**CHAPTER III**

**RESEARCH METHOD**

In this chapter the writer describes the research method. It consists of research design, subject of the research, place and time of the research, variable, data and data sources, data collecting method and instrument, and technique of data analysis.

1. **Research Design**

This study uses pre-experimental with One –Group Pretest-Posttest design. According to Arikunto (2006: 85). This research is intended to investigate the effectiveness of using little shop of treasures game in mastering English vocabulary at the fifth grade students at SDN Kutoanyar 02 Tulungagung.

The experimental method is the only method of research that can truly test hypothesis concerning cause-and-effect relationships (L.R.Gay,1992:298). There are two major classes of experimental designs, single-variable designs, which involve one independent variable, and factorial designs, which involve two or more independent variables. Single-variable designs are classified as pre-experimental, true experimental and quasi experimental (L.R.Gay, 1992:318). This study uses Pre-experimental design.

This research was classified as pre-experimental design because it gives little or no control of extraneous variables. There is no control of extraneous variables means that this research don’t use control group because this research only use one class of the subject research. This research use treatment that is teaching by using little shop of treasures game. Pre-experimental design means that this design still has another variable which have influence the dependent variable, therefore, the result of the experimental of dependent variable is not only influenced by independent variable, because this design does not have control variable and the sample is not selected by random. In the one-group pretest posttest design, a single group was measured or observed not only after being exposed to a treatment of some sort but also before.

One group, pretest-posttest design provides some improvement over the first, for the effects of the treatment are judged by the difference between the pretest and the posttest scores. No comparison with a control group is provided (Best, 1981 : 81).

1. **Subject of The Research**

In this research, the researcher chooses the fifth grade students of SDN Kutoanyar 02 Tulungagung because on the researcher’s opinion, the students of SDN Kutoanyar 02 have difficulties to improve their vocabulary and difficult to understand the meaning of the words and the researcher wanted to know the students’ achievement before and after being taught by using little shop of treasures game.

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 (Sukardi, 2003 : 53). In this research, the researcher chooses SDN Kutoanyar 02, Tulungagung as the place of the research. This research was conducted on May $15^{th }$ up to May $29^{th}$. In this time, the research introduces in front of the class and to teach the fifth grade students for three meetings in this elementary school.

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

According to Best, variables are conditions or characteristics that the experimenter manipulates, controls, or observes, (Best, 1981 : 59). A variable is an attribute that is regarded as reflecting or expressing some concept or construct, (Ary, 2002 : 31). In addition, variable is divided into two group, they are independent variable (x) and dependent variable (y). there are two kinds of variable in quantitative research:

1. Independent variable is the conditions or characteristics that the experimenter manipulates in his or her attempt to answer their relationship to observed phenomena, (Best, 1981 : 59). Here, the independent variable is the uses of little shop of treasures game.
2. Dependent variable is the conditions or characteristics that appear, disappear or change 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 (Best, 1981 : 60). Here, the dependent variable is students’ vocabulary mastery.
3. 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:

1. Primary data is the data that are collected by the researcher directly (Sumardi, 2005:39). The primary data in this research were the students’ score of pretest and posttest.
2. Secondary data is the data that are collected by the researcher indirectly, such as documentation (Sumardi, 2005:39). 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 and the name of the students.
3. **Data Collecting Method and Instrument.**

Data collecting method is the method that is used by the researcher to collect data (Arikunto, 2006:160). To collect the data, the researcher uses instrument. Instrument is the tool that used to get the data (Arikunto, 2006:160). The use of valid instrument is very essential to determine the validity of data. In this study, the methods that 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 (Sukardi, 2008:139). In this research, test is used as a main method. The test was given to all fifth graders at SDN Kutoanyar 02 Tulungagung. In this research the researcher uses pre-experimental research with one-group-pretest-posttest design. The procedures of experimental research that use one-group – pretest - posttest design:

1. Administering a pretest with a purpose of measuring the vocabulary achievement in the fifth grade students at SDN Kutoanyar 02 Tulungagung.
2. Applying the experimental treatment teaching vocabulary by using little shop of treasures game to the subjects in fifth grade students at SDN Kutoanyar 02 Tulungagung.
3. Administering a post test with a purpose of measuring the dependent variable (vocabulary achievement) in the fifth grade students at SDN Kutoanyar 02 Tulungagung.

The questions of the test are 20 items. The test items of pretest are same with the posttest. The forms of the test are made in the following form:

1. Multiple choice tests that consist of 10 items. The students must choose the correct answer. The score for each item is 5, so all scores are 50.
2. Find the name of the pictures that consist of 5 items. The students must give the name of the pictures in English correctly. The score for each item are 5, so all scores are 25.
3. Find the meaning tests that consist of 5 items. The students must translate to Indonesia. The score for each item are 5, so all scores are 25.

So all scores of the tests are 100. The test will be done twice, pretest and posttest.

