# CHAPTER III

RESEARCH METHODS

This part discusses Method of the Study, Operational Definition, Research Variable, Population and Sample, Technique for Collecting Data, Validity and Reliability, and Technique for Analyzing Data.

A. Method of the Study

This study uses the experimental method. Creswell (2012), clarifies experimental method into three: pre-experiment design, a quasi-experimental design and true-experimental. In this study the researcher will choose pre-experimental method. A pre-experimental method has one group pre test and post test. So, it only needs one group to do pre test and post test.

To get the data the researcher did three steps that has been done in this study. The first step was the researcher gave pre-test to the students. The second, the researcher thought reading by using read aloud instructional strategy and the third the researcher gave post-test to the students to know the effectiveness of the strategy that used. The researcher used one group pre-test and post-test design. The research design could be presented as below:

$$O_1 \quad x \quad O_2$$
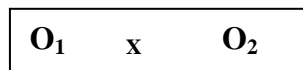
(Cohen, 2005)

Where:

X   : Experimental / Treatment

O_1 : Pre-test in experimental class

O_2 : Post-test in experimental class

B. Operational Definitions

The title of this study is enhancing the seventh grade students' reading comprehension through interactive read aloud instructional strategy at SMP Negeri 32 OKU and the following terms necessary to be define:

1. Teaching

   Teaching is an interactive process between the teacher and the students to transferring knowledge by teacher to the students, and how the students can understand well so, the students can get the information.

2. Reading comprehension

   Reading comprehension is the activity where the students actually understand what they read about.

3. Interactive Read Aloud Instructional Strategy

   Personal Interactive read aloud instructional strategy has become an instructional method to incorporate in the classroom because they offer the same and additional benefits as read aloud.

C. Research Variable

According to Kerlinger (2018) that variable is as an object off research. Differentiates variable into independent variable (X) that is influence to the other variable, and dependent variable (Y) that is influence by independent variable.

In this study, there are two variables of this research. They are independent variable and dependent variable. An experiment involves making a change in the

value of one variable called the independent variable and observing the effect of that change or another variable called dependent variable.

By this title, the researcher states that Interactive Read Aloud Instructional Strategy independent variable and Enhancing Reading Comprehension as dependent variable.

D. Population and Sample

1. Population of Research

Accordingto Christensen (2014) a population (sometimes called a target populations) is the set of all elements. Creswell (2012), states that the target population is a group of individuals (or groups of organizations) with some general characteristics that can be identified and studied by researcher.

The population of this study was the whole of the seventh grade students of SMP Negeri 32 OKU with the total number of students is 117.

Table 1
Population of the study

No.	Class	Number of students
1.	VII.A	27
2.	VII.B	32
3.	VII.C	27
4.	VII.D	31
Total		117

(Source : SMP Negeri 32 OKU, Academic year 2021/2022)

2. Sample of Study

Sample is a part of population that used to be a subject of the study. Sample is smaller group or subset of the total population in a study. The researcher chose sample of this research was VII.B class the researcher took one class as sample. In this study the researcher used purposive sampling as the technique took the sample.

According to Arikunto (2010), purposive sampling is sampling technique take with the purpose. The sampling should be on the characteristics, qualities which are the fundamental characteristics of the population and the sampling taken as samples which are the subject of most contain traits contained in the population.

The sample of this study was VII.B class. The researcher took this sample because based on observation and English teacher's recommendation who told that VII.B class has lower reading. The sample could be seen in this following table:

Table 2
Sample of the study

Class	Total
VIII.B	32

(Source : SMP Negeri 32 OKU, Academic year 2021/2022)

E. Technique for Collecting the Data

Technique for collecting data in this study was by the test. Test is method of measuring of a person ability, knowledge, or performance in a given domain. In

collecting the data, the researcher used reading comprehension test with the total of questions are 30 items. The test would be administered twice pre-test and post-test. The pre-test has been given at the first time to the students to measure their ability in reading comprehension learning before teaching using Read Aloud Instructional Strategy. Then, the post-test used to find out the students' reading comprehension after treatment that give six times. To measure student's achievement, the researcher compared the result of pretest and posttest using SPSS.

