# CHAPTER III

# METHODOLOGY OF THE RESEARCH

## A. The Method of the Research

The type of this research is experimental research. According to Cresswell (2008, p. 299), experiment is you test an idea (or practice procedures) to determine whether it influences an outcome or dependent variable. The method used in this research was quasi-experimental research that used pre-test and post-test non-equivalent control group design. This design involves two groups, one group for experimental and another group for control.

This research consists of two variables, clozeline strategy is independent variable and symbolized by X, while students' reading comprehension is dependent variable and symbolized by Y. The research can be designed in brief by following table:

**Table III. 1**
**Research Design**

| Group | Pre-Test | Treatment | Post-Test |
|---|---|---|---|
| Experiment | $O_1$ | X | $O_1$ |
| Control | $O_2$ | -- | $O_2$ |

The writer used two classes as sample in conducting this research. One class is for experimental and another class is for control. Both of class was given pre-test, then was given treatment differently, then was given

31

post-test for both of class. Treatment means that the experimental class was taught by using clozeline strategy and control class was taught by using the usual strategy that is used by the English teacher.

## B. The Location and Time of the Research

This research was conducted in State Senior High School 001 Kampar Utara, it is located on Pekanbaru-Air Tiris street Km 42. In addition, the time of the research was from August to November 2015.

## C. The Subject and Object of the Research

The subject of this research was the second year students of State Senior High School 001 Kampar Utara. Then, the object of the research was the effect of using clozeline strategy towards students' reading comprehension of the students at State Senior High School 001 Kampar Utara.

## D. Population and Sample of the Research.

### 1. The Population

The population of this research was the second year students of State Senior High School 001 Kampar Utara. The total number of population was 130 students; it was divided into five classes. The writer took two classes as sample by using cluster sampling.

**TABLE III.2**
**The Population of the Second Year Students of State Senior High**
**School 001 Kampar Utara**

| No | Class | The number of Students |
|----|-------|------------------------|
| 1. | XI A | 24 Students |
| 2. | XI B | 23 students |
| 3. | XI C | 30 students |
| 4. | XI D | 27 students |
| 5. | XI E | 26 students |
| | Total | 130 Students |

## 2. The Sample

The population above was large enough, therefore the researcher took the sample of the population of the research by using cluster random sampling. The researcher used this technique because the students were homogenous and this technique was selected the sample is not individual but group. According to Gay and Peter (2000, p. 129) cluster random sampling selects groups, not individuals. All the members of selected groups had similar characteristics. So, the research took two classes as sample. The researcher took two classes for the sample by using cluster random sampling. In this research, the researcher took the groups by using lottery. The researcher made the paper rolls, and then selected it randomly. The class was XI A for experimental class and XI B for control class.

**TABLE III.3**
**The Sample of the Research is the Second Year Students of State**
**Senior High School 001 Kampar Utara**

| No | Group | Class | Number Of Student |
|----|-------|-------|-------------------|
| 1 | Experimental class | XIA | 24 |
| 2 | Control class | XI B | 23 |
| Total | | | 47 students |

Based on the table above, it was clear that the experimental class consisted of 24 students and control class also consisted of 23 students. So, the number of both experimental class and control class was 47 students.

## E. The Technique of Collecting the Data

The writer used test to collect the data for this research. The type of test was multiple choices that consist of thirty items. It was divided into two types – pre-test and post-test. Pre-test and post-test were given to both of classes.

After the students did the test, the writer then took the total score from the result of the reading comprehension test. Then, the writer took the total score from the result of the reading comprehension test. According to Arikunto (2009, p 245) the classification of the students' score is shown below:

**Table III. 4**
**The Classification of students' Score**

| Score | Categories |
|---|---|
| 80-100 | Very good |
| 66-79 | Good |
| 56-65 | Enough |
| 40-55 | Less |
| 30-39 | Fail |

Finally, the result of the test in control and experimental classes was compared. By this result, the researcher could identify, whether or not there is an effective technique that can be used in improving students' reading comprehension on narrative text.

## F. The Validity of the Test

According to Brown (2003, p. 3) validity is the extent to which inferences made from assessment result are appropriate, meaningful, and useful in terms on the purpose of the assessment. A validity of the test is achieved if the test really measures the test-takers' ability. Furthermore, Hughes (2005, p.26) stated that a test is said to be valid if it measures accurately what it is intended to measure.

According to Hartono (2008, p 84) validity of the research instrument such as test, questionnaire, and observation can analyzed by doing factor analysis i.e. by correlating between instrument item score and total score. This can be done by using correlation of product moment, and then the formula is:

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

Where:

$r_{xy}$      : coefficient of correlation each instrument item

n : total number of respondent

X      : score of each item

Y      : total score

The term in taking decision is:

a. If r calculated > r table, then the instrument item has significant correlation toward total score, so it is valid.

b. If r calculated < r table, then the instrument item has no significant correlation toward total score, so it is invalid.

