

CHAPTER III

RESEARCH METHOD

In this part, the researcher describe about research methodology that used in conducting the research. It purpose to answer the problem of the study. This chapter consists of: Research design, population and sample, data collecting procedures, instruments of the study, and instrument try out.

A. Research Types

The type of this study is think aloud study. The study uses the think aloud method because the problem of the study will answer by using think aloud method to describe the students' ability in reading narrative text.

B. Research Design

The recent study was an experimental research to find out the result of a certain technique. Experimental design is one of the precise methods to examine the cause and effect because of the fact, instruction toward a group and experimental sample. The instructional activity was designed only to teach reading skill students by using Think aloud strategy as a techniques toward the experimental group, the group of sample would have test to measure the effect that students get after treatment. The result of the test would be analyzed and compare using statistical computation.

This study tries to describe the effect of treatment of two distinction, Think aloud strategy and reading skill, the research design is pre-test and post-test. Therefore, the design is called a pre-test and post-test control group design.

Table 3.1 Randomized group, pre-test and post-test

| Group | Pre-test | Independent variable (treatment) | Post-test |
|-------|----------|--|-----------|
| E | Y_1 | X | Y_2 |
| C | Y_1 | - | Y_2 |

Notes :

E = experimental group

C = control group

Y_1 = pre-test

X = treatment on the experiment group

Y_2 = post-test

This research design will present several characteristics :

- a. It has two groups of experimental subjects or treatment group and control group
- b. The two groups compared with respect two measurements of observation on the dependent variable
- c. Both groups will be measured twice, the first measurement serve as the pre-test and the second as the post-test
- d. Measurement on the dependent variable for both groups will be done at the same time with the same test
- e. The experimental group manipulated with particular treatment.

C. Population and Sample

1. Population

In this study, the population of the study includes all eight grade students of the MTsN 2 Palangkaraya amount 234 students in VIIA, VIIIB, VIIC, VIID, VIIE, VIIF, in the academic year 2015/2016. there are as the population and for observation the samples are only 63 students consist of 2 classes namely experimented class and control class MTsN 2 Palangkaraya.

The writer gave the code based on the form of the data. Code is a sign which is made in number or letters that was given to identify the information or data that is analyzed. For example the students name replaced with the code such as E-01, C-02, TO-03, and the like. The codes are available in appendix.

Table 3.2
Population of the study

| No. | Class | Number |
|-----|--------|--------|
| 1. | VIII-C | 31 |
| 2. | VIII-D | 32 |
| 3. | Total | 63 |

2. Sample

Sample is a subset of individuals or case from within a population.¹ To determine the students as experiment group the researcher used cluster sampling. Cluster sampling is used if the population does not consist of individuals, but groups or cluster.² Because the population of this study was the students of the eight grade of MTsN-2 Palangka Raya which they consist of six classes.

Therefore, the writer chose VIII-C and VIII-D as the sample because they represented the average English score of the whole population. The VIII-C class became the control class and VIII-D became the experimental class.

D. Research Instrument

In any scientific research, instrument for collecting data was absolutely important. The accuracy of the result of research was mostly dependent on how accurate the use of instrument. Before research carried out, the instrument for the data collection should be well prepared.

Related to the research problems, the writer used reading test as an instrument. The test used must be appropriate in term of our object, the dependable in the evidence provides, and applicable to our particular situation. In this case, the researcher gave the students reading test in using think aloud strategy.

¹David Nunan, *Research Methods in Language Learning*, New York: Cambridge University Press, 1992, p. 232.

²Nurul Zurich, *Metodologi Penelitian Sosial dan Pendidikan (Teori Aplikasi)*, Jakarta: Bumi Aksara, 2006, p. 124

The schedule to get the data is available in appendix, where the students was asked to tell by using Think aloud Strategy was used to make the students achievement in reading skill at MtsN-2 Palangka Raya.

