CHAPTER III
RESEARCH METHODOLOGY

A. Research Design

In this study, the researcher are use descriptive quantitative research. Descriptive research aims to obtain information about the actual or existing phenomena or situations at the time of the research, Sigit Santoso, (2011:59). In descriptive research, the researcher collects, analyzes, and interprets descriptive data to capture certain interesting phenomena. In this case, the phenomenon is students' difficulties in reading comprehension. In a descriptive study, no treatment is necessary. Research only explained the variable and phenomena that occur in the school. The researcher had described the students' difficulties in reading comprehension at the seventh-grade students of SMP N 05 Tanah Pinoh Barat.

A quantitative descriptive research method was used for this research. The quantitative descriptive research method is research that aim to describe a phenomenon, symptom, and event by using numbers that describe the subject under study. Descriptive quantitative research is a scientific investigation that explains phenomena by involving statistical processes in analyzing the data Saraswati et al, (2021:36). In this case, quantitative descriptive research is research that described the description of the phenomenon under study, and the data obtained were analyzed statistically. To get the data, the researcher used a reading comprehension test.

B. Subject of Research

The subject of this research is the students of SMP N 05 Tanah Pinoh Barat. The researcher used purposive sampling to select the sample. Purposive sampling is the selection of samples based on certain criteria. Sugiyono, (2013:85) states that purposive sampling is a sampling technique with certain considerations and criteria. In this case, the sample selection based on the criteria needed is seventh-grade students.

The sample is part of the population that is made the object of research. According to Arikunto (2010: 174), the sample is part or agent of the population being examined. And according to Arikunto if the population is less than 100 people, then the number of samples is taken as a whole, but if the population is greater than 100 people, 10-15% or 20-25% of the population can be taken. As explained by Arikunto above, this study will use the entire population as a sample, namely 60 students in grade VII students of SMPN 05 Tanah Pinoh Barat, Melawi Regency. Because the population is less than 100 people, the total number of samples is taken.

In this study, the sample is 60 students at SMPN 05 Tanah Pinoh Barat.

Table 3.1

Distribution of students

No	Class	Total of sample	Sample
1.	VII A	20	20
2.	VII B	20	20
3.	VII C	20	20
TOTAL			60

Source: Administration of SMPN 05 Tanah Pinoh Barat

C. Technique and Tools of Data Collection

1. Technique of Data Collection

Data collection is defined as a procedure for collecting, measuring, and analyzing a problem. Data collection is the process involved with a get-together and estimating data on factors of interest, in an established systematic fashion that enables one to answer stated research questions, test theories, and assess results.

In this research, the researchers would use the measurement technique because it was intended to measure students' achievement in reading comprehension before and after treatment. Furthermore, Creswell (2012: 623) students that measurement means that the researchers observe and record the score on an instrument. Also, in this researcher would measure the

performance of the sample by utilizing a questionnaire in form of an achievement test.

2. Tools of Data Collection

Tools of data collection are tools that are selected and used by researchers in their collecting activities so that these activities become systematic and facilitated by them. Tools of data collection are methods that can be used by researchers to collect data. The instrument as a tool in using the data collection method is a means that can produce a result, below will explain what data collection tools are used in this research.

The appropriate tools in collecting data were very important to gain objective results. In this research, the researcher used the reading test as the tool of data collecting.

a. Test

To do research, a researcher has several techniques of data collection. According to Sudijono (2011: 67), the test is a method that can be used or a procedure that needs to be taken in the context of measurement and assessment in the field of education, in the form of giving assignments or a series of tasks in the form of questions which must be answered, or orders which must be done by the test so that based on the data obtained from the measurement results a value can be obtained that symbolizes the behavior or achievement of the testee; which values can be compared with values achieved by other testees or compared to certain standard values. In this research, the researcher used measurement techniques and indirect correspondence techniques in collecting data. The instrument in gathering information, the researcher gave a test as a structure filling test using multiple-choice the test consisted of 20 questions.

Table 3.2

The Score Classification Students' Reading Comprehension

Score	Classification
85-100	Excellent

70-84	Good
55-69	Average
40-54	Poor
0-39	Very Poor

Taken from Heaton in Kurniawan (2013: 9)

The grid is a distribution map of various topics/subjects or teaching materials, also called a blueprint or a table of specifications. A complete grid, should contain things that will be used as a guide in preparing questions: The subject or teaching material to be tested. Below is a blueprint for a reading comprehension test.

Table 3. 3

Blueprint of Reading Comprehension test.

No	**Indicator**	**Test item number**	**Total**
1.	Main Idea	1, 7, 11, 14	4
2.	Supporting Detail	9, 16, 17, 19	4
3.	Vocabulary	2, 3, 6, 13	4
4.	Inference	5, 8, 10, 20	4
5.	Reference	4, 12, 15, 18	4
Total			20

Source: (Depdikbud, 2012)

b. Questionnaire

The questionnaire is a research instrument consisting of a series of questions to gather information from respondents. Sugiyono, (2013:142) states that a questionnaire is a data collection technique that is done by giving a set of written questions to respondents to answer. Questionnaires are used to determine the factors of students' difficulties in reading comprehension. In this study, the researcher chose a closed-ended questionnaire, the answer is chosen by the respondent himself. The researcher adopted a questionnaire from Yolanda Melandita, (2019:63). The questionnaire has been validated by the researcher.

D. Validity and Reliability

1. Validity

By checking the validity of the data, the researcher can find out that the questions in the test are feasible to use. In the research test questions that the researcher has made, which amount to 20 questions, 10 questions are invalid or cannot be used. The definition of validity according to Sugiyono (2010) is "The degree of determination between data that occurs in the object of research with power that can be reported by the study. Thus, valid data is data "which does not differ" between data reported by researchers with data that happened to the object research." Sugiyono (2010). A validity test is used to measure valid, or invalid.

