

## **CHAPTER III**

### **RESEARCH METHOD**

This chapter presents the research method. It focuses on the method that is used in conducting this study which covers (a) research design, (b) population, sample, and sampling, (c) research variable, (d) research instrument, (e) tryout, (f) validity and reliability testing, (g) normality and homogeneity testing, (h) data collecting method, (i) treatment, (j) data analysis, and (k) hypothesis testing.

#### **A. Research Design**

Research designs are plans and the procedures for research that span the decisions from broad assumptions to detailed methods of data collection and analysis (Creswell, 2009:3). In conducting this research, it needs a plan for some steps that will be taken. Consequently, the design of this research should be suitable for the research condition. The research approach that used in this study is quantitative approach. It means for testing objective theories by examining the relationship among variables. These variables can be measured, typically on instruments, so that numbered data can be analyzed using statistical procedures.

In this study, the researcher used Quasi-experimental research. Ary (2010:648) states that Quasi-experimental is the research in which the investigator can control the treatment and the measurement of the dependent variable but the subjects are not randomly assigned to the treatment conditions.

This research is classified into Quasi-experimental research that uses nonrandomized control group, pretest-posttest design. In this design, the researcher evaluated the experimental group before and after given a treatment. Meanwhile, the other class stands as control group. This group is also given the treatment but it is different from the treatment in experimental group. The illustration of the research design in this study is as the table below :

**Table 3.1 The Illustration of Research Design**

Group	Pretest	Independent Variable	Posttest
E	$Y_1$	$X$	$Y_2$
C	$Y_1$	—	$Y_2$

E : Experimental group

C : Control group

$Y_1$  : Pretest for both of groups

$X$  : Treatment for experimental group (One Stays the Rest Stray technique)

$Y_2$  : Posttest for both of groups

## **B. Population, Sample, and Sampling**

### **1. Population**

A population is defined as all members of any well-defined class of people, events, or objects (Ary, 2010:408). Based on this statement, it can be concluded that the population is all object of the research. The population of this research is second grade students of Junior High School 3 Kedungwaru, which consists of ten classes (A-J). Each class consists around 31 up to 32

students. Therefore, the total numbers of the second grade students of Junior High School 3 Kedungwaru are 311 students.

## **2. Sample**

According to Arikunto (2010:174), a sample is a part representative of population that is observed. There are many number in population, so the researcher took sample as the representative of the population. The researcher took the sample from A and B class of second grade students of Junior High School 3 Kedungwaru. A class is as a control group and B class as an experimental group. The control group (A class) consists of 31 students. There are 17 boys and 14 girls in the control group. Then, the experimental group (B class) also consists of 32 students. There are 20 boys and 12 girls in the experimental group.

## **3. Sampling**

Sampling is a technique for taking the sample (Sugiyono, 2015:118). It means that sampling is the process of getting the representative part of the population that was studied. The researcher uses purposive sampling technique to choose the sample. According to Ary (2010:648), purposive sampling is a nonprobability sampling technique in which subjects judged to be representative of the population are included in the sample. Purposive sampling technique is the way to choose the sample with a certain criteria or reason. The researcher used purposive sampling by consideration of students' achievement

in English subject. In this study, the researcher chooses two classes that the students have moderate or average ability in English. It was based on the English teacher suggestion. Moreover, the researcher also felt that it was appropriate with needed.

### **C. Research Variable**

Anything that has quantity or quality that varies is usually called as a variable. Santrock (2004:47) explained that a variable is the characteristic or attribute of individual, group, or educational system that researcher is interested in. There are two types of variables that are independent and dependent variable.

#### **1. Independent variable**

Creswell (2014:84) defined the independent variables as those that cause, influence, or affect outcomes. It means that independent variable is the variable that refers to how participants are treated. It is also a factor that affects a dependent variable. In this study, the independent variable was One Stays the Rest Stray technique.

#### **2. Dependent variable**

According to Creswell (2014:84), dependent variables are those that depend on the independent variables; they are the outcomes or results of the influence of the independent variables. It can be said that dependent variable is a variable which is observed and measured to determine the

effect of the independent variable. The dependent variable in this study was students' reading ability in narrative text.

