**CHAPTER III**

**RESEARCH METHODOLOGY**

In this chapter, the writer describes the research methodology; it consist of research design, place and time of the research, the population, variable, data and data sources, data collecting method and instrument, and technique of data analysis.

1. **Research Design**

The research design in this study is experimental research. According to Best, experimental research provides a systematic and logical method for answering the questions. The researcher manipulates certain stimuli, treatments, or environmental conditions and observes how the conditions and observes how the condition or behavior of the subject is affected or changed.[[1]](#footnote-2)

An experiment involves the comparison of the effects of a particular treatment with that of different treatment or of no treatment. In a simple conventional experiment reference is usually made to an experimental group and to a control group.[[2]](#footnote-3)

This research is intended to investigate the influence of monopoly game as media in teaching vocabulary for the fifth year students of SDI Qurrota A’yun Ngunut, Tulungagung. The research design used by the researcher is pre-experimental design in the form of one-group, pretest-posttest design.

One-group, pretest-posttest design provides some improvement over the first, for the effects of the treatment are judged by the difference between the pre-test and the posttest scores. No comparison with a control group is provided.[[3]](#footnote-4)

1. **Place and Time of the Research**

Place of the research is a place of the study process which is used to get the problem solving of the research is happened.[[4]](#footnote-5) In this research, the researcher chooses SDI Qurrota A’yun Ngunut Tulungagung because on the researcher’s opinion, the students of SDI Qurrota A’yun have enthusiasm in English but sometimes they have difficulties to improve their vocabulary and difficult to understand the meaning of the words. The research was done in May 2010.

1. **The Population**

According to Sugiono, population is the object/subject that has some qualities and characteristics that are chosen to be learnt and to be studied by the researcher.[[5]](#footnote-6) In this research, the researcher researches the fifth graders of SDI Qurrota A’yun Ngunut, Tulungagungbecause they have many vocabularies and they are more familiar with some words than other classes under this class. The population of this class is 17 students. The researcher didn’t choose the sixth graders because they will have final examination.

1. **Variable, Data and Data Sources**
2. Variable

According to Best, variables are conditions or characteristics that the experimenter manipulates, controls, or observes.[[6]](#footnote-7) There are two variables in this research, they are:

1. Independent Variable (X)

The independent variables are the conditions or characteristics that the experimenter manipulates in his or her attempt to ascertain their relationship to observed phenomena.[[7]](#footnote-8) In this research, the independent variable is the use of monopoly game.

1. Dependent Variables (Y)

The dependent variables are the conditions or characteristics that appear, disappear, or change as the experimenter introduces, removes, or changes independent variables. The dependent variables are the measured changes in pupil performance attributable to the influence of the independent variables.[[8]](#footnote-9) In this research, the dependent variable is students’ vocabulary mastery.

1. Data and Data Sources

Data is a note of facts or information that will be processed in the research’s activity. There are two kinds of data:

Primary data is the data that are collected by the researcher directly.[[9]](#footnote-10) As the primary data in this research were the students’ score of pretest and posttest.

Secondary data is the data that are collected by the researcher indirectly, such as documentation.[[10]](#footnote-11) The secondary data in this research got from person, place and paper. The secondary data in this research were the documents about the conditions and situations of the school.

1. **Data Collecting Method and Instrument**

Data collecting method is the method that is used by the researcher to collect data.[[11]](#footnote-12) To collect the data, the researcher uses instrument. Instrument is the tool that is used to get the data.[[12]](#footnote-13) The use of valid instrument is very essential to determine the validity of data. In this study, the methods used are test and documentation.

1. Test

According to Ary and friends as quoted in Sukardi, a test is a set of stimuli presented to individual in order to elicit response on the basis of which a numerical score can be assigned.[[13]](#footnote-14) In this research, test is used as a main method. The test was given to all fifth graders at SDI Qurrota A’yun Ngunut, Tulungaggung. The questions of the test are 25. The test items of pretest are different with the posttest but similar in their level. The form of the test is made in the form of multiple choices. The students must choose the correct answer. The score for each item is 4, so all scores are 100. The test will be done twice, pretest and posttest.