1. Test Try Out

In order to prove the test was suitable to the students who were the sample of this study, the writer conducted a try out test. Then, the writer choosed the students in the same school but different class to try out the test. The try out test conducted on February, 16th 2016 at MTsN-2 Palangka Raya. VIII- C was as the try out class with 31 students. The test was students' reading comprehension score in multiple choice test form and there are 50 items. The result of the try out test was there were 13 items was invalid and there were 37 items was valid. The researcher used 35 items to give the pre-test.

In the other time, the writer did the same thing to give the try out test for getting the post test item. But, the writer choosed the different class to test the try out. The try out test conducted on February 17th 2016 at MTsN-2 Palangka Raya. VIII-D was as the try out class with 27 students. The test was students' reading comprehension score in multiple choice test form with the same level and content with the try out for pre test. There were 50 items test. The result of the try out test was there were 14 items was invalid and there were 36 items was valid. The researcher used 35 items to give the post-test. The instrument is available in appendix 4.

2. Test Validity

a. Content Validity

The researcher would try out the instrument before it applies to give pretest to the real sample. The researcher obtains the instrument quality consist of instrument validity and instrument reliability. The test will be tried to the students of MTsN-2 Palangka Raya in class VIII C and VIII D

In this case, the students assign to read a text and answer questions. Then, the researcher gives score and analyzes the obtain data to check the instrument reliability.

Table 3.3 Test Item Specifications

| Item | Level of Comprehension | Questions | Answer Key | Position in text |
|------|------------------------|--|---|-----------------------|
| 1. | Inferential | What is the story telling about ? | (B) The farmer and the bird | Paragraph 1 Line 1 |
| 2. | Inferential | What did we learn from the text ? | (C) A good deed deserves a reward | Paragraph 4 Line 1 |
| 3. | Inferential | Why did the bird decide to go back to its nest ? | (A) Because the bird did not want the farmer arguing with his wife | Paragraph 2 Line 3 |
| 4. | Literal | When did the birds go back to its nest ? | (D) When its wing mended | Paragraph 2 Line 2 |

| | | | | |
|-----|-------------|--|---|-----------------------|
| | | | | |
| 5. | Literal | Where did the farmer and the bird live ? | (B) In a new hut | Paragraph 5 Line 4 |
| 6. | Literal | “when the farmer <u>discovered</u> the bird” (P3). The underlined word refers to ? | (B) Found out | Paragraph 3 Line 1 |
| 7. | Literal | How did the birds show their thanks to the farmer ? | (C) The bird gave the farmer a little box | Paragraph 3 Line 5 |
| 8. | Literal | What is the main information discussed in the third paragraph ? | (A) The bird welcomed to the farmer | Paragraph 3 Line 4 |
| 9. | Literal | Which statement is NOT TRUE according to the text ? | (D) The farmer lived happily with his wife | Paragraph 5 Line 2 |
| 10. | Literal | What did the farmer find in the box ? | (A) Precious stones | Paragraph 4 Line 2 |
| 11. | Inferential | What is the story telling about ? | (B) The rats and the elephants | Paragraph 1 Line 1 |
| 12. | Inferential | What did we learn from the text ? | (A) A peace bring the happiness | Paragraph 4 Line 3 |

| | | | | |
|-----|-------------|---|---|-----------------------|
| 13. | Inferential | Why did the elephant's king apologize to the rats ? | (B) Because the homes of all rats destroyed | Paragraph 1 Line 3 |
| 14. | Literal | When did many of rats crush to death ? | (C) When the group of elephants crossed the jungle | Paragraph 1 Line 3 |
| 15. | Literal | Where did the story take place ? | (A) In the jungle | Paragraph 1 Line 3 |
| 16. | Literal | “ He <u>summoned</u> on of the elephant...” (P3). The underlined word refers to ? | (D)Ordered to come | Paragraph 3 Line 3 |
| 17. | Literal | How did a group of rats help the trap elephants ? | (C) They cut the nets | Paragraph 4 Line 1 |
| 18. | Literal | What is the main information discussed in the third paragraph ? | (A) The elephants trapped by the hunter | Paragraph 3 Line 1 |
| 19. | Literal | Which statement is NOT TRUE according to the text ? | (B) The elephants trapped by the rats | Paragraph 3 Line 1 |
| 20. | Literal | What helped the elephant's herd free ? | (D) A group of the rat's king | Paragraph 4 Line 1 |
| 21. | Inferential | What is the story telling about ? | (C) The good stepmother | Paragraph 1 Line 1 |