#### **D. Research Instrument**

According to Arikunto (2010:262), research instrument refers to any equipment used to collect the data. The instrument used in this study is a test. It is because this study is an experimental research. A test is a set of stimuli presented to an individual in order to elicit responses on the basis of which a numerical score can be assigned (Ary, 2010:201). There are two kinds of tests for this study, they are pretest and posttest. Pretest is used to measure students' reading ability before the treatment was given, while posttest is to measure students' reading ability after the treatment was given.

The test consists of 20 items in the form of multiple choice. Those items included of social function, main idea, explicit information, implicit information, word reference, and also word meaning. The researcher used multiple choice test because the scoring can be perfectly reliable. Moreover, the scoring should also be rapid and economical. The assessment of this questions is based on totally true and false answer. The scoring guide is as the formula below :

$$\text{Score} = \text{number of correct items} \times 5$$

If the students can answer one true answer, they will get 5 points. It can be said that each true answer will get 5 points and the false answer will get zero point. So, if the students can get true answer for all items, they will get the excellent point or 100 points. On the contrary, if they do not get no one true answer, they will get poor result or zero point.

### **E. Tryout**

In this study, the researcher conducted tryout of the test to another subject of sample. The purpose of conducting tryout of the instrument is to achieve the validity and reliability of the instrument. Tryout was implemented to ten students of the second grade students in Junior High School 3 Kedungwaru. After consulting with the English teacher, she suggested to choose some students from D class because the characteristics of the students ability are similar to the sample was used in this study. Therefore, tryout subject was ten students from different class, that was D class. Based on the agreement with the students, tryout was being conducted after school time and was done in 40 minutes. The researcher administrated tryout on January 31<sup>st</sup>, 2018.

### **F. Validity and Reliability Testing**

#### **1. Validity**

Lodico, et al (2006:87) stated that validity focuses on ensuring that what the instrument claims to measure is truly what it is measuring. It means that the instrument that is used by the researcher must be able to be used to measure

what will be measured, so it has to be valid. A valid test of reading ability actually measures reading ability, not previous knowledge or other irrelevant variable. According to Brown (2004), the validity of the test has five types, they are Content validity, Criterion-related validity, Construct validity, Consequential validity, and Face validity. However, Brown (2004:22) also mentioned that there is no absolute measure of validity, but several different kinds of evidence (content, criterion-related, construct, consequential, and face) may be involved in support. Based on this statement, the researcher decided to use content, construct, and face validity because this kinds of validity have given enough support for the instrument validation in this study. Therefore, the researcher emphasized on the content validity, construct validity, and face validity to know the validity of the test as follow :

**a. Content validity**

Brown (2004:22) explained that content validity can be fulfilled if a test requires the test-taker to perform the behavior that is being measured. Based on this statement, it can be concluded that a test must be related with curriculum and the material which is used by the researcher when do the treatment. Therefore, the instrument in this study achieved the content validity since the test was designed based on the syllabus of the second grade of Junior High School 3 Kedungwaru on the second semester. The teaching-learning process of the second grade of Junior High School 3 Kedungwaru implements KTSP curriculum as presented in the following table :

**Table 3.2 Standard Competence and Basic Competence in  
KTSP Curriculum**

<b>Standard Competence</b>	<b>Basic Competence</b>
1.1 Understanding the content of the simple short functional text in the form of recount and narrative text to interact with the environment.	1.1.3 Responding the meaning and the rhetorical step in the written text correctly, accurately, and politely related with daily life to interact with the environment in the form of recount and narrative text.

In this study, the material which is used by the researcher is narrative text. It was a suitable material because narrative text is one of the texts that has to be mastered by the second grade of Junior High School based on the KTSP curriculum. Before contributing the test to the subject of the research, the researcher also consulted the instrument related to the questions with some teachers who expert in teaching English, especially in reading. In this case, the researcher made six indicators in the blueprint of the test as follow :

**Table 3.3 Blueprint of the Test**

<b>No.</b>	<b>Indicators</b>	<b>Item Number</b>
1	Find the communicative/social function of narrative text	1
2	Find the main idea of narrative text	8, 19
3	Find the explicit information of narrative text	2, 4, 12, 17, 18, 6, 7, 9, 11, 15
4	Find the implicit information of narrative text	10, 13, 20
5	Find the word reference in narrative text	3, 16
6	Find the word meaning in narrative text	5, 14



From the explanation above, it could be concluded that the test is valid in term of content validity (see the full version of blueprint of the test in Appendix 1).