According to Heaton (1988, p. 159)stated that there are five categories of validity, they are:

**Table III. 5**
**The Category of Validity**

| No | Proportion correct (p) | Item Category |
|----|------------------------|---------------|
| 1 | P > 0.70 | Easy |
| 2 | $0.30 \leq P \leq 0.70$ | Average |
| 3 | P < 0.30 | Difficult |

The researcher used SPSS. 17.0 to find out the scores of instrument item validity. The result is shown in the table below:

**Table III. 6**
**The Result of Validity**

| No | Item No | $r_{xy}$ | $r_{table}$ | Category | Inf |
|----|---------|------|--------|----------|-----|
| 1 | Item 1 | 0,433 | 0,374 | Average (enough) | Valid |
| 2 | Item 2 | 0,458 | 0,374 | Average (enough) | Valid |
| 3 | Item 3 | 0,592 | 0,374 | Average (enough) | Valid |
| 4 | Item 4 | 0,381 | 0,374 | Low (less) | Valid |
| 5 | Item 5 | 0,512 | 0,374 | Average (enough) | Valid |
| 6 | Item 6 | 0,591 | 0,374 | Average (enough) | Valid |
| 7 | Item 7 | 0,395 | 0,374 | Low (less) | Valid |
| 8 | Item 8 | 0,462 | 0,374 | Average (enough) | Valid |
| 9 | Item 9 | 0,512 | 0,374 | Average (enough) | Valid |
| 10 | Item 10 | 0,398 | 0,374 | Low (less) | Valid |
| 11 | Item 11 | 0,412 | 0,374 | Average (enough) | Valid |
| 12 | Item 12 | 0,378 | 0,374 | Low (less) | Valid |
| 13 | Item 13 | 0,42 | 0,374 | Average (enough) | Valid |
| 14 | Item 14 | 0,392 | 0,374 | Low (less) | Valid |
| 15 | Item 15 | 0,392 | 0,374 | Low (less) | Valid |
| 16 | Item 16 | 0,406 | 0,374 | Average (enough) | Valid |
| 17 | Item 17 | 0,407 | 0,374 | Average (enough) | Valid |
| 18 | Item 18 | 0,381 | 0,374 | Low (less) | Valid |
| 19 | Item 19 | 0,606 | 0,374 | High (good) | Valid |
| 20 | Item 20 | 0,517 | 0,374 | Average (enough) | Valid |
| 21 | Item 21 | 0,387 | 0,374 | Low (less) | Valid |
| 22 | Item 22 | 0,757 | 0,374 | High (good) | Valid |
| 23 | Item 23 | 0,443 | 0,374 | Average (enough) | Valid |
| 24 | Item 24 | 0,533 | 0,374 | Average (enough) | Valid |
| 25 | Item 25 | 0,428 | 0,374 | Average (enough) | Valid |
| 26 | Item 26 | 0,383 | 0,374 | Low (less) | Valid |
| 27 | Item 27 | 0,391 | 0,374 | Low (less) | Valid |
| 28 | Item 28 | 0,395 | 0,374 | Low (less) | Valid |
| 29 | Item 29 | 0,612 | 0,374 | High (good) | Valid |
| 30 | Item 30 | 0,418 | 0,374 | Average (enough) | Valid |

Table above shows that all of correlation coefficient for each instrument item is higher than t table ($r_{xy} > r_{table}$). Then all of the items of the test are valid. The item number 7, 10, 12, 14, 15, 18, 21, 26, 27, and 28 are categorized Low (less). The item number 1, 2, 3, 5, 6, 8, 9, 11, 13, 16, 17, 20, 23, 24, 25 and 30are categorized Average (enough). The item

number 19, 22, and 29 are categorized High (good). Then the entire item is valid and it can be used to take the data of research.

### G. The Reliability of the Test

A test must first be reliable as measuring instrument. According to Miles and Banyard (2007, p. 270) reliability is a necessary characteristic of any good test. Reliability refers to whether a test measures something well. The researcher analyzed reliability of the instrument by using Cronbach's Alpha formula (Arikunto, 2002, p. 193):

$$r_{11} = \left[\frac{k}{k-1}\right]\left[1 - \frac{\sum \sigma_b^2}{V_t^2}\right]$$

Where:

$r_{11}$      : reliability of the instrument

k      : total number of item

$\sum \sigma_b^2$      : total of each item variance

$V_t^2$      : total of variance

According to Guilford (1956, p. 145, in thesis Aulia Ika Putri 2016) stated that there are five categories of validity, they are:

**Table III. 7**
**The Category of Reliability**

| No | Score | Category |
|----|-------|----------|
| 1 | $0.80 < r_{11} \leq 1.00$ | Very high |
| 2 | $0.60 < r_{11} \leq 0.79$ | High |
| 3 | $0.40 < r_{11} \leq 0.49$ | Average |
| 4 | $0.20 < r_{11} \leq 0.39$ | Low |
| 5 | $-1.00 \leq r_{11} \leq 0.19$ | Very low (unreliable) |

The researcher used SPSS. 17.0 to find out the scores of reliability of the instrument. The result is shown in the table below:

**Table III. 8**
**The Result Reliability**

| Cronbach's Alpha | N of Items |
| --- | --- |
| .871 | 30 |

Based on the table above, it is known that the score of Cronbach's alpha is 0.871. The total item is 30. Then the reliability of the instrument is categorized Very High.

## H. The Technique of Analyzing the Data

The writer analyzed the data by using SPSS program. There were two groups in this research, so the writer used independent sample t-test to find out the effect of using clozeline strategy toward students' reading comprehension. The formula is:

$$d = \frac{M_2 - M_1}{\sqrt{\frac{S_1^2 + S_2^2}{2}}}$$

Where:

$t_o$ : The value of $t_{obtained}$

$M_x$ : Mean score of experimental class

$M_y$ : Mean score of control class

$SD_x$ : Standard deviation of experimental class

SD$_y$ : Standard deviation of control class

N : Number of the students

After computing t-test, it obtains the degree of freedom that is used to determine whether the t-obtained is significant or not. The obtained value is consulted with the value of t-table by using degree of freedom (df) = (NI+N2)-2 statically hypothesis:

1. H$_o$ is accepted if t$_o$ <t$_{table}$ or there is no significant effect of using clozeline strategy toward students' reading comprehension on narrative text at State Senior High School 001 Kampar Utara.

2. H$_a$ is accepted if t$_o$ >t$_{table}$ or there is any significant effect of using clozeline strategy toward students' reading comprehension on narrative text at State Senior High School 001 Kampar Utara.