

## CHAPTER III

### RESEARCH METHOD

In this chapter the writer presents about research design, subject of study, research variable, research instrument, validity and reliability testing, research procedure, data collecting method and data analysis technique.

#### A. Research Design

Before discussing about the topic, it is important to know what research is. Creswell (2008: 3) explains that research is a process of steps used to collect and analyze information to increase our understanding of a topic or issues. It means that research design is the way to conduct a research.

The design of this research is experimental research design with One-Group Pretest-Posttest. Experiment research is a research method which is used for finding the effect of treatments toward another in controlling condition (Arikunto, 2010:207). Therefore, experimental research involves a study of effect of systematic manipulation of one variable on another variable.

In this research the writer used pre-experimental design with One-Group Pretest-Posttest design. The writer used pre-experimental design because it only had one subject as control group and experimental group. The

illustration of the research design in this research was adapted from Ary *et. al.* (2010: 304), as follow:

**Table 3.1 the research design illustration**

$Y_1$	$X$	$Y_2$
Pre-test	Treatment (Independent variable)	Post-test (Independent variable)

From the table 3.1 the research design illustration assumed that:

$Y_1$ : The students' listening comprehension achievement before taught by using dictogloss technique

$X$ : The dictogloss technique treatment

$Y_2$ : The students' listening comprehension achievement after taught by using dictogloss technique

The differences application of the experimental treatment is evaluated by comparing the pre-test and post-test scores.

In this research, the writer used pre-experimental research with purpose to find out the effectiveness of using dictogloss technique toward the students' listening comprehension achievement at the eighth grade of SMPN 1 Rejotangan. The effectiveness of the technique could be known after

finding the significance difference by comparing the pre-test and post-test scores.

## B. Subject of the study

The writer presents about population, sample and sampling in this subchapter as follows:

### 1. Population

Population is a group of individuals who have the same characteristics (Creswell, 2008:151). So, Population is all subject being researched. The populations in this study are all of the students at the eighth grades of SMPN 1 Rejotangan in academic year 2015/2016. The eighth grades of SMPN 1 Rejotangan consists of 237 students and divided into ninth classes, VIII A, VIII B, VIII C, VIII D, VIII E, VIII F, VIII G, VIII H and VIII I. Each class consists of 24 – 30 students.

**Table 3.2 List of population**

Class	Male	Female	Total
VIII A	13	16	29
VIII B	16	14	30
VIII C	14	16	30
VIII D	12	12	24
VIII E	12	12	24
VIII F	10	14	24
VIII G	11	13	24
VIII H	13	16	29

VIII I	15	14	29
<b>Total</b>	<b>116</b>	<b>127</b>	<b>243</b>

## 2. Sample

Sample is a subgroup of the target population that the writer plans to study for the purpose of making generalization about the target population (Creswell, 2012: 142). It means that sample is part of population that is being studied. The population was very wide, so the writer takes one sample class in eight grade of SMPN 1 Rejotangan that is VIII A. It consists of 29 students; 13 males and 16 females.

## 3. Sampling

Sampling is technique to take sample. Ary et al (2010:167) stated that sampling is the small group that is observed. In this research the writer used purposive sampling. Gay (1992: 116) states a purposive sample, also commonly called judgmental sample, is one that selected based on the knowledge of a population and the purpose of the study.

The writer chooses purposive sampling because the writer wanted to use a class that has the average ability in learning English. Based on the purpose, the writer got advice from the English teacher at eight grade of SMPN 1 Rejotangan to choose VIII A class which consisted of 29 students; 13 males and 16 females.

### **C. Research Variable**

Research variable is characteristics of subject of the research. Creswell (2012:112) stated that a variable is a characteristic or attribute of an individual or an organization that writers can measure or observe and varies among individuals or organizations studied. In this research, the writer presents two main variables, there are.

#### **1. Independent variable (X)**

An independent variable is an attribute or characteristic that influences or affects an outcome or dependent variable (Creswell, 2012: 116).

Independent variable in this research is listening comprehension achievement by using dictogloss technique.