**b. Construct validity**

Brown (2004:25) mentioned that a construct is any theory, hypothesis, or model that attempts to explain observed phenomena in our universe of perceptions. Based on this theory, construct validity is the measurement of the instrument or the test that will be used to conduct the research. In this study, the researcher uses multiple choices to measure the students' reading ability. The form of multiple choices are used to fulfill the construct of reading test in order to be valid in term of construct validity.

Moreover, the researcher also used Pearson Product Moment Correlation by using SPSS 21.0 version to know the validity of test items. However, the researcher had to find the degree of freedom first in order to know the  $r_{table}$  for the measurement. Then, the degree of freedom could be found by using the formula is as stated by Lestari and Yudhanegara (2015:193) below :

$$df = n - 2$$

where :

df = degree of freedom

n = number of students

In this study, the researcher gave the test to 10 students. When it was counted by using the formula above, the degree of freedom is 8. According to critical values of the Pearson Product Moment correlation coefficient in Ary (2010:630),  $r_{table}$  of degree of freedom 8 and level of significant 0.05 is 0.6319. The determination of testing is if the result of  $r_{count}$  is higher than  $r_{table}$ , it means that the test items are valid. Therefore, the test items can be valid if  $r_{table} < r_{count}$ . Table 3.4 shows the list of  $r_{count}$  of the test items.

**Table 3.4 List of  $r_{count}$  of the Test Items**

<b>Item Number</b>	<b><math>r_{table}</math></b>	<b><math>r_{count}</math></b>
1	0.6319	0.813
2	0.6319	0.813
3	0.6319	0.813
4	0.6319	0.813
5	0.6319	0.736
6	0.6319	0.736
7	0.6319	0.736
8	0.6319	0.813
9	0.6319	0.736
10	0.6319	0.736
11	0.6319	0.813
12	0.6319	0.713
13	0.6319	0.736
14	0.6319	0.736
15	0.6319	0.867
16	0.6319	0.736
17	0.6319	0.813

18	0.6319	0.634
19	0.6319	0.813
20	0.6319	0.813

Based on the table 3.4 above, it showed that all of the result of  $r_{\text{count}}$  is higher than  $r_{\text{table}}$ . So, it means that all of the test items were valid.

### c. Face validity

According to Brown (2004:27), face validity means that the students perceive the test to be valid. It can be concluded that the researcher has to give attention to the test form in order to make the students understand about the test which is given. The test form consists of the clear task and instruction, the well formatted test layout, and the clear printing of the test. To fulfill the face validity, the researcher consulted the instrument related to the layout with the experts, that are the advisor and Junior High School English teacher. Furthermore, the researcher also asked for their suggestion about the good test form.

## 2. Reliability

Ary (2010:649) stated that reliability is the extent to which a measure yields consistent result. In other word, the reliability of a measuring instrument is the degree of consistency with which it measures whatever it is measuring. Realibility focuses on the the effect of error on the consistency of scores. Before the pre-test was given, the researcher conducted a tryout of the

instrument on 10 students which did not include into the sample group, but they are the second grade of Junior High School too. The purpose of this tryout is to know how far the reliability of the instrument. After that, the researcher analyzed each item of the instrument by using SPSS 21.0 version. Cronbach's Alpha Formula was used to measure the reliability of the test.

According to Basuki and Hariyanto (2014:119), the criteria of reliability testing can be divided into 5 classes as the table below :

**Table 3.5 Criteria of Reliability Testing**

<b>Coefficient of Reliability</b>	<b>Description</b>
$0.0 \leq r \leq 0.19$	The reliability is very low
$0.20 \leq r \leq 0.39$	The reliability is low
$0.40 \leq r \leq 0.69$	The reliability is moderate
$0.70 \leq r \leq 0.89$	The reliability is high
$0.90 \leq r \leq 1.00$	The reliability is very high

Based on the tryout of the test that has been done on January 31<sup>st</sup>, 2018, the result of the test showed the reliability as follow :

**Table 3.6 The Result of Reliability Testing by Using Cronbach's Alpha**

**Reliability Statistics**

Cronbach's Alpha	N of Items
,863	20

According to the table 3.6 above, the result of the reliability testing was high. It means that the test was reliable.

