CHAPTER III

RESEARCH METHODOLOGY

3.1 Research Design

The research design of this study was an experimental research. There were two variables in this study, namely RAFT (Role, Audience, Format, Topic) as the independent variable and students' reading comprehension as the dependent variable. In collected data, there were two groups namely, experimental group and control group. The design was applied in order to compare the data that were gained from both of groups. The experimental group was taught by using RAFT (Role, Audience, Format, Topic) strategy, while the control group is taught by using Conventional Method.

Table 3.1
Experimental and Control Group

Group	Pre-test	Treatment	Post-test
Experimental Group	X1	✓	X2
Control Group	Y1	-	Y2

Where:

X 1 : Pre-test of experimental group

Y 1 : Pre-test of control group

X 2 : Post-test of experimental group

Y 2 : Post-test of control group

1. : Using RAFT strategy on teaching Reading

- : Without using RAFT strategy on teaching Reading

3.2. Population and sample

3.2.1. Population

According to Sugioyono (2017: 80), population is an area of generalization consisted of objects or subjects which become the quantity and certain characteristics that are determine by the researcher to study and then draw conclusions. The population of this research was taken from students of SMP Tarbiyah Islamiyah TP. 2020/2021 at Jl. Perintis Kemerdekaan, Simpang Beringin, Hamparan Perak, Deli Serdang, North Sumatra.

Table 3.2
Population and Sample of the Research

No	Classes	Population
1	VIII-A	38
2	VIII-B	38
3	VIII-C	38
4	Total	114

3.2.2. Sample

According to Sugiyono (2018:81) is a part of the number and characteristics possess by that sample population was taken from the population must be truly representative (represent). The sample of this research is class VIII-B and VIII-C consist of 38 students consisted of which was taken by using cluster random sampling technique. It meant that the entire student population was involved to be sampled in this study. And one of the two classes was chosen as the control group,

and the other as the experimental group. In this study, class VIII-B as the experimental group and VIII-C as the control group.

Table 3.3
Sample of the Research

No	Classes	Population
1	VIII-B	38
2	VIII-C	38
3	Total	76

3.3. Procedures of Data

One of the most important activities in conducting research is how to collect data. To collect data, researchers must have appropriate research instruments because they play an important role in determining the quality of the research. In this research, researchers was used tests (pre-test and post-test) that is made by the researcher. The test consists of 20 multiple choice questions from several descriptive texts.

3.3.1. Pre-test

A pre-test was given before treatment. Both the experimental group and the control group were given the same test. Students were asked to answer the item of reading comprehension . There were 20 items of reading comprehension test was design by researcher from book sources or the internet.

3.3.2. Treatment

The experimental and control groups were taught using the same material but with different treatments. The experimental group was taught using the RAFT strategy (Role, Audience, Format, Topic), for students' reading comprehension,

while the control group was taught using the conventional method. The teacher taught the experimental group and the control group with the following procedure.

Table 3.4
The Procedure for the Experimental and Control Group

No	Experimental Group	Control Group
1	**First Meeting** **1. Introduction** • Greeting (The teacher greets the students and students response) • Teacher gives motivation and instructions to students to start do the test first. **2. Main activities Pre test** • Teacher gives pre-test to the students by distributing the test of reading in a piece of paper. • Teacher collects the student's answer sheet. **3. Closing**	**First Meeting** **1. Introduction** • Greeting (The teacher greets the students and students response) • Teacher gives motivation and instructions to students to start do the test first. **2. Main activities Pre test** • Teacher gives pre-test to the students by distributing the test of reading in a piece of paper. • Teacher collects the student's answer sheet.

	• Teacher gives the conclusion about the lesson.	**3. Closing** • Teacher gives the conclusion about the lesson.
2	**Second Meeting** **1. Introduction** • Greeting (Asks the student's condition). • Teacher gives motivation. **2. Main Activities Treatment** **Step 1 :** • Teacher explains about the reading RAFT to the students. • Teachers contributes the reading text to the students and give the instruction how to answer the reading test of the text by applying RAFT, as following activities.	**Second Meeting** **1. Introduction** • Greeting (Asks the student's condition). • Teacher gives motivation. **2. Main Activities** **Step 1** • Teacher asks the students to open their book and asks one of the students to read the reading passage on it. **Step 2** • Teacher asks the students to find out the difficult words and get the meaning of words from dictionary. **Step 3**

	Before Reading : • **Stimulation:** The teacher asks students to skim information such as titles, pictures, and bold or underlined words to determine (a) what they know about the topic and (b) what information they got from the text. • **During Reading** • the teacher explains to students about the descriptive text • students asks to choosen a topic that they choose and brainstorm about the topic they choose • Teacher asks students to tell what is about important person, place or things. **After Reading**	• Teacher asks the students to translate the text and try to comprehend it. **3. Closing** • Teacher gives the conclusion about the lesson.