Table 3. 4

Validity of Students' Reading Comprehension Test (Tryout)

Items	r Table	r Value	Result
Item 1	0,2387	0,35071	Valid
Item 2	0,2387	0,47587	Valid
Item 3	0,2387	-0,3507	Tidak Valid
Item 4	0,2387	-0,4626	Tidak Valid
Item 5	0,2387	0,29737	Valid
Item 6	0,2387	-0,1888	Tidak Valid
Item 7	0,2387	-0,3237	Tidak Valid
Item 8	0,2387	-0,0433	Tidak Valid
Item 9	0,2387	0,24514	Valid
Item 10	0,2387	-0,4586	Tidak Valid
Item 11	0,2387	-0,033	Tidak Valid
Item 12	0,2387	0,47587	Valid
Item 13	0,2387	0,46257	Valid
Item 14	0,2387	0,46257	Valid

Item 15	0,2387	0,46257	Valid
Item 16	0,2387	0,46257	Valid
Item 17	0,2387	0,63879	Valid
Item 18	0,2387	0,29737	Valid
Item 19	0,2387	0,7269	Valid
Item 20	0,2387	0,41852	Valid

The formula written below is the Pearson product-moment correlation formula. The formula can be written as:

$$r = \frac{N\sum XY - (\sum X)(\sum Y)}{\sqrt{(N\sum X^2 - (\sum X)^2)(N\sum Y^2 - (\sum Y)^2)}}$$

Sugiyono (2011:183)

Keterangan:

- r : koefisien korelasi yang dicari
- N : banyaknya peserta test
- X : nilai variabel X (skor item)
- Y : nilai variabel Y (skor item)

Jika rhitung>rtabel maka butir item valid.

2. Validity Test Results

Analysis of instrument validity test data using the help of Microsoft Excel 2013 program, to calculate the Rxy value or correlation to find the calculated r-value after getting the calculated r-value compared to r table, if r count > r table then the item is declared valid and if r count < r table then the item is declared invalid, the value of r table is 0, 2387.

The test results of the instrument amounted to 20 statement questions after being analyzed, it was stated that 20 questions were declared valid and Reliability.

Reliability is a consistent result of a test repeatedly, as proof of the accuracy of the test results even though the test is repeated will produce the

same results. Sugiyono (2017:130) states that the reliability test is the extent to which the measurement results using the same object will produce the same data. The reliability test was carried out simultaneously on all statements.

$$r_{11=}\left(\frac{k}{k-1}\right)\left(1-\frac{\sum \sigma_b^2}{\sigma_t^2}\right)$$

Arikunto (2010:239)

Keterangan:

r_{11} : reliabilitas soal

k : banyaknya butir soal

$\sum \sigma_b^2$: jumlah varians butir

$\sum 1^2$: varians total

E. Technique of Data Analysis

Techniques of Data Analysis is the most important step in research because the main purpose of research is to obtain data. Data analysis is the process of compiling data obtained from test results and participation observations which then selects the important parts and becomes data that is easy to understand. In this study, the researcher used tests and participant observation to analyze the data.

To do research, research has several techniques of data collection. In this research, the researcher uses measurement techniques and indirect communication techniques to collect data, namely tests and observation.

1. Test

The first is the test was being carried out when the researcher goes to the field, the test is in the form of multiple-choice, which was be filled in by class VII students, the researcher will get results about students' reading comprehension and when the test was given the researcher also made observations about students' reading activities seen when they were doing the learning process in class. To find out the answer to the research question and the result of the test, the procedures of data analysis are as followed: the first is

about finding the students' reading comprehension, to know the degree of students reading comprehension, to analysis data reading comprehension test the researcher will calculate the individual score of students' reading comprehension.

First, the researcher scores the results of the test using the formula below:

$$= \frac{The\ number\ of\ right\ answer}{The\ number\ of\ question} \text{ X } 100$$

After getting the results of students' scores, the researcher calculated the students' average scores. Then the researcher categorizes student scores based on the ability level according to Arikunto, (2006:245) as quoted in Wahyu Tanoto, (2016:39).

To find out what difficulties are experienced, the researcher had calculated the percent error of the five aspects of reading comprehension using the Arikunto, (2008:172) formula:

$$\text{S:}\frac{R}{N} \quad \text{X } 100\%$$

S: Incorrect Percentage

R: Incorrect answers

N: Total Sample

2. Analysis of the Questionnaire

This study used a closed-ended questionnaire, where the answers are chosen by the respondents themselves. The questionnaire consists of 15 statements. To analyze research data, the researcher used the formula of Sudjono, (2001:43).

$$\text{P:}\frac{F}{N} \text{ x } 100\%$$

Were,

P: Percentage

F: Frequency

N: The total number of the respondents

F. Research Procedures

1. Preparation stage

   Starting from the preparation of research designs, obtaining permits, and preparing research equipment. After that, the researcher prepared all the instruments to collect the data.

2. Researchers conduct research:
   a. The researcher arranged a schedule with the teacher at the school, to start distributing the test.
   b. The researcher gave a test to 3 classes. The first test was conducted on 04 January, the second test was on 05 January, and the last test was conducted on 06 January 2022.
   c. The researcher distributed the reading test to the participants.
   d. Researchers give time to work on the problem for 30 minutes.
   e. After conducting the test, the researcher distributed questionnaires to the participants.
   f. Questionnaires are given to students when students complete the test. The time given by the researcher was 20 minutes.

3. Stages of Data Analysis

   The data analysis stage is an attempt to find research problems. Researchers process the data, analyze the data, and then draw conclusions.