## G. Normality and Homogeneity Testing

### 1. Normality

Normality test is to determine whether the data from population normally distributed or not. Normality test is done by the researcher after getting the result of pretest and posttest. The researcher used One-Sample Kolmogorov-Smirnov test by using SPSS 21.0 version to know the normality. The determination of testing is if the normality or Asymp. Sig. (2-tailed) higher than level of significant or 0.05, it means that the test distribution is normal.

**Table 3.7 Normality Testing of Pretest and Posttest (Experimental and Control Group)**

One-Sample Kolmogorov-Smirnov Test					
		Pretest of Experimental	Pretest of Control	Posttest of Experimental	Posttest of Control
N		30	25	30	25
Normal Parameters <sup>a,b</sup>	Mean	62,83	65,00	74,17	70,20
	Std. Deviation	7,154	6,770	6,706	6,205
Most Extreme Differences	Absolute	,213	,180	,183	,233
	Positive	,148	,140	,151	,233
	Negative	-,213	-,180	-,183	-,161
Kolmogorov-Smirnov Z		1,165	,900	1,001	1,164
Asymp. Sig. (2-tailed)		,132	,393	,269	,133

a. Test distribution is Normal.

b. Calculated from data.

Based on the result of normality testing above, the normality in pretest of experimental group was 0.312 and the normality in pretest of control group was 0.393. Moreover, it also can be seen that the normality in posttest of experimental group was 0.269 and the normality in posttest of control group

was 0.133. It means that the normality or Asymp. Sig. (2-tailed) in pretest and posttest of experimental and control group is higher than 0.05. Therefore, it can be concluded that the scores of both pretest and posttest in experimental and control group are in normal distribution.

## 2. Homogeneity

Homogeneity test is done to know the variance in population of research homogeneity or not. To know the homogeneity of the test, the researcher used One Way Anova by using SPSS 21.0 version. If the significance value is bigger than level of significant or 0.05, it means that the data both pretest and posttest have homogeneity of variances.

**Table 3.8 Homogeneity Testing of Pretest (Experimental and Control Group)**

**Test of Homogeneity of Variances**  
Pretest of Experimental and Control Group

Levene Statistic	df1	df2	Sig.
,162	1	53	,688

### ANOVA

Pretest of Experimental and Control Group

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	64,015	1	64,015	1,313	,257
Within Groups	2584,167	53	48,758		
Total	2648,182	54			

Based on table 3.8 above, the result of homogeneity testing of pretest (experimental and control group) is higher than level of significant ( $0.688 > 0.05$ ). It can be interpreted that the data is homogeneity.

**Table 3.9 Homogeneity Testing of Posttest (Experimental and Control Group)**

**Test of Homogeneity of Variances**

Posttest of Experimental and Control Group

Levene Statistic	df1	df2	Sig.
,440	1	53	,510

**ANOVA**

Posttest of Experimental and Control Group

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	214,561	1	214,561	5,104	,028
Within Groups	2228,167	53	42,041		
Total	2442,727	54			

The result of homogeneity testing of posttest (experimental and control group) in the table 3.9 above is higher than level of significant ( $0.510 > 0.05$ ). It can be concluded that the data has homogeneity of variances.

## H. Data Collecting Method

The data collecting method refers to how the way the researcher collect the data. The purpose of the data collecting in conducting the research is to get the data that is needed by the researcher. The method of collecting data is clarified as follow :

### 1. Pretest

Pretest is a test which is conducted before given a treatment to the students. It is given to both experimental group and control group. Pretest is needed to know the basic competence for the students and how far they know about the subject that will be taught. Pretest was given to the students at the first meeting, that is on February 2<sup>nd</sup>, 2018. There were 1

student of experimental group and 2 students of control group that were absent on that day. Therefore, pretest was followed by 31 students of experimental group and 29 students of control group. The researcher used objective test that is multiple choices. The test consists of two narrative texts and 20 multiple choice items (see the pretest items in Appendix 2). The students have to answer correctly based on the information on the text that is given.