1. Pretest

Pretest is a test that is given to all fifth graders at SDI Qurrota A’yun Ngunut, Tulungagung to measure their ability before treatment process (teaching by using monopoly game). This test was given to know the basic competence for all students and to know their earlier knowledge before they get treatment.

1. Posttest

Posttest is a test that is given to all fifth graders at SDI Qurrota A’yun Ngunut, Tulungagung after they get treatment (teaching by using monopoly game). It is done to know the final score and to know the students’ difference competence before and after they get treatment.

1. Documentation

Documentation is something written that is observed. In this study, the researcher observed the names of the fifth graders of SDI Qurrota A’yun Ngunut, Tulungagung and written information about the school’s condition as documents.

1. **Technique of Data Analysis**

In managing and analyzing quantitative data collected from the research, the researcher used quantitative data analysis, so the researcher analyzed the data by using statistical technique. The research design that was used by the researcher is pre-experimental design in the form of one-group pretest posttest design. To know the significant difference, the data are analyzed by using the following formulation of ttest.[[14]](#footnote-15)

To= $\frac{M\_{D}}{SE\_{M\_{D}}}$

MD = Means of difference (mean value of differences between Variable I Score and Variable II Score) that can be found by using the formula:

 MD = $\frac{ΣD}{N}$

ΣD = different value between Variable X and Variable Y, and D can be found by the formula:

 D = X-Y

N = Number of Cases= Amount of subject that we observe

$SE\_{M\_{D}}$= Standard Error that can be found by using the formula:

 $SE\_{M\_{D}}$ = $\frac{SD\_{D}}{\sqrt{N-1}}$

$SD\_{D}$= Standard Deviation of score differences between Variable I and Variable II that can be found by using:

$SD\_{D}$ = $\sqrt{\frac{ΣD^{2}}{N}-\frac{(ΣD)^{2}}{(N)}}$

N = Number of cases

1. John W Best, *Research in Education,* (New jersey, Prentice Hall: 1981), pae 57 [↑](#footnote-ref-2)
2. *Ibid….*page 59 [↑](#footnote-ref-3)
3. *Ibid…..*page 81 [↑](#footnote-ref-4)
4. Sukardi, *Metodologi Penelitian Pendidikan,* (Jakarta: PT. Bumi Aksara, 2003), 53. [↑](#footnote-ref-5)
5. Sugiyono, *Metode Penelitian Kuantiitatif, Kualitatif dan R&D,* (Bandung: Alfabeta, 2008) page 80 [↑](#footnote-ref-6)
6. John W Best, *Research in education,……*page 59 [↑](#footnote-ref-7)
7. *Ibid,………*page 59 [↑](#footnote-ref-8)
8. *Ibid,………*page 60 [↑](#footnote-ref-9)
9. Sumardi Suryabrata, *Metodologi Penelitian* (Jakarta: Raja Grafindo Persada, 2005), page 39 [↑](#footnote-ref-10)
10. *Ibid,………*page 39 [↑](#footnote-ref-11)
11. Suharsimi Arikunto, *Prosedur Penelitian Suatu Pendekatan Praktek,* (Jakarta: Rineka Cipta, 2006), page 160 [↑](#footnote-ref-12)
12. *Ibid,…….*page 160 [↑](#footnote-ref-13)
13. Sukardi, *Metodologi Penelitian Pendidikan,* (Jakarta: Bumi Aksara, 2008), page 138 [↑](#footnote-ref-14)
14. Anas Sudijono, *Pengantar Statistik Pendidikan,* (Jakarta: Raja Grafindo Persada, 2004) p. 305 [↑](#footnote-ref-15)