

## **CHAPTER III**

### **RESEARCH METHOD**

This chapter presented the research method. It focused on the method used in conducting this study. The decision covered Research Design, Population, Sample and Sampling, Variable of the Study, Data collecting method, Research Instrument, Validity and Reliability Testing, Normality Testing, and Data Analysis.

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

This research was conducted in experimental research by using a quantitative approach. The quantitative approach is every kind of number, not data or the research based on the test. According to Hamdi (2009:8), quantitative research could be defined as the research that uses of collecting data like a number and the analysis data use of statistics. The purpose of the the experimental study is to determine cause and effect relationship. Arikunto (2006:310) stated that experimental research has a purpose to investigate whether there is an effect on something that is treated as a subject of the research. In other words, experimental research tries to observe that cause and effect relations. In conducting this research, two classes in the first year students of MTs Darul Huda Wonodadi Blitar were involved. The students were administrated by giving pretest at the beginning to know their abilities in listening comprehension. In the middle, they were being given the different treatment and in the end, they were given posttest.

## B. The Population and Sample of the Research

**Table III.1**

**The Population and Sample of the Research**

No	Class	Population	Sample
1	X4	21	Experiment class
2	X2	21	Experiment class
Total		42	42

From the table above, it was seen that the total of population was 180. In addition, in taking a sample of the population the researcher used cluster sampling technique. The researcher took only two classes from six classes as a sample of the research. Furthermore, the sample of this research was 42 students. The sample was divided into two groups. The first group was an experimental class B, it consisted of 21 students and the other one was the experimental class C that consisted of 21 students.

### 1. Population

The population was whole of a research subject. In Encyclopedia of educational evaluation noted that a population is a set (or collection) of all elements processing one or more attributes of interest (Arikunto, 2010:173). Population-based on Ary et al (1975:53) population is all numbers of a well-defined class of people, events or object. In this research, the populations all third grade are 47 students consisted of two classes; they were class B 26 students and class C 21 students.

## **2. Sample**

According to Arikunto (2010:174) sample was a part of the population which is researched. In this research, the researcher took all of the students of third grades students of MTs Darul Huda Wonodadi Blitar, was divided into two classes consist of 47 students. The purpose of taking class B and C for the sample was because the researcher found that in MTs Darul Huda Wonodadi Blitar the students both of them less in listening achievement. From the description above the sample of this study were the students of MTs Darul Huda Wonodadi Blitar in the academic year of 2017/2018.

## **3. Sampling**

Sampling is a technique of taking a sample which gives an opportunity for every element or population member to be chosen as a sample. In this research, the researcher used purposive sampling. Purposive sampling was techniques to determine sample with a particular consideration. The researcher chose the class IX B and C at the sample because the students had homogeneity than other classes. The meaning of homogeneity in this research was the students had similar scores when they got an examination, especially in listening test. The researcher proved it when she shows a teaching practice there.

### C. Variable of the Study

A variable is a concept a noun that stands for variation within a class of objects. Variables can be classified into two classifications. The most important classification is on the basis of their use within the research under consideration when they were classified as independent variables or dependent variables (Ary, 1975:30).

#### a. The dependent variable (Y)

The dependent variable was observed to determine what effect, if any the types of a variable may have on it. In other words, a dependent variable would act if there was any relationship. In this research, the dependent variable was teaching listening comprehension.

#### b. The independent variable (X)

Independent variable is an antecedent of the dependent variable (Ary, 1985:29). Independent variable was variably selected by the research to the effect on our relationship with the dependent variable. In this research, there were two the independent variable was the first variable is teaching listening comprehension on the using drilling with audio recording from British council and the second variable was teaching listening comprehension on the using dictation with audio recording from British Council.

The designs of this research were as follows:

E1    O<sub>1</sub>    X    O<sub>2</sub>

E2    O<sub>3</sub>    X    O<sub>4</sub>

Where:

O <sub>1</sub> , O <sub>3</sub> : Pre-test	X: Treatment
O <sub>2</sub> , O <sub>4</sub> : Post-test	E1: Experimental Class 1
	E2: Experimental Class 2

## **D. Data Collecting Method**

### **1. The Instrument of Collecting the Data**

Data collecting technique of this research were as follow:

#### **1. Pre-test**

The researcher gave a pre-test to the class. There were 10 until 40 items for the questions.

#### **2. Treatment**

The researcher taught listening by audio. In this research, the researcher gave four treatments in every class. In experimental class one, the researcher used drilling as the technic. Then, experimental class two, the researcher used dictation as the technic to teach listening.

#### **3. Post-test**

The last step was giving post-test. It gave after the treatment finished. The post-test was purposed to know the result of students' achievement after the students' have been given teaching/ treatment.

## 2. Validity of the test

Valid instrument meant: that the instrument is suitable for measuring the object that will be measured (Arikunto, 2006: 168). In this research, the researcher assumed the role of expert that the test was used content validity. The formula was defined as follows:

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

Where:

$r_{it}$  : Coefficient of validity

N : Total of item

X : Score of item

Y : Total Score of all item

Arikunto (2006: 170)

The result of the computation of validity was consulted to the  $r$  table of the statistic. The test items were valid if  $r$  obtained is higher than  $r$  table or  $r_o < r_t$  and invalid if  $r$  obtained was lower than  $r$  table or  $r_o < r_t$ .

### 3. Reliability of the test

The criteria of the good test include at least the instrument should be valid and reliable. According to Arikunto (2006: 178), the reliability coefficients indicated the degree to which the result on a scale can be considered internally consistent, or reliable. The researcher used audio recording from British council in teaching listening comprehension especially at the third-grade students of MTs Darul Huda Wonodadi Blitar in academic years 2017/2018. After the valid items are determined, the researcher needs to measure the reliability of the instrument. The formula for computing KR20 reliability was as follows:

$$r_{kk} = \left[ \frac{k}{k-1} \right] \left[ \frac{V_t - \sum pq}{V_t} \right]$$

Were:

$r_{kk}$  : Kuder- Richardson formula 20 reliability Coefficient

k : Total of valid item

p : The proportion of test takers who pass the items

q : The proportion of test takers who valid the items

$V_t$  : The Variance of the total test scores

Arikunto (2006: 188)

The result of the computation of reliability was consulted with the r-table in order to know whether or not the instrument is reliable. The instrument was reliable if  $r_{obtained}$  is higher than r-table or  $r_o > r_t$ .

In this research, the researcher used the test an instrument to collect data. The test was used to find out the students' ability in listening comprehension. The data of this research was the score of the students' listening comprehension obtained by using test. The test was done twice, the first was pre-test given before treatment and the second was post-test given after treatment intended to obtain students' ability in listening comprehension at the third grade of MTs Darul Huda Wonodadi Blitar.

To obtain data from the samples of this research, the researcher used a technique. Those are:

#### 1. Classroom Observation

In this research, the researchers' used observer. The researcher came and joined in the learning process to see one by one of the students' when they got the material on the procedure of the drilling and dictation technique. The researcher observed the students who were taught by drilling and dictation technique and who are not taught by drilling and dictation technique.

To obtain the necessary data from the samples of this research, then the researcher used a classroom technique as follows:



1. Pre-observation is to meet with the teacher and discuss the plan to do the observation determine the class that was used for observation and determine the time of observation and ask for class data such as lesson plan and syllabus.
2. The observation was the direct observation of the class. Observations made to see the state of the classroom as the state of the student when the teacher explained the lesson and the way the teacher did the learning process.
3. Interview, collecting materials information was carried out by conducting frequently asked questions orally, face to face, and with the direction and purpose that have been determined (Sujiono, 2006:82). Nurhayati in Ary et.al (2002:434) further mention that interview was used to gather data on subject's opinion, belief and feelings about the situation in their own words. Interviews provide information that could not be obtained through observation. It was conducted informal interview with informants in some days, the purpose is to know the language they used in informal situation, define the meaning of the words contextually and describe the processes of word formation.

Through the interview, the researcher concluded that the data taken in the form of opinions or views of teachers to the learning process takes place. What can be extracted from the teacher interview that was preparation before teaching, what strategy used by teacher,

media that used by the teacher, obstacle faced by teacher and how to overcome it, students' responses when reviewing the material already taught, and also teacher assessment when it happened until the end of learning have finished.

## 2. Test

The test consisted of pre- test and post-test given to measure the students' listening ability of both experimental classes. The pre-test was administered for both classes before the treatment or implementation of group work technique for experimental class. At the last, the post-test was given for both experimental classes that had already been treated with group work technique.

### **E. Research Instrument**