## 2. Posttest

The researcher conducted the posttest in order to know or to measure the students' reading ability after the treatment was given. Furthermore, posttest is administrated to know whether there is significant difference of the students' reading ability between those who are taught with and without using one stay the rest stray technique. Posttest was given to the students at the last meeting, that is on February 10<sup>th</sup>, 2018. There were 1 student of experimental group and 4 students of control group that were absent on that day. Because of that condition, posttest was followed by 31 students of experimental group and 27 students of control group. In posttest, the researcher also used objective test that is multiple choices. The test consists of two narrative texts and 20 multiple choice items too (see the posttest items in Appendix 3). The students have to answer correctly based on the information on the text that is given.



## I. Treatment

Treatment was given after pretest was conducted. In this study, the researcher gave the treatment for the experimental group (see the lesson plan of experimental group in Appendix 4). Meanwhile, the researcher only taught the control group conventionally (see the lesson plan of control group in Appendix 5). The experimental group was given the treatment by using One Stays the Rest Stray technique. The purpose of the treatment is to help the students in understanding English text, especially in narrative text. The second and third meeting was used by the researcher to give treatment for the experimental group. The second meeting is on February 3<sup>rd</sup>, 2018 and the third meeting is on February 9<sup>th</sup>, 2018. Thus, the treatment was given two times. When the treatment was given, the students were enthusiastic, enjoyable, and interested in learning English. It was conducted by using the steps below :

**Table 3.10 The Steps of Treatment by Using One Stays the Rest Stray Technique**

Activities		
No.	Teacher	Students
1	Explained briefly about narrative text	Listened to the teacher's explanation
2	Asked for the students to divide the class into 5 groups	Followed the teacher's instruction and sat on their own group
3	Gave the reading passage and the tasks to each group	Understood the tasks which was given by the teacher

4	Asked for the students of each group to discuss their tasks. Each group discussed different paragraphs	Each group discussed different paragraphs of the reading passage
5	Walked in each group and helped them in case they found difficulties (the teacher is as a facilitator)	Had discussion together with their friends and the teacher (when it was needed) in each group
6	Asked one of the members to stay in their group while the rests strayed to other groups to ask the information about other paragraphs	One of the members stayed in their group while the rests strayed in other groups to ask the information about other paragraphs
7	Asked the students to return to their base group after they had got the information from other groups about the content of other paragraphs	Returned to their base group after they had got the information from other groups about the content of other paragraphs
8	Asked the students to discuss the results of their strayers to other groups and to understand the content of the passage	Returned to their base group and discussed the results of their strayers to other groups
9	Listened to the report of each group about the content of the passage	Made a report of their discussion on the passage, then shared it to the other groups in front of the class

## J. Data Analysis

According to Tavakoli (2012:145), data analysis is the process of reducing accumulated data collected in research to a manageable size, developing

summaries, looking for patterns, and performing statistical analysis. In this study, the data which have been analyzed were quantitative data. This kind of data uses and deals with statistical calculation. Thus, the researcher used statistic to analyze the data.

This activity was used by the researcher to identify the significant difference of the students' ability in reading narrative text between those who are taught by using One Stays the Rest Stray technique and those who are taught without using One Stays the Rest Stray technique. In this case, the researcher used Independent Sample T-test by using SPSS 21.0 version. Moreover, the increased mean score of experimental and control group was also considered by the researcher. If the increased mean score of experimental group is higher than the control group, it means that One Stays the Rest Stray is an effective technique to increase the students' ability in reading narrative text.

#### **K. Hypothesis Testing**

The researcher analyzes the data of students' score by using statistical calculation to know the effectiveness of One Stays the Rest Stray technique in this study. If the result of Sig. (2-tailed) is bigger than the level of significance 0.05, the null hypothesis cannot be rejected. It means that One Stays the Rest Stray as a teaching technique is not effective towards students' reading ability. Meanwhile, if the result of Sig. (2-tailed) is smaller than the level of significance 0.05, the null hypothesis can be rejected. It means that One Stays the Rest Stray as a teaching technique is effective towards students' reading ability.