

CHAPTER III

RESEARCH METHODOLOGY

A. Research Methodology

In this research the researcher used pre experimental research . Pre-experiment is the simplest form of research design. Muijs (2004:13) states that the experimental research is the experiment, which can be defined as: a test under controlled conditions that is made to demonstrate a known truth or examine the validity of a hypothesis. The key element of this definition is control. Then, Creswell (2009:190), “ pre-experimental designs the researcher studies a single group and provides an intervention during the experiment. This design does not have a control group to compare with the experimental group”. In this research the researcher used only one group. The researcher choose pre experimental design to find out the effect of cooperative integrated reading and compositon (CIRC) method in the students’ reading achievement. The form of research used pre-test-treatment-post-test format design. The form of pre-experimental study the one group pretest-posttest design which the researcher used can be seen as :

Class	Pre-test	Treatment	Post-test
Experimental	O ₁	X	O ₂

Note :

O₁ : Students score before given the treatment.

X : Treatment (Independent variable).

O2 : Students score after given the treatment.

Taken from Cohen, Manion, Morrison (2007:282)

B. Subject of the Research

a. Population

The population (or target group) is the group about which the researcher wants to gain information and draw conclusions. Marczyk, Matteo, Festinger (2005:33), “the population is all individuals of interest to the researcher”. The population of this research is the eight grade students of SMPN 1 Pengkadan, Kapuas hulu regency. The total number of populations are :

Table 3.1
Research Population

No	Level	Total
1	VIII A	21
2	VIII B	21
Total of population		42

b. Sample

Sample is a small proportion which is use as a source of data collecting. In this research, the researcher used purposive sampling as a technique to decide the sample. Singh (2004:100), “The purposive sampling is selected by some arbitrary method because it is known to be representative of the total population, or it is known that it will produce well matched groups. The Idea is to pick out the sample in

relation to some criterion, which are considered important for the particular study.”

In this research, The researcher choose the eight grade students namely class B to be the sample. It was taken by the criteria that the students had problem with reading comprehension and had lowest score among other class.

C. Technique and Tools of Collecting Data

1. Technique of Collecting Data

In collecting data in this research, the researcher used measurement technique to measure the students' reading achievement. Kothari (2004:69), “measurement technique is a process of mapping according to some rule of correspondence”.

2. Tools of Collecting Data

The tool in this research is reading test in multiple choice form. The kind of measure of the test will use pretest-posttest. The pre-test will give before the treatment was given. Meanwhile, the post-test will give after the researcher had given the treatment to the class. The aim of pre-test to discover the students' previous achievement in reading comprehension and then post-test will conduct to assess students' reading comprehension after having treatment.

a. Validity

A test is considered valid if the test measure what it intends to be measured. According to Anastasi & Urbina in Oluwatayo (2012:1), “Historically, validity has been defined as the degree to which a test or measuring instrument actually measures what it purports to measure or how well a test or a meaning instrument fulfils its function ”. Muijs (2004:66) defines that validity is probably the single most important aspect of the design of any measurement instrument in educational research. However good our research design or sophisticated our statistical analyses, the results will be meaningless if we aren’t actually measuring what we are purporting to measure.

In this research, the researcher used content validity by asking a validator to check the content validity of the test is valid or not. According to Muijs (2004:66), “content validity refers to whether or not the content of the manifest variables (e.g. items of a test or questions of a questionnaire) is right to measure the latent concept (self-esteem, achievement, attitudes and etc) that we are trying to measure ”.

3. Technique of Data Analysis

Technique of data analysis in this research used descriptive statistic and inferential statistic.

a. Descriptive statistic was used to know the students' individual score and the students mean score both pre-test and post-test.

1. The formula of calculating the students individual score is as follow:

$$A = \frac{S}{N} \times 100$$

Note :

A : The students' individual score

S : The sum of students' score

N : Maximum score

Adapted from Cohen, Manion, Morrison (2005:336)

2. The formula of calculating the students' mean score is as follow:

$$M = \frac{\sum X}{N}$$

Note :

M = The students mean score

$\sum X$ = Sum of the students score

N = The total number of students

(Blerkom, 2009:245)

Table 3.2

The Criteria to Clarify the Students' Mean Score

Test score	Classification
80-100	Good to very good
60-79	Average to good
50-59	Poor to average
0-49	Poor

(Heaton, 1975:96)

b. Inferensial Statistic

The researcher used standar deviation, normality test and t-test. The researcher analyze the data by using SPSS22. The formula are:

1. Standar Deviation

Standard deviation is a square of the variance. Singh (2006:307), "Standard Deviation is regarded as a most stable and reliable measure of variability as it employs mean for its computation. It is often called as root-mean square deviation and is denoted by the Greek letter sigma." The formula of standard deviation is as follow:

$$SD = \sqrt{\frac{\sum(X-M)^2}{N}} = \sqrt{\frac{\sum x^2}{N}}$$

Notes :

- X = Stands for individual score
- M = Mean of the given set of scores
- N = Total number of the scores
- X = The deviation of each score from the mean

2. Normality Test

One of the requirement need in parametic method that the data should distributed normally. Before doing T-tes, the researcher check the normality of the data both pre-test and post-test . In this research the researcher used Kolmogrov-

smirnov that available in SPSS22 explore to find out the normality of the data. The normality test used Kolmogorov-Smirnov test to find out the distribution data. It was compare the significant value (P) with alpha (α). If the score of significant value (P) $< 0,05$ (α), it means the data is not in normal distribution. If the score of significant (P) $> 0,05$ (α) or equal with $0,05$ (α) it means the data is normal distribution.

3. Testing of Hypothesis

To find out the answer of research hypothesis whether the method is effective or not in teaching reading, the researcher collected the data from the result of pre-test and post-test. Then, the researcher analyze the data using SPSS22 by paired sample t-test. If the significant value (P) $< 0,05$ (α), it means the data is significant different or that means H_a is accepted. But if the significant value (P) $> 0,05$ (α), it means the data is have no significant different or that means H_a is rejected.