

CHAPTER III

RESEARCH METHODOLOGY

In this part presents the method of research, operational definition, population and sample, and technique for collecting the data.

A. Method of the Research

Fraenkel and Wallen (2019, p. 14) said that descriptive studies describe a given state of affairs as fully and carefully as possible. In educational research, the most common descriptive methodology is the survey, as when researchers summarize the characteristics (abilities, preferences, behaviors, and so on) of individuals or groups or (sometimes) physical environments (such as schools). Qualitative approaches, such as ethnographic and historical methodologies are also primarily descriptive in nature. Examples of descriptive studies in education include identifying the achievements of various groups of students; describing the behaviors of teachers, administrators, or counselors; describing the attitudes of parents; and describing the physical capabilities of schools. The description of phenomena is the starting point for all research endeavors.

According to Cohen, et al., (2015, p. 169), descriptive research is concerned with conditions or relationships that exist; practice that prevail; beliefs, points of views, or attitudes that are held; processes that are going on; effects that are being felt; or trends that are developing. At times, descriptive research is concerned with how *what is or what exists* is related to some preceding event that has influenced or affected a present condition or event. The purpose of descriptive research is described sistematically the fact and characteristic of give population or area of interest factually and correctly.

B. Operational Definition

The title of this study was “The students’ ability in comprehending a descriptive text at SMP N 21 OKU”, to avoid some misinterpretations, some words used in the title were optionally defined: ability, writing and descriptive text. The following key terms were:

1. Ability means the competency which can be done by the students covering, cognition, psychomotor, and affection.

2. Reading

Reading is a process to do and also used readers to get message, will sent by the writer’s through words media or written language.

3. Descriptive text

Descriptive text is a text which is telling about the characteristics of a particular thing, such as person’s characteristics or descriptions..

C. Population and Sample of the Research

1. Population

Population is a group of elements or cases, whether individuals, objects, or events, that conforms to specific criteria and to which the researcher intends to generalize the result of their research. Fraenkel and Wallen (2019, p. 90) states the larger group to which one hopes to apply the result is called the population. The population of this study was the whole of the seventh grade students in SMP N 21 OKU academic year 2022-2023. The total numbers of population are 102 students. Table 1 shows the population of this study:

Table 1
Population of Sample

NO	Class	Number of Students
1	VIIA	25
2	VIIB	27
3	VIIC	24
4	VIID	26
Total		102

(Source: SMP N 21 OKU academic year 2022-2023)

2. Sample of the Research

The sample is part or representative of the population under study” (Arikunto, 2010: 174). In order for the sample taken to be representative, a sampling technique is needed. Sampling needs to be done in a way that can be accounted for to get the right data, so that the conclusions drawn can be trusted. According to Suharsimi Arikunto (2012: 112) that: For just random, if the subject is less than 100, it is better to take all of them so that the research is a population study. Furthermore, if the number of subjects is greater than 100, it can be taken between 10-15% or more, depending on at least:

- a. The ability of researchers seen from the time, energy and funds.
- b. Narrow area of observation of each object, because this involves a lot of data.
- c. The size of the risk is borne by the researcher. For research with a large risk, of course if the sample is large, the results will be better.

The members of the population in this study were 102 students from 4 classes in class VII SMK Negeri 21 OKU Academic Year 2022/2023, the researchers determined a sample of 70% of 102 students. Sampling in this study used a simple random proportional sample method with how to draw without return. The population in this study consisted of 4 (four) classes, then from each of these classes a sample would be sought. Samples from each class

are taken by drawing lots with numbers, the numbers drawn then the individual is a sample of the class. The number of samples for each class is taken according to the proportion of student members for each class with the total population multiplied by the number of samples from the population.

The writer took the sample of the research by using simple random sampling through the following procedure:

1. The writer wrote all of the students' name and class of the population in a small piece of paper and roles it
2. The writer put paper into a glass
3. The writer shook the glass, and took 72 students as the sample.

Table 2
Sample of the Research

NO	Class	Number of Students
1	VIIA	18
2	VIIB	19
3	VIIC	17
4	VIID	18
Total		72

Source: SMP N 21 OKU database acaemic year 2022/2023

D. Technique for Collecting the Data

According to Cohen, et al., (2015, p. 321) the purposes of test are several, for example to diagnose a student's strengths, weaknesses and difficulties, to measure achievement, to measure aptitude and potential, to identify readiness for a programe. In collecting the data, the technique that was used in this research was test. The writer used multiple choices that consisted of 30 items and the test supposed to be completed within 45 minutes.