F. Validity and Reliability of the Test

1. Validity of the Test

Validity is an important key to effective research. Validity is defined as the extent to which a concept is accurately measured in quantitative study (Twycross, 2015). It is defined as measuring research concept accurately. A test can be said validity the test measure the object to be measure and suitable with the criteria. In this study, the researcher used content validity. Ary (2010) states that to have a content validity, the instruments are representative of some defined universe or domain of content. Content validity is the extent to which a measuring instrument provides adequate coverage of the topic under study. Content validity refers to the instrument must show that fairly and comperhensively cover the domain or item that is purpose cover.

Table 3
Test Specification of Test Items

Objective of test	Indicators	Test Material	Format of test
To measure students' achievement in reading comprehension using Read Aloud Instructional Strategy	1. The student can find the main idea from the text	Text 1 My Classroom	1,6,11,16, ,21, 26
	2. The student can comprehend similar the meaning of words in the text	Text 2 Dogs Text 3 Jhony	2,7,12,17, 22,27 3,4,8,9,13,14,18, 19,23,24,28,29
	3. The student can find the detail information in the text	Text 4 The kangaroos	5,10,15,20,25,30
	4. The student can understand the inference of the text	Text 5 My mother's kitchen Text 6 Food Chains	

(Source : English book worksheet for junior high school)

The researcher had been gotten all of the students score from the population of students which was the consisted of 30 items. The researcher did the try out on Monday, 14th March, 2022. The score of the students describe on the following table:

Table 4
The students' Score of Try Out

No	Code of Student	Item	Total of Answer		Score
			True	False	
1	AS	30	19	11	63
2	AP	30	6	24	20
3	AP	30	20	10	66
4	AAK	30	18	12	60
5	AA	30	24	6	80
6	BS	30	8	22	26
7	CNJP	30	9	21	30
8	DN	30	19	11	63
9	DA	30	3	27	10
10	EP	30	21	9	70
11	FA	30	21	9	70
12	FO	30	6	24	20
13	HS	30	22	8	73
14	IPS	30	17	13	56
15	JC	30	24	6	80
16	L	30	2	28	6
17	MMAF	30	23	7	76
18	MYAH	30	10	20	33
19	MDA	30	20	10	66
20	MPS	30	19	11	63

21	ND	30	19	11	63
22	NO	30	4	26	13
23	RA	30	22	8	73
24	RA	30	15	15	50
25	R	30	22	8	73
26	R	30	8	22	26
27	RAD	30	12	18	40
28	SOS	30	19	11	63
29	SA	30	8	22	26
30	WL	30	16	14	53
31	YN	30	15	15	50
Total					**1561**
Mean					**50,3**

The researcher did try out of instruments test in Class VII.D at 14th March 2022. The total numbers of students were 31 students. The highest was 80 that were reached by 2 students. The lowest score was 10 that were reached by one student and the total score in try out was 1561. From the table 4, presented the score of try out. The highest score was 80 That reached by two students and the lowest was 6 reached by one student. Total score was 1561, and mean 50.3, median was 60, and the mode in try out score was 63.

The researcher checked whether the instrument has valid or not by using Pearson Product Moment Test in SPSS . The researcher determined the significance level (α) of the test was 0.05% or 5% from the interval 95% and the value r_{table} of this test was 0.367 (df = N-2 = 29). To kwon whether the instrument were valid or not, the researcher concluded two hypothesis as follow:

a. If the critical value (r $_{obtained}$) was positive or more than (r $_{table}$) it means that the item was valid.

b. If the critical value (r $_{obtained}$) was negative or less than (r $_{table}$) it means that the item was not valid.