#### **2. Dependent variable (Y)**

A dependent variable is an attribute or characteristic that is dependent on or influenced by the independent variable (Creswell, 2012:115).

Dependent variable in this research is the students' listening comprehension achievement.

### **D. Research Instruments**

Research instrument is important to collect the data. According to Creswell (2012: 14), An instrument is a tool for measuring, observing, or documenting quantitative data. It contains specific questions and response possibilities that you establish or developing advance of the study. To collect the data in this research, the writer uses test.

Test is a set of stimuli presented to individual in order to elicit responses on the basis of which a numerical score can be assigned Ary, *et al* (2010: 201). The test that used to measure the students' listening comprehension achievement before and after being taught by using dictogloss technique is achievement test. Johnson (2001: 292) explains that:

Achievement test are concerned with how well a learner has done in relation to a particular course programme. The achievement usually come at the end of programmes and are deliberately based on content covered it. Achievement tests are useful to the teacher as well as learners, they indicate how well teaching has succeeded and where improvements need to be made. Two kinds of test that used in this research are pretest and posttest.

1. Pretest is given before the students are taught by using dictogloss technique. The title of the pre-test is "*Fun Camping*". The pretest consists of 20 questions with the types of test; 10 items in the form of fill in the blank and 10 items in the form of multiple choices. The time allocation of pretest is 45 minutes. The pretest design can be seen in appendix 1.
2. Posttest is given after the students are taught by using dictogloss technique. The title of the post-test is "*My Holiday*". The posttest consists of 20 questions with the types of test; 10 items in the form of fill in the blank and 10 items in the form of multiple choices. The time allocation of posttest is 45 minutes. The posttest design can be seen in appendix 2.

## **E. Validity and Reliability Testing**

A good test must fulfill and consider standardized of test itself. There are two important aspects in measuring test through a process of validity and reliability check.

### **1. Validity**

Validity is the development of sound evidence to demonstrate that the test interpretation (of scores about the concept or construct that the test is assumed to measure) matches its proposed use (Creswell, 2012:159). Weir (1993:19) also states that test validity supposes that the writer can be explicit about what is to be tested and takes steps to ensure that the test reflects realistic uses of particular ability to be measured. It means that validity must represent the test.

Four types of validity there are content validity, criterion-related validity, construct validity and face validity. To measure whether the test has a good validity, the writer analyzes the test from content validity and constructs validity

#### **a. Content validity**

Content validity is the test that a content which is relevant with the purpose of the test. Ary et al (2010:226) states that to have a content validity, the instruments are representative of some defined universe or domain of content. It mean that the test of listening comprehension must be made up of item testing knowledge of

listening comprehension. The test is made by the writer based on the course objective on syllabus of eighth grade of Junior High School.

**Table 3.3 Content validity**

<b>The material</b>	Recount text
<b>Standard competence</b>	8. Memahami makna dalam teks lisan fungsional dan monolog pendek sederhana berbentuk <i>narrative</i> dan <i>recount</i> untuk berinteraksi dengan lingkungan sekitar
<b>Basic competence</b>	8.1 Merespon makna yang terdapat dalam teks monolog pendek sederhana secara akurat, lancar, dan berterima untuk berinteraksi dengan lingkungan sekitar
<b>Indicator</b>	<ol style="list-style-type: none"> <li>1. Siswa dapat mengidentifikasi isi/makna yang terdapat dalam teks monolog pendek berbentuk recount</li> <li>2. Siswa dapat menjawab pertanyaan yang terdapat dalam teks monolog pendek berbentuk recount</li> </ol>
<b>Technique</b>	Fill in the blank test and multiple choice test

From the explanation above, it can be concluded that the test has a content validity because it is appropriate with course objective based on the syllabus of eight grade of Junior High School.

#### **b. Construct validity**

The construct validity of test is test which is capable of measuring certain specific characteristics in accordance with a theory of language behavior and learning (Heaton, 1975: 159). A test is said to have construct validity if it can be demonstrated that measures only the ability which is supposed to measure (Isnawati, 2014:29). In



listening comprehension test the writer used the two types of test that are fill in the blank and multiple choices.

The writer uses fill in the blank because it has some advantages. It minimizes the chance of students guessing the answer and requires students to think about the correct answer. Fill in the blank test also has high reliability. The form of fill in the blank can be seen in table 3.4:

**Table 3.4 Example test in form of fill in the blank**

*Last week I (1) \_\_\_\_\_ to Mount Bromo. I (2) \_\_\_\_\_ at my friend's house in Probolinggo, East Java. The house has a (3) \_\_\_\_\_ garden with colorful flowers and a (4) \_\_\_\_\_ pool.*

Then, the writer uses multiple choices as varian and it has many advantages. According Johnson (2001: 294), multiple choice question provide clear-cut right and wrong answer, thus avoiding endless agnoizing debates about whether a particular answer is correct or not. The form of multiple choice question can be seen in table 3.5:

**Table 3.5 Example test in the form of multiple choice**

*What is the title of the story?*

*A. My Trip*

*B. Nice Trip*

*C. My Holiday*

*D. Nice Holiday*

The test consists of 10 items in the form of fill in the blank and 10 item in the form of multiple choices with total questions are 20 questions each test.

## 2. Reliability Testing

Reliability indicates how consistently a test measures whatever it does measure. According Creswell (2012:159), reliability means that scores from an instrument are stable and consistent. Scores should be nearly the same when writers administer the instrument multiple times at different times. Also, scores need to be consistent. When an individual answers certain questions one way, the individual should consistently answer closely related questions in the same way. Hence, more similar the score are more reliable.

To find out the reliability test the writer conducting the tryout of pre-test and post-test to the students in other class in the same grade and test instrument. Try out test was done on March, 17<sup>th</sup> 2016 in SMPN 1 Rejotangan. The result of try out can be seen in table 3.6

**Table 3.6 List Scores of Tryout Pre- test and Post-test**

No	Name	Pre-test score	Post-test score
1.	ADT	35	70
2.	AGN	70	55
3.	AAA	50	50
4.	DOR	35	25
5.	DYP	25	35
6.	DKF	40	30
7.	FAR	50	35
8.	IYW	30	40
9.	INW	80	75

10.	JPT	70	60
11.	LFN	60	85
12.	LAL	45	60
13.	MBS	30	35
14.	MNF	65	70
15.	MAH	45	35
16.	NNK	80	75
17.	SRA	60	45
18.	VDN	30	40
19.	WCN	60	60
20.	YWA	85	90
21.	ZSD	75	80
22.	NHY	30	40
23.	RRA	75	70
24.	YSH	30	30

In order to measure the reliability of the test items, the writer used Kuder Richardson formula (KR-20) by using Microsoft Excel. KR-20 requires test administration only once. One correct answer is given point 1, while incorrect answer is given 0. Then, the writer got value of coefficient reliability was 0.706 for tryout pre-test instrument and the value of coefficient reliability was 0.717 for tryout post-test instrument. The reliability of pre-test and post-test can be seen in appendix 3 and appendix 4.

After calculated the reliability of the test items, the writer classified the reliability coefficient which was taken from Sudjiono (1996: 209- 230), as the follows:

**Table 3.7 Classification of Reliability Test**

<b>Reliability Test Coefficient</b>	<b>Classification</b>
0.99-1.00	More highly
0.70-0.89	High

0.50-0.69	Fair
0.30-0.49	Low
<0.30	Very low

Based on table 3.7, the value of coefficient reliability for tryout pre-test and post-test instrument shows that reliability of test is high because the score between 0.70-0.89. So, it concludes that both instrument in pre-test and post-test was reliable.

#### **F. Research Procedure**

In this sub-chapter, the writer explains the procedures of pre-experimental research that use one group pretest-posttest design as follows:

1. The writer administered a pretest in VIII A class on March 19<sup>th</sup>, 2016 with a purpose to measuring the students' listening comprehension achievement before giving treatment at eighth grade of SMPN 1 Rejotangan.
2. After giving a pre-test, the writer gives the treatment to students. The writer applied treatment by using dictogloss technique. The treatment was conducted four times. The first treatment was conducted on March 26<sup>th</sup>, 2016. The second treatment was conducted on March 31<sup>th</sup>, 2016. The third treatment was conducted on April 02<sup>st</sup> 2016. The fourth treatment was conducted on April 14<sup>th</sup>, 2016. The steps of treatment by using Dictogloss technique divided into four stages those are:

*a. Preparation*

The teacher give the students topical warming-up such as, some question that relevant with topic. Not only give the students topical warming-up, but the teacher also gives the students some vocabulary conerned with the topic which one can help them in dictation stages.

*b. Dictation*

In this stages, the teacher plays the recording of listening material twice. First satge, the students only listen which comprehend the recording without any take notes or write anything. They only listen to get a general information of the text. Second stage, the students listening with take a notes about important information from the recording that they get.

*c. Reconstruction*

The teacher ask to the students to reconsctruction the text in small group (4-5 students). In this stages, the students reconstruction the text in small group. The students discuss what they have note taking which similiar to the original version of text. During in reconstruction stage, the role of teacher was monitor the students' activities.

*d. Analysis and correction*

The students with teacher analysis and correction the result of students' reconstruction text. The students analyse and compere the result of students' reconstruction text with the original text that will be showed by the teacher. The teacher ask to the students about their

problem and try to give them solution. The last, the teacher ask the student to practice learning listening by using dictogloss technique in their home.

3. After giving the treatment or after teaching listening comprehension by using dictogloss technique to students. The writer administered a post-test on April 16<sup>th</sup>, 2016 with a purpose to measuring the students' listening comprehension achievement at eighth grade of SMPN 1 Rejotangan.

#### **G. Data Collecting Method**

In a research data has important aspect, because without data it is imposible to conduct the result of reserach. The data in this reserach were collected by administrating tests and also the instruments. The writer conducted pretest and posttest as follow:

1. Pre-test

Pre-test was administered before doing an experimental reserach or before teaching by using dictogloss technique. It was given to students to know their earlier knowledge before got the treatment. The pre-test was conducted on March 19<sup>th</sup>, 2016. The test consists of 10 items in the form of multiple choices and 10 item in the form fill in the blank with total 20 item each test. Time allocation of the test was 45 minutes.

2. Post-test

Post-test was administered after doing an experimental research or after teaching by using dictogloss technique. It was given to students to

know their listening comprehension scores after getting the treatment. The post-test was conducted on April 16<sup>th</sup>, 2016. The post-test consisted 20 items, 10 item in the form of multiple choice and 10 item in the form of fill in the blank. The questions of post-test were different from pre-test. Time allocation of the test was 45 minutes.

From the result of of pretest and posttest, then the writer analyze to find out is there any significance difference the students' listening score before and after being taught by using dictogloss technique. If there any differences score, it showed that treatment was successful, while if there was no differences score, it showed that treatment was unsuccessful.

#### **H. Data Analysis Techniques**

The writer in this research used quantitative data analysis technique by using stastical method. The quantitative data of this research in analyzed using statistical computation. The analysis was used to find out the significant difference scores between the students' listening comprehension before and after being taught by using dictogloss technique. The data was collected from students' scores in pretest and posttest with purposed to know the effectiveness of using dictogloss technique in teaching listening comprehension.

The data which was collected by the writer were then analyzed by using Paired Samples T-test through SPSS 16.0 for windows. *Paired Samples T-test* is used when the samples are paired or correlated where

each individual results in two data. In other words, the scores for pretest and posttest are correlated because those scores are got by individual.

The criteria for accepting or rejecting the hypothesis testing in this research are: If the t-count is higher than t-table (0,05%), the alternative hypothesis ( $H_a$ ) is accepted and null hypothesis ( $H_0$ ) is rejected. On contrary, If the t-count lower than t-table (0,05%), the null hypothesis ( $H_0$ ) is accepted and the alternative hypothesis ( $H_a$ ) is rejected.