| | | | | |
|-----|-------------|--|--|-----------------------|
| | | | | |
| 22. | Inferential | What did we learn from the text ? | (B) A stepmother did not always evil | Paragraph 5 Line 1 |
| 23. | Inferential | Why did the stepmother saved her step children ? | (D) Because she loved them | Paragraph 5 Line 3 |
| 24. | Literal | When did the witch putting some stew in the oven ? | (A) When the stepmother gave her almighty | Paragraph 4 Line 2 |
| 25. | Literal | Where did the story take place ? | (C) In the forest | Paragraph 2 Line 2 |
| 26. | Literal | “The witch fell into the open and the stepmother <u>shut</u> the door” (P4). The underlined word refers to ? | (B)Closed | Paragraph 4 Line 3 |
| 27. | Literal | How did the witch die ? | (D) She was burned in the oven | Paragraph 4 Line 3 |
| 28. | Literal | What is the main information discussed in the last paragraph ? | (B) They lived happily ever after | Paragraph 5 Line 3 |
| 29. | Literal | Which statement is NOT TRUE according to the text ? | (A) Hansel eaten by the witch | Paragraph 1 Line 2 |
| 30. | Literal | What did the stepmother do to her children ? | (C) Saved them | Paragraph 4 Line 4 |

| | | | | |
|-----|-------------|--|--|-----------------------|
| 31. | Inferential | What is the story telling about ? | (B) The lion and the mouse | Paragraph 1 Line 1 |
| 32. | Inferential | What did we learn from the text ? | (B) Don't look at someone because of his clothes | Paragraph 3 Line 5 |
| 33. | Inferential | Why did the mouse help the lion ? | (D)Because the lion forgive and let him go | Paragraph 2 Line 5 |
| 34. | Literal | When did the mouse come to help the lion ? | (A) When the hunters went search of a wagon | Paragraph 3 Line 2 |
| 35. | Literal | Where did the story take place ? | (C) In the jungle | Paragraph 3 Line 2 |
| 36. | Literal | “Who placed his <u>huge</u> paw upon the mouse” (P1). The underlined word refers to ? | (B) Large | Paragraph 1 Line 3 |
| 37. | Literal | How did the mouse help the lion free ? | (D)Gnawed the ropes | Paragraph 3 Line 4 |
| 38. | Literal | What is the main information discussed in the third paragraph ? | (A) The little mouse could prove his word that he could help the lion | Paragraph 3 Line 5 |

| | | | | |
|-----|-------------|--|---|-----------------------|
| 39. | Literal | Which statement is NOT TRUE according to the text ? | (C) The lion ate the little mouse | Paragraph 1 Line 4 |
| 40. | Literal | What did the little mouse do to prove his word ? | (B) He tried hard to help lion | Paragraph 3 Line 3 |
| 41. | Inferential | What is the story telling about ? | (A) The bear and the rabbit | Paragraph 1 Line 1 |
| 42. | Inferential | What did we learn from the text ? | (D) People should love each other | Paragraph 3 Line 2 |
| 43 | Inferential | Why did the poor rabbit did not get any of the meat ? | (C) Because the bear carried all the meat home | Paragraph 2 Line 1 |
| 44. | Literal | When did the poor rabbit go home ? | (B) After his hard day's work | Paragraph 2 Line 4 |
| 45. | Literal | Where did the story take place ? | (A) On the other side of the hill | Paragraph 1 Line 3 |
| 46. | Literal | "The bear was <u>gluttonous</u> "... (P1). The underlined word refers to ? | (C)Greedy | Paragraph 2 Line 2 |
| 47. | Literal | How did the youngest child give the meat to the rabbit ? | (B) Pretend to play the ball and | Paragraph 3 Line 4 |

| | | | | |
|-----|---------|--|---|-----------------------|
| | | | kicked the meat to the rabbit's house | |
| 48. | Literal | What is the main information discussed in the last paragraph ? | (D) The youngest child would gave the meat with a great kicked | Paragraph 4 Line 3 |
| 49. | Literal | Which statement is NOT TRUE according to the text ? | (B) The papa bear knew that his youngest child gave the rabbit some meat | Paragraph 3 Line 4 |
| 50. | Literal | What did the bear asked to the rabbit ? | (D) Took his bow and arrow | Paragraph 1 Line 3 |

To measure the validity of the instrument, the writer used the formulation of Product Moment by Pearson as follows:³

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

Where:

r_{xy} : Total coefficient of correlation

$\sum X$: Total Value of Score X

$\sum Y$: Total Value of Score Y

$\sum XY$: Multiplication Result between Score X and Y

N : Number of students

³Riduwan, *MetodedanteknikMenyusunThesis*, Bandung: Alfabeta, 2007, p.110.

To know the level of validity of instrument, the value of was interpreted based on the qualification of validity as follows:

$r_{xy} > t_{\text{-table}} = \text{Valid}$

$r_{xy} < t_{\text{-table}} = \text{Not Valid}$

To assess students' ability of English reading comprehension the researcher will do the Reading Comprehension test, then the writer score to each student by using the formula:

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

Where:

S = students' score

n = number of true answer

N = number of test items

Table 3.4

The Scoring Rubric for The Measurement of Reading Comprehension

| Mark Value | Letter Value | Heavy Value | Predicate |
|-------------------|---------------------|--------------------|------------------|
| 80-100 | A | 4 | Excellent |
| 70-<80 | B | 3 | Good |
| 60-<70 | C | 2 | Enough |
| 50-<60 | D | 1 | Less |
| 0-<50 | E | 0 | Fail |

b. Face Validity

For face validity of the test items as follow:

- a) The test used reading test in multiple choice test instruction.
- b) The evaluation by reading multiple choice test based on scoring system.

- c) The language of items used English.
- d) The reading test was suitable with syllabus of English writing for VIIIth MTsN-2 Palangka Raya.

c. Construct Validity

If a test has construct validity, it is capable of measuring certain specific characteristic in accordance with a theory of language behavior and learning. Construct validity refers to the practical test developed from a theory.

The tests would be based on the syllabus in making. The test will be refers to scope and limitation of the study. The test is about narrative text, reading literacy (Literal) and reading interpretative (inferential) which is refers to junior High School students. The item test is suitable with the syllabus of the eighth grade students of MTsN-2 Palangka Raya

E. Test Reliability

Reliability refers to the consistency of test score. It means how consistent test scores or other evaluation results are from one measurement to another.⁴ Basically there are three basic methods and the type of information each provides are as follow:

- a. Test–Retest method, which indicates the stability of test scores over some given period of time.

⁴WilmarTinambunan, *Evaluation of Student Achievement*, Jakarta: Depdiknas, 1988. p. 4.

- b. Equivalent forms method, which indicates the consistency of test scores over different forms of the test.
- c. Internal consistency method, which indicates the consistency of test scores over different parts of the test.

The steps in determining the reliability of the test were:

- a) Making tabulating of tester's scores.
- b) Measuring the mean of the testers' scores with the formula :

$$M = \frac{\sum X}{N} \times 100$$

- c) Measuring the total variants with the formula:

$$S^2 = \frac{\sum X^2 - \frac{(\sum X)^2}{N}}{N}$$

Where:

S^2 = the total variants

$\sum X$ = the total of score

$\sum X^2$ = the square of score total

N = the number of testers

- d) Calculating the instrument reliability using KR-21.

$$r_{11} = \frac{k}{k-1} \left[1 - \frac{M(k-M)}{k.S^2} \right]$$

Where:

r_{11} = Reliability of instrument

k = the number of items

M = the mean score for all the testers

S^2 = the standard deviation of the test score

- e) The last decision is comparing the value of r_{11} and T_{table}
- f) To know the level of reliability of instrument, the value of r_{11} was interpreted based on the qualification of reliability as follows:

$r_{11} > T_{table} = \text{Reliable}$

$r_{11} < T_{table} = \text{Not Reliable}$

Table 3.5
Criteria of Reliability

| Reliability | Interpretation |
|---------------------|------------------------------|
| 0.800- 1.000 | Very High Reliability |
| 0.600-0.799 | High Reliability |
| 0.400-0.599 | Fair Reliability |
| 0.200-0.399 | Poor Reliability |
| 0.000-.0199 | Very Poor Reliability |

F. Data Collection Techniques

The problem of this study:

What is effect of think aloud strategy toward the students' reading skill at the Eight grade of MTsN-2 Palangka Raya. To collect the accurate data in this study, the researcher selects the instruments that will be appropriate for the problem statement:

1. Documentation

Documentation method is used to look for the data concerning matters or the variable that are taken in the form of the note, transcript, book, newspaper, magazine, inscription, notulen, lengger, agenda, etc. It refers to the archival data that help the writer to collect the needed data. In this

study, this method is used to get the data that related to the object of research such as students' name list which are included in the population. In this case, the data was gained by the help of the English teacher.

2. Test

Test is a set of questions or exercises and other tools which are used to measure skill, intelligence, knowledge, and ability those are had by individual or group. The method of collecting data for this research is used testing. A test is a group of questions, tasks or exercises for measuring individual or groups skill. The contents or the reading task include factual question, determining a title and determining the main idea.

G. Data Collections Procedure

The technique of data analysis, will be used here is statistical analysis that is descriptive analysis. The writer do some ways in the data analysis procedures, they are as follows:

The writer do some ways in the data analysis procedures, they are as follows:

1. Observe the class
2. Determine two classes from the population into experiment group and control group
3. Take students' score before treatment by giving the pretest
4. Teach the experiment group using think aloud strategy
5. Teach the control group without using think aloud strategy

6. Evaluate the treatment by giving the post test to experiment and control group
7. Give score to the data from experiment group and control group
8. Analyze the data that have been obtained from pre-test and post test
9. Interpretation the analysis result
10. Conclude the activity of the study whether think aloud strategy can increase the students' reading skill or not, based on the obtain
11. Collecting the students' written scores of Pre-test and post- test.
12. Arranging the obtained score into the distribution of frequency of score table.
13. Calculating mean, median, modus, standard deviation and standard error of students' score.
14. Measuring the normality, homogeneity, and linearity.
15. Analyzing the data by using one-way T Test to answer the problem of the study. In addition, the SPSS 17 program is applied.
16. Interpreting the result of analyzing data.
17. Making discussion to clarify the research finding.
18. Giving conclusion.

H. Data Analysis

The data of this study were students' reading ability score. Therefore, the data were quantitative. The pretest and post-test raw score were converted into percentages. In order to analyze the data that had been collected. The mean, standard deviation and standard error of students' score be computed for the

pretest and post-test scores of the experiment and control groups. The writer used statistical t_{test} to answer the problem of the study. In Order to analyze the data, the writer did some way procedures:

1. Gave tests to the students of the eighth grade students at MTsN-2 Palangka Raya.
2. Collected the data of the students work sheet test result.
3. Scored the students' answers using the formula:

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

Where: S= Students' score

n= number of true answer

N= number of test items

4. Tabulated the data into the distribution of frequency of score table, then find out the mean of students' score, standard deviation, and standard error of variable X1 (Experimental group) and X2 (Control group) by using the formulas bellow:

a. Mean of students' score

$$\bar{X} = \frac{\sum FX_i}{n}$$

Where:

$\sum FX_i$ = total of score

n = total of the students

b. Standard deviation⁵

$$S = \sqrt{\frac{n \sum F_{xi}^2 + (\sum F_{xi})^2}{n(n-1)}}$$

c. Standard Error⁶

⁵ Riduwan, *Metode dan teknik Menyusun Thesis*, p. 351

$$SE_{md} = \frac{S}{\sqrt{N-1}}$$

Where:

S= Standard deviation

n_1 = the number of the experimental group

n_2 = the number of the control group

SE_{md} = Standard error

N= Number of Case

5. Normality Test

It is used to know the normality of the data that is going to be analyzed whether both groups have normal distribution or not. Chi square is used here⁷

$$X^2_{\text{observed}} = \sum_{i=1}^k \frac{(f_o - f_e)^2}{f_e}$$

Notice:

X^2_{observed} = Chi square

f_o = frequency from observation

f_e = expected frequency

Calculation result of X^2_{observed} was compared with X^2_{table} by 5% and 1% degree of significance. If X^2_{observed} was lower than X^2_{table} so the distribution list was normal.

6. Homogeneity Test

It is used to know whether the experimental group and control group, that were decided, come from population that has relatively same variant or not.

⁶ Sudjana, *Metode Statistika*, Bandung: Tarsito, p. 273.

⁷ *Ibid*, p. 179.

The formula was:⁸

$$X^2_{observed} = (\log 10) \times (B - \sum (dk) \log S^2_i)$$

Where: $B = (\log S^2_i) \times \sum (n_i - 1)$

Notice:

$X^2_{observed} \leq X^2_{table}$, is homogeneity.

$X^2_{observed} \geq X^2_{table}$, is not homogeneity.

If calculation result of $X^2_{observed}$ was lower than X^2_{table} by 5% degree of significance, it meant both groups had same variant.

7. Calculated the data by using t_{test} to test the hypothesis of the study, whether the using of think aloud gave effect to the students' reading comprehension skill scores or not. To examine the hypothesis, the writer used t_{test} formula as follows:⁹

$$t_{observed} = \frac{Mn_1 - Mn_2}{\sqrt{\frac{(n_1 - 1)S_1^2 + (n_2 - 1)S_2^2}{n_1 + n_2 - 2} \left(\frac{1}{n_1} + \frac{1}{n_2} \right)}}$$

Where:

Mn_1 = the mean score of experimental group

Mn_2 = the mean score of control group

S_1^2 = variance of experimental group

S_2^2 = variance of control group

n_1 = total of experimental

group students

n_2 = total of control group students

⁸*Ibid*, p. 177.

⁹*Ibid*, p. 273

To know the hypothesis was accepted or rejected using the criterion: **If $t_{\text{observed}} (\text{the value}) \geq t_{\text{table}}$, it means H_a is accepted and H_o is rejected. If $t_{\text{observed}} (\text{the value}) \leq t_{\text{table}}$, it means H_a is rejected and H_o is accepted.**

8. Interpreted the result of t_{test} . Previously, the writer accounted the degrees of freedom (df) with the formula:¹⁰

$$df = (N1+N2-2)$$

Where:

df: degrees of freedom

N1: Number of subject group 1

N2: Number of subject group 2

2: Number of variable

After that, the value of t_{test} will be consulted on the t_{table} at the level of significance 1% and 5%. If the result of t_{test} was higher than t_{table} , it meat H_a was accepted. But if the result of t_{test} was lower than t_{table} , it means H_o was accepted.

9. The writer made the conclusion of data analysis obtained.
10. In addition, the writer used SPSS 17.00 program to compare the data
11. Discussed and conclude the result of data analysis.

Figure 3.1 Steps of Collecting, Data Analysis Procedure and Testing

Hypothesis

¹⁰Anas Sugiono, *Pengantar Statistik Pendidikan*, Jakarta: Rajawali Press, 1978, p.284.