Table 5
The critical value (r $_{obtained}$) and (r $_{table}$)

No.	Number of items	Critical Value (R obtained)	(R table)	Conclusion
1	Item 1	0.332	0.367	**Invalid**
2	Item 2	0.309	0.367	**Invalid**
3	Item 3	0.644	0.367	Valid
4	Item 4	0.292	0.367	**Invalid**
5	Item 5	0.479	0.367	Valid
6	Item 6	0.252	0.367	**Invalid**
7	Item 7	0.594	0.367	Valid
8	Item 8	0.394	0.367	Valid
9	Item 9	0.518	0.367	Valid
10	Item 10	0.126	0.367	**Invalid**
11	Item 11	0.585	0.367	Valid
12	Item 12	0.550	0.367	Valid
13	Item 13	0.079	0.367	**Invalid**
14	Item 14	0.489	0.367	Valid
15	Item 15	0.34	0.367	**Invalid**
16	Item 16	0.205	0.367	**Invalid**
17	Item 17	0.585	0.367	Valid
18	Item 18	0.109	0.367	**Invalid**
19	Item 19	0.556	0.367	Valid
20	Item 20	0.556	0.367	Valid
21	Item 21	0.443	0.367	Valid
22	Item 22	0.412	0.367	Valid
23	Item 23	0.673	0.367	Valid
24	Item 24	0.576	0.367	Valid
25	Item 25	0.332	0.367	**Invalid**
26	Item 26	0.585	0.367	Valid
27	Item 27	0.734	0.367	Valid

28	Item 28	0.624	0.367	Valid
29	Item 29	0.662	0.367	Valid
30	Item 30	0.579	0.367	Valid

The table showed that there were 10 items were invalid, and 20 items that tested and residue of the test items that valid were 20 items.

2. Reliability of the Study

The second measure of quality in quantitative study is reliability or accuracy of an instrument. Creswell (2012) "reliability means that the consistency and stability of the score from an instrument". In addition, Heale and Twycross (2015) states that research instrument consistently has the same situation on repeated occasions. is essentially a synonym for consistency and reliability over time, over instrument, and over groups of respondent. Reliability refers to the extent to which the test scores are consistent and accurate.

To find out the reliability, the researcher has been done the try out to VII.D class students of SMP Negeri 32 OKU. To check the reliability of the test in this study, the researcher will use SPSS program.

To determine which number of items was reliable or not, compare the cronbach's alpha point with the criteria point 0,70. The reliable items is item which had cronbach's alpha point more than criteria point 0,70. So, from the explanation the researcher concluded two hypothesis as follow:

1. If the cronbach alpha point is more than 0.70, it means that the items were reliable.

2. If the cronbach alpha point is less than 0.70, it means that the items were not reliable.

After calculated the score of try out, the researcher used cronbach' Alpha to calculated the reliability of the instruments. The reliability was measured by using cronbach' Alpha in SPSS .

The reliability statistics description as below:

Table 6

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.734	.884	31

Based on the table , the cronbach's alpha point was 0.734, it was more than 0.70. So the researcher concluded that the items of try out were reliable and could be used at instrument to get the data of the research.

2. Index of Difficulty

To check whether the instrument has a good or not, the researcher will check the index difficulty of the instrument.

The formula is follow:

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

Where:

P   : The Difficulty Index

B   : Number of test taker which choose the right answer

JS   : The total number of student

Table 7
Index Difficulty of Question

P (Index Difficulty)	Interpretation
0,20 – 0,40	Difficulty
0,41 – 0,60	Enough
0,61 – 0,80	Easy

(Sudijono 2010)

Index difficulty of each instrument was showed as the result below:

