CHAPTER III
RESEARCH METHOD

This chapter presents the aspects of the research methodology, which are set to analyze the data. These aspects are the research design, population and sample, data collection, and data analysis.

3.1 Research Design

Research design is classified into two categories; they are quantitative and qualitative research. Each approach has its own methodology and terminology. Ary (2010) stated that qualitative research focuses on understanding social phenomena from the perspective of the human participants in its natural settings. It does not begin with formal hypothesis, but it may result in hypothesis as the study unfolds. On the other hand, quantitative studies’ objective measurement is to gather numeric data that are used to answer questions or test predetermined hypothesis. It generally requires a well-controlled setting.

This study was conducted to reveal the implementation of SQ5R technique to improve the students’ reading ability. Thus, the writer used the quantitative research, especially the experimental design. The experimental research design is the scientific investigation in which the researcher manipulates one or more dependent variables, controls any other relevant variables, and observes the effect of the dependent variable on the independent variable. In experimental research design, there are three kinds of designs: pre-experimental, quasi-experimental, and true-experimental. In this study, the writer employed the quasi-experimental
design. Since, the writer gives the experiment to the selected group without any random pre-selection process. This study had two variables; they are independent and dependent variables. The independent variable is the implementation of SQ5R technique while dependent variable is the students’ reading ability.

3.2 Population and Sample

Population is an important matter in doing a research. Population is a group of people from which the data are collected. According to Ary (2010: 148), population is defined as all members of any well-defined class or people, events, or objects. Furthermore, the population of this research was the eighth grade students of SMP N 8 Malang. The writer used purposive sampling technique to pick the sample. The sample was taken by purposive sampling because writer might not permit to draw a random sample of students for a study but in certain classes and the unit chosen is a number of small districts whose returns in previous elections (Ary, 2010: 156). Then, the writer merely took two classes for the sample, 8H and 8I. The sum of the students in the two classes was 65. The two classes had the same English teacher. Then, the writer determined class 8I as the experimental group and class 8H as the control group.

3.3 Data Collection

Data collection comprises the technique, instrument, and procedures employed to collect the data in the research. This study used quantitative data because the data in this research were the students’ scores of reading ability.
3.3.1 Technique and Instrument

Instrument is one of the important things in experiment research from which the data can be obtained. In this case, the writer used two reading tests. The test was to measure the students’ reading ability.

3.3.2 Procedure

Writer used quasi-experimental design because she did not need to randomization the class. Then she used three procedures conducted by the writer in order to collect the data. They included the pre-test, treatment, and post-test. So, the data of this research were obtained from the scores of the pre-test and post-test.

1. Pre-test

The pre-test was given to both groups, the experimental and the control groups, in the first meeting. The pre-test was given by the teacher in the form of a multiple choice. The function of this test is to measure the students’ reading ability for both of the experimental and control groups before any treatment was given.

2. Treatment

After the pre-test had been administered, the treatment was started. Each group was treated with different teaching strategies. The Experimental Group (class I) was taught by using SQ5R technique while the Control Group (class H) was taught without SQ5R technique. The treatment was given in two weeks for four meetings.
3. Posttest

After the treatment, the post-test was given to the experimental group as well as the control group. The posttest was same as the pretest. However, the function of post-test was to measure the result of the students’ reading ability between the experimental and control groups after SQ5R technique be given.

3.4 Data Analysis

Data analysis is directed to determine whether the experimental group achieves a better mean score than the control group. In fact, the pre-test and post-test scores from both groups were computed using independent sample t-test by using SPSS 21. Then, the steps of the data calculation are presented as follows:

1. The writer arranged the pre-test and post-test scores from the experimental group and the control group and presented them into a table.

<table>
<thead>
<tr>
<th>Table 3.1 Scores of Pretest and Posttest</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

2. The writer classified the pre-test and post-test scores between the experimental group and control group.

3. The writer computed the means of both of groups’ scores by using SPSS 21.

4. The writer calculated the means of pre-test and post-test by using independent sample t-test in SPSS 21. The following formula is the formula of independent t-test.
$$t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{\frac{(n_1-1)s_1^2 + (n_2-1)s_2^2}{n_1 + n_2 - 2} \left( \frac{1}{n_1} + \frac{1}{n_2} \right)}}$$

5. The writer analyzed the result of the calculations to see whether or not SQ5R technique can improve the students’ reading ability. If t-ratio is higher than t-table at 0.05 level of significance, H0 (null hypothesis) will be rejected. It means that the students who are taught by using SQ5R technique achieve significance better score in their reading ability than the students who are not treated with the technique. However, if t-ratio is lower than t-table at 0.05 level of significance, H0 (null hypothesis) will be accepted. It means that there is not a significance difference between the students who are treated with SQ5R technique and the students who are not treated SQ5R technique in their reading ability.