	• The students present the reading results in front of the class **3. Closing** • Teacher gives the conclusion about the lesson.	
3	**Third Meeting Treatment** **1. Introduction** • Greets the students (ask their condition) • Teacher gives the motivation and asks them about RAFT that the students have already studied. **2. Main Activities** • The teacher provides student texts that must be understood by students after	**Third Meeting** **1. Introduction** • Greets the students (asked their condition) • Teacher gives motivation **2. Main Activities** • Teacher gives the students texts and asks the students to comprehend it. Then the students also have to answer the questions of the text. • Teacher asks the students to comprehend the text by using dictionary.

	implementing RAFT in cooperative learning. Then students also have to answer text questions. • The teacher divides students into groups. Then, students asks to present a descriptive text based on the topic they choose, one member of the group from each grou take turns playing the role of a resource person to answer questions from the audience. • Teacher asks the students to apply RAFT in cooperative learning. **3. Closing** • Teacher collects the students answer sheet and gives the conclusion about the lesson.	**3. Closing** • Teacher collects the student's answer sheet and gives conclusion about the lesson.

4	**Fourth Meeting** • Teacher gives the direction related to the test. • Teacher gives post-test	**Fourth Meeting** • Teacher gives the direction related to the test • Teacher gives post-test.

3.3.3. Post-test

After the treatment, a post-test was administered which by giving a post-test. The final test was used to determine whether the RAFT strategy affected students' reading comprehension. Post-tes given to the experimental and control group. Students were given a post-test to determine the difference in scores between the experimental group and control group by using the RAFT (Role, Audience, Format, Topic) strategy and conventional methods.

3.4. Instrument of the research

Sugiyono (2017: 102) states that a research instrument is a tool used to measure observed natural and social phenomena. To collect the data, the researcher used test as the instrument to obtain the data. Data were collected by giving 20 items multiple choices to both of experimental group and control group in pre-test and post-test. The technique of collecting data has and important role in conducting any kinds of research in order to make the result of the study was valid. The time will be given for doing the test is 40 minutes. The researcher hoped the students use the time effectively to finish the test.

3.5. Reliability and Validity

Reliability and validity are also important parts of research because this is necessary to determine whether the instrument is valid and reliable. Validity is the

accuracy of an instrument in measuring to test the instrument the researcher used SPSS 20 version application program to get same data.

In determining a valid and significant item with a total mean score, the researcher used SPSS testing technique which is often use to test the validity of using the Bivariate (Pearson) correlation formula which will use in this study.

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

Pearson Moment Products formula:

r_{xy} = Is the product of total amount of variable x and the total amount of variable y.

N = Is the number of data pairs X and Y.

$\sum$X = Is the total of variable X.

$\sum$Y = Is the total of variable Y.

$\sum X^2$ = Is acquired a total amount of variable X.

$\sum Y^2$ = Is acquired a total amount of variable Y.

Measurements that have high reliability mean that measurements can produce reliable data (Azwar, 2015). In the reliability testing method, among others, the Flana formula, Cronbachs Alpha, the KR (Kuder-Ricardson) -20, KR – 21 formula method. The method that the researcher will use is Cronbach's Alpha because this method is very suitable for use in dichotomous scores (0 and 1) and will produce an equivalent calculation. The KR-20 and Anova Hoyt methods, if the measurement results are incorrect so the measuring instrument is will categorize as reliable if the measurement results are constant.

$$r_{11} = \left(\frac{n}{n-1}\right)\left(\frac{S^2 - \sum[x]}{S^2}\right)$$

KR 20 Formulas:

n = Sample size for the test.

p = Proportion of people passing the item.

q = Proportion of people falling the item.

S^2 = Variant total.

r_{11} = Reliabilities instrument.

3.6. Technique of data collection

In data collection, this study used the pre-test and post-test to the experimental and control groups. There are several stages carried out as follows:

2. Giving pre-test to both classes
3. Teaching the experimental group using the RAFT strategy.
4. Teaching in a control group using the Lecture method.
5. Giving post-test for both classes.
6. Assessment of students' reading tests.

3.7. Technique of Data analysis

After the data collection from the post-test, the researcher was analyzing the data using the T-test formula. Before analyzing the data using the T-test formula, the researcher also used the normality and homogeneity test. In analyzing the data, the following t-test formula is as follows:

$$t = \frac{Ma - Mb}{\left(\frac{da^2 + db^2}{Na + Nb - 2}\right)\left(\frac{1}{Na} + \frac{1}{Nb}\right)}$$

T test Formula:

t = Total score.

Ma = The mean of experimental group.

Mb = The mean of control group.

da^2 = The standard deviation of experimental group

db^2 = The standard deviation of control group.

Na = The total number sample of experimental group.

Nb = The total number sample of control group.