E. Validity and Reliability of the Test

1. Validity of the Test

According to Cohen, et al., (2015, p. 105), validity of the test is an essentially a demonstration that a particular instrument in fact measures what it purpose to measures. In this study, the writer measured the content validity of the test. Cohen, et al., (2015, p. 109) content validity refers to the instrument must show that fairly and comprehensively covers the domain or item that is purports to cover. In order that the test had content validity, the writer devised the test accordance with the purpose of the test that is to measure students' ability. The specification of the test was shown on the table 3 below:

Table 3
Specification of the Test Item

Objective	Indicator	Test material	Form of test	Number
To find out the students' ability in comprehending a descriptive text	The students can get specific information related to the text.	<u>Text 1</u> Rafflesia Arnoldi	Multiple choice	3,4,5,7,9,10,12,14,15,17,18,19,20,23,24,25,27,28
		<u>Text 2</u> My Grandma		
	The students are able to find main idea in the reading text.	<u>Text 3</u> Ondel-Ondel		1,6,11,16,21,26
		<u>Text 4</u> London		
	The students can figure out the vocabulary associated with texts	<u>Text 5</u> Borobudur		2,8,13,18,22,29,30
		<u>Text 6</u> My Younger Sister		
Total				30

To check whether the instrument has a good validity or not, the writer checked the difficulty index of the instruments. The writer used the formula and used the SPSS version

20.00. The writer used non sample class for trying out the instrument, which consisted of 30 students. The writer did the try out test on 4th Mey 2023. To analyzed the validity of the instrument based on SPSS, the writer determined the Significance level (α) of the test was 0,05 or 5% from the confidence interval 95%, and the value r_{table} of this test was 0.361 ($df = N - 2 = 28$). The writer concluded two hypotheses first if the critical value ($r_{obtained}$) was positive and more than r_{table} , it meant that the item was valid. The second if the critical value ($r_{obtained}$) was negative and less than r_{table} , it means that the item was invalid. The result of validity in the test for tryout was:

Table 4
Validity of Try Out

Number of Items	Critical Value(R Obtained)	R_{table}	Conclusion
1	0.921	0.361	Valid
2	0.947	0.361	Valid
3	0.843	0.361	Valid
4	-0.036	0.361	Invalid
5	-0.124	0.361	Invalid
6	0.921	0.361	Valid
7	-0.052	0.361	Invalid
8	0.878	0.361	Valid
9	0.921	0.361	Valid
10	0.947	0.361	Valid
11	0.843	0.361	Valid
12	0.947	0.361	Valid
13	-0.052	0.361	Invalid
14	0.921	0.361	Valid
15	0.867	0.361	Valid
16	0.947	0.361	Valid
17	-0.031	0.361	Invalid
18	0.795	0.361	Valid
19	0.921	0.361	Valid
20	0.072	0.361	Invalid
21	0.947	0.361	Valid
22	0.843	0.361	Valid

23	0.947	0.361	Valid
24	-0.132	0.361	Invalid
25	0.947	0.361	Valid
26	0.765	0.361	Valid
27	0.843	0.361	Valid
28	0.886	0.361	Valid
29	0.878	0.361	Valid
30	0.843	0.361	Valid

After the writer did test validity to the instruments, the writer concluded that from 30 items, there were 7 items were invalid. They were item 4, item 5, item 7, item 13, item 17, item 20 and item 24. And there were 23 items valid. So, the writer just used 23 items which were valid as the instrument of test in this study.

2. Reliability

According to Cohen, et al., (2015, p. 117) reliability is a synonym consistency and reliability over time, over instrument and over groups of respondents or a measure of consistency over time and over similar samples. It means that reliability is a measurement to determine the influence of each variable or to know the validation of a test.

The writer did the try out test to non sample students which was taken from four classes of the population to know whether the test items are reliable or not, the writer concluded two hypotheses as follow:

- a. If the Cronbach Alpha Point is more than 0.70, it means that the items are reliable.
- b. If the Conbrach Alpha Point is less than 0.70, it means that the items are not reliable.