1. Pretest

Pretest provides a measure on some attribute or characteristics that someone assesses for participants in an experiment before they receive a treatment. Pretest refers to a measure or test given to the subjects prior to the experimental treatment (Wiersama, 1991:106).

In this research, pretest is a test that given to all fifth graders at SDN Kutoanyar 02 Tulungagung to measure their ability before treatment process (teaching vocabulary by using little shop of treasures 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 measure on some attribute or characteristics that is assessed for participants in an experimental after a treatment. Posttest is a measure taken after the experimental treatment has been applied (Wiersama, 1991:106).

In this research, posttest is a test that is given to all fifth graders at SDN Kutoanyar 02 Tulungagung after they get treatment (teaching vocabulary by using little shop of treasures game). It is done to know the final score and to know the students’ difference before and after they get treatment.

There are two important characteristics that every measuring instrument should process validity and reliability. Validity is concerned with what a test measures and for whom it is appropriate. The validity of the test is the extent to which it measures what it is supposed tpo measure and nothing else (Heaton, 1975:159). While reliability reserve too consistently with which a test measure whatever it measures. Validity is very important because one of main characteristic of test, without has this characteristic a test there is not important.

1. Validity

In this test, the validity of the test was ensured in term of content validity and construct validity.

* Construct validity

The construct validity of test is test which is capable of measuring certain specific characteristics in accordance with a theory of language behavior and learning (Heaton, 1975: 159). Construct validity is concept or theory which basis of use a skills of language. Brown mentioned (in Isnawati, 2011:29) that a construct is any theory, hypothesis or model that attempts to explain observed phenomena in our universe or perception.

Based on the theory of Brown in Isnawati (2011) and Heaton (1975) vocabulary achievement can be tested using multiple choice items, matching items and completion items.

The vocabulary test that used in this research are multiple choice items, finding and giving the meaning of the pictures. According to Heaton (1988) there are ways in testing vocabulary such as multiple choice items, matching items and completion items.

According to Isnawati (2011:50), there are techniques that are suggested only for possible use in achievement test:

* Pictures

The use of pictures can limit the students to lexical items that we have in mind. Some pictures are provided and the students are required to write down the name of the objects. This method is obviously restricted to concrete nouns which can be draw.

* Gap filling

This technique can take the form of one or more sentence with a single word missing.

In conclusion this test is valid because this test is fulfill the construct of vocabulary test and therefore valid in term of construct validity.

* Content validity

The content validity is a kind of validity which depends on a careful analysis of the language being tested and of the particular course objectives (Heaton, 1975: 159). A test is said to have content validity if its contents constitutes a representative sample of the language skills, structures, etc being tested (Isnawati, 2011:27). Content validity is measured with analyze the test item and compare with the competence that will be reached. The balance of this test can be seen with the percentage. The content validity in this research can be showed as below:

**Table 3.1. Content Validity**

|  |  |  |  |
| --- | --- | --- | --- |
| No | Competence Indicators | Test Item | Percentage |
| 1 | Students are able to choose the right thing at home appropriate with their characteristics. | 17 | 5%5% |
| 2 | Students are able to decide the right place at home to do a certain activity. | 23 | 5%5% |
| 3 | Students are able to decide the right thing at home appropriate with their function. | 45 | 5%5% |
| 4 | Students are able to choose the right place at home for putting something. | 68 | 5%5% |
| 5 | Students are able to choose the right name for the picture of things at home. | 910 | 5%5% |
| 6 | Students are able to write the right name for the picture of things at home. | 1112131415 | 5%5%5%5%5% |
| 7 | The student are able to translate the name of things at home in Indonesian language. | 1617181920 | 5%5%5%5%5% |
|  | Total | 20 | 100% |

Based on the table above, it can be seen that the test is valid in term of content validity because the test is fulfill the content validity.

1. Reliability

Reliability is a necessary characteristic of any good test for it to be valid at all and a test must be reliable as measuring instruments. A reliable test is consistent and dependable (Isnawati, 2011:18).The researcher gives test for 27 students to know the reliability of test.

In this research the researcher uses Kuder-Richardson Formula 20 to test the validity of the questions. To get Kuder-Richardson reliability, it requires test administration only once. One correct answer is given point 1, while incorrect answer is given 0.

KR-20:

r11= $\frac{k}{k-1}(\frac{S^{2}-\sum\_{}^{}pq}{S^{2}})$

Where :

r11 = Reliability using equality KR-20

p= proportion of correct answer for an item

q= proportion of incorrect answer for an item (p=1-p)

Ʃpq = total multiplication between p and q

k= total of question

Based on the analyze, score of student test is reliable, because the result of $r\_{11}$ is 0,99.

1. Documentation

Documentation is used to collect data from written thing such as books, magazine, document, notable, memo, etc (Sukardi, 2003:206). Documentation is something written that is observed. In this study, the researcher observed the names of the fifth graders of SDN Kutoanyar 02 Tulungagung and wrote 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. In this research, the reseacher uses t-test to analyze the data with help SPSS 16.0 statistics aplication to know the result of this formulation.