**CHAPTER III**

**RESEARCH METHODOLOGY**

1. **Research Method and Design**

The aim of the research focuses on investigating whether there is an effect of one stays the rest stray technique on students’ reading comprehension. Pre-Experimental method with One-Group Pretest-Posttest Design will be used in this research. Sugiyono (2016:74) says, “Pre-Experimental design is used to investigate the effect of new invention to one varriable to another varriable”. It means that the method is used to measure an outcome before and after using that invention. The method and design are as follows:

O1 X O2

 Note:

 O1: Pretest on reading comprehension before the treatment.

 O2: Posttest on reading comprehension after the treatment.

 X : The treatment (using One Stays the Rest Stray Technique)

 In this research, one class as a sample will be used. Then, the pretest is given to the sample in the first meeting. The pretest is given to identify background knowledge of the students about their reading comprehension. O1 is used as a symbol of result of the pretest. Next, students as the sample will be given a material by using One Stays the Rest Stray Technique as the treatment (X) in teaching learning process. The treatments will be conducted three times to the class. At the end of teaching learning process a posttest will be given to find out whether there is an effect the One Stays the Rest Stray Technique on students’ reading comprehension. The symbol of O2 is used as the posttest result.

1. **Population and Sample**

The first grade students of *MA Al-Amin* will be the population in this research. Students who learned narrative text in the first grade will be chosen as the participant in this research. In taking the sample, One-Group Pretest-Posttest design will be used in this research. It is X-2 class that contains of 30 students. Therefore, there are 30 students as the sample for experimental group who will be taught the material by using one stays the rest stray.

1. **Data Collection Technique**

The data will be collected from pretest and posttest result to investigate students’ reading comprehension of narrative text in essay questions. In this research, data resources will be taken from pretest, three times of treatments, and posttest.

1. Pretest

Pretest is the first step to gain the data. The students will get pretest to measure their comprehension in a narrative text. Pretest is given to the group in the first meeting to know students’ basic knowledge in their reading comprehension. In the pretest the students are asked to answer all of the questions about narrative text.

1. Treatments (Application of the Technique)

The treatment will be given as the second step to get the data. Three times of treatments will be given to the students using One Stays the Rest Stray Technique. There are several steps in using One Stays the Rest Stray Technique. The first, students are divided into 8 groups. The second, each group is given a different paragraph and they discuss the paragraph they get. After that, one of the members stays in their group while the rests stray in other groups to ask the information about other paragraphs. The next, the students return to their previous group or based group after they have already got the information from other groups about the content of other paragraphs. The fourth, all groups discuss all the information from each paragraph. The last, the teacher gives questions about the paragraphs to the all groups. There are 20 questions that will be given to the students which consist of skimming, scanning, reference and vocabulary questions.

1. Posttest

After that, posttest is the last step to gain the data. In teaching learning process using One Stays The Rest Stray Technique, the students will be given the exercise in the end teaching learning process to check the impact of One Stays The Rest Stray Technique on students’ reading comprehension in narrative texts. Expert validation is used to validate the instruments about narrative texts.

1. **Data Analysis**

To find out the effect of the treatments on students’ reading comprehension, the result of pre-test is compared to the result of post-test using the formula t-test. The following formulas are taken from Supardi (2013: 325) as follows:

1. Calculating Gain (*d*)

Calculating Gain (*d*) is used to find out the result of the student’s tests before and after being taught by using one stays the rest stray technique. The procedure is post-test result (*y*) minus pre-test result (*x*) of each student. The formula can be seen in table 3.1

**Table 3.1**

*d* = [*y - x*]

Y = the post-test result of each student

X = the pre-test result of each student

1. Calculating Mean of Gain (M*d*)

Calculating Mean of Gain (M*d*) is the way to know the average of the results of all samples. The procedure is all of the gains of the sample are divided by the number of samples. The formula can be seen in table 3.2

**Table 3.2**

 ∑ *d*

M *d* = *n*

M*d* = Mean of gain

∑*d* = Sum of gain

*n* = total of sample

1. Calculating t-test

t-test is used to test the average comparative hypothesis of two samples when the data is in the form of interval or ratio. The procedure is the mean of gain divided by the root of quadrate deviation of gain score divided by total sample multiplied by total sample minus one. The formula can be seen in table 3.3

 **Table 3.3**

 M *d*

*t* =

 $\sqrt{\begin{array}{c}\sum\_{}^{}xd^{2}\\n(n-1)\end{array}}$

 *t* = t-test

 M*d* = Mean of gain

 $\sum\_{}^{}x d$ = Deviation of gain score (*X*d = d1-Md)

 $\sum\_{}^{}xd^{2}$ = Quadrate deviation of gain score

 *n* = total of sample

1. Testing the Hypothesis

The formula degree of freedom is taken from Arikunto (2014:350)

In which used to compare and test the hypothesis by knowing the result of tcal and ttab.

*dƒ =N*-1

 *df* = Degree of freedom

 *N* = total number of sample