The result analyses of SPSS 20.00 of reliability of the instrument was:

Table 5
Result of Tryout

Student's Code	Number of Item	Total Answer		Score
		TRUE	FALSE	
A	30	3	27	10.00
AW	30	25	5	83.33
ASA	30	4	26	13.33
AE	30	18	12	60.00
AZ	30	13	17	43.33
BA	30	25	5	83.33
BCH	30	7	23	23.33
CAS	30	26	4	86.67
EN	30	7	23	23.33
EI	30	23	7	76.67
FA	30	20	10	66.67
FS	30	28	2	93.33
HS	30	27	3	90.00
JW	30	26	4	86.67
JA	30	24	6	80.00
RI	30	2	28	6.67
MR	30	24	6	80.00
RLD	30	2	28	6.67
VCS	30	26	4	86.67
RS	30	1	29	3.33
Y	30	19	11	63.33
NS	30	3	27	10.00
CF	30	25	5	83.33
NS	30	25	5	83.33
JR	30	3	27	10.00
STA	30	18	12	60.00
W	30	1	29	3.33
WA	30	26	4	86.67
YIR	30	3	27	10.00
Y	30	26	4	86.67
TOTAL	900	480	420	1600
MEAN	30	16	14	53

Based on the table 3, it was found that the students' mean score was 53. And the result of reliability of tryout was:

Table 6

Cronbach's Alpha	N of Items
.968	30

The table 6 showed that the Cronbach's Alpha Point was 0.968, it was more than 0,70. So, it meant that the items of the instruments were reliable and could be used as the instrument of the research.

F. Index Difficulties

Index of difficulty is the percentage of students answering correctly each item in the test.

$$P = \frac{B}{JS}$$

Where :

P : Proportion / Index of Difficulty

B : Numbers of students who have right answer

JS : Number of students taking the test

Dealing with index of difficulty, Nurgiyantoro (2010, p. 195), present the criteria of difficulty used that “difficult, Middle, Easy”. The criteria of index difficulty as follows:

Table 7
Index Difficulty of Question

Index of Difficulty	Interpretation
0,10 - 0,40	Difficult
0,41 - 0,60	Middle
0,61 - 0,80	Easy

Source: Nurgiyantoro (2020, p. 195)

The result of difficulty index of tryout was:

Table 8
Difficulty Index of Tryout

Items	Number of Student	Correct Answer	Difficulty Index	Criteria
1	30	17	0.57	Middle
2	30	18	0.60	Middle
3	30	16	0.53	Middle
4	30	25	0.83	Easy
5	30	22	0.73	Easy
6	30	17	0.57	Middle
7	30	4	0.13	Difficult
8	30	17	0.57	Middle
9	30	17	0.57	Middle
10	30	18	0.60	Middle
11	30	16	0.53	Middle
12	30	18	0.60	Middle
13	30	4	0.13	Difficult
14	30	17	0.57	Middle
15	30	18	0.60	Middle
16	30	18	0.60	Middle
17	30	6	0.20	Difficult
18	30	9	0.30	Difficult
19	30	17	0.57	Middle
20	30	20	0.67	Middle
21	30	18	0.60	Middle
22	30	16	0.53	Middle
23	30	18	0.60	Middle
24	30	5	0.17	Difficult
25	30	18	0.60	Middle
26	30	16	0.53	Middle
27	30	16	0.53	Middle
28	30	16	0.53	Middle
29	30	17	0.57	Middle
30	30	16	0.53	Middle

Based on table 8, it was found that there were 5 items (item 7, item 13, item 17, 20, 24) were too difficult, 2 items (item 4, item 5) were too easy, and the rest items were

middle. So, writer used 23 items which was valid as the research instrument. It means that the questions were not too easy and too difficult. So, all questions could be used as instrument.

G. Technique for Analyzing the Data

In this research, the writer used descriptive analysis technique. Before the data are analyze, the writer at first takes following techniques:

a. The data is in the form of score. To get individual score, the writer supplied the following formula, The formula as follow :

$$X = \frac{r}{n} \times 100$$

Where:

X = Individual score

r = Number of answer

n = Number of test item

(Source:Arikunto, 2016: 49)

To classify individual score that the students obtained in discovering the key ideas with the following category

Table 9
Score Range and Qualification

No	Percentage Range	Score criteria
1	80-100	Very Good
2	66-79	Good
3	55-65	Fair
4	46-54	Poor
5	< 45	Fail

(Source; Nurgiyantoro, 2015: 235)

b. Percentage analysis is used in analyzing the data of the test. The formula as follow:

$$X = \frac{F}{N} \times 100\%$$

Where :

X= result of percentage

F= total number of students' score range

N= total number the sample

(Source:Hatch & Farhady, 2015: 43)

c.To get the students average score the writer uses the follow formula :

$$X = \frac{R}{TXN} \times 100\%$$

Where :

X= percentage of students' correct answer

R= total number of students correct answer

N= total number of test item

T= total number of the sample