Table 8
The result difficulty of item of instrument test

No.	Total item	Number of item	$P = \dfrac{B}{JS}$	Interpretation
1	30	Item 1	0.64	**EASY**
2	30	Item 2	0.61	**EASY**
3	30	Item 3	0.48	MEDIUM
4	30	Item 4	0.38	**DIFFICULT**
5	30	Item 5	0.51	MEDIUM
6	30	Item 6	0.64	**EASY**
7	30	Item 7	0.51	MEDIUM
8	30	Item 8	0.58	MEDIUM
9	30	Item 9	0.54	MEDIUM
10	30	Item 10	0.25	**DIFFICULT**
11	30	Item 11	0.54	MEDIUM
12	30	Item 12	0.58	MEDIUM
13	30	Item 13	0.35	**DIFFICULT**
14	30	Item 14	0.51	MEDIUM
15	30	Item 15	0.25	**DIFFICULT**
16	30	Item 16	0.67	**EASY**
17	30	Item 17	0.54	MEDIUM
18	30	Item 18	0.35	**DIFFICULT**
19	30	Item 19	0.54	MEDIUM
20	30	Item 20	0.51	MEDIUM
21	30	Item 21	0.58	MEDIUM

22	30	Item 22	0.51	MEDIUM
23	30	Item 23	0.48	MEDIUM
24	30	Item 24	0.54	MEDIUM
25	30	Item 25	0.38	**DIFFICULT**
26	30	Item 26	0.51	MEDIUM
27	30	Item 27	0.41	MEDIUM
28	30	Item 28	0.54	MEDIUM
29	30	Item 29	0.51	MEDIUM
30	30	Item 30	0.58	MEDIUM

Based on the table 8, showed that the instrument in some difficulties which there were 6 items as difficult question, medium questions 20, and 4 item question was easy. So the researcher used medium test that have a good validity in pre-test and post-test. The index of difficulty of the items in try out was resumed as follow:

Table 9
The result of index difficulty of test

Percentage	Category	Number of item	Total number of item
0.20-0.40	Difficulty	4,10,13,15,18,25	6
0.41-0.60	Medium	3,5,7,8,9,11,12,14 ,17,19,20,21,22,23, 24,26,27,28,29,30	20
0.61-0.080	Easy	1,2,6,16	4
Total			30

G. Technique for Analyzing the Data

1. Scoring the Test

To calculate the scoring of the test the researcher used the following formula in calculating the students' score:

$$\textbf{Student Score} \ = \ \frac{\textbf{The Number of correct answer}}{\textbf{Total of question}}$$

Where:

S : Student's score

X : The number of correct answer

Q : Total of question

(Sudijono,2010)

2. Describing the Students' Score

To make description of students score the researcher used the score range and criteria. It was shown on the following table:

Table 10
The score range of criteria

Score Range	Predicate
80-100	Very Good
70-79	Good
60-69	Sufficient
50-59	Poor
<49	Very Poor

(Sudijono,2010)

3. The Analyzing of Normality Test

There is way to measure of sample normality. It is normality test. Normality test use to measure the validity sample. One way to determine the normality of the data in research is the Kolmogorov-Smirnov test or the so-called K-S test which is available in the SPSS program. This test serves to determine the

significance of normally distributed data, with decision-making guidelines (Sulhan 2011).

- If the value of Sig. ≥ 0.05 (above α), then H_0 is rejected, meaning that the data used in this study is normally distributed.

- If the value of Sig. < 0.05 (below α), then H_0 is accepted. This means that the data used does not come from a normal distribution.

4. **Statistical Analysis**

The researcher would analyzed the data after getting the score of pre-test and post-test in experimental group. The researcher used SPSS version 22 (Paired Sample T-Test) to get the result of the investigation order to know the significance the treatment test. There were two hypothesis as the conclusion of this analysis steps:

Ha   : There was a significance improvement after the treatment process.

Ho   : There was no a significance improvement after the treatment process.

The researcher compare the value of t and Sig. (2-tailed). If the value of Sig.(2-tailed) $<$ significance level (α=0.05), it meant that the Ha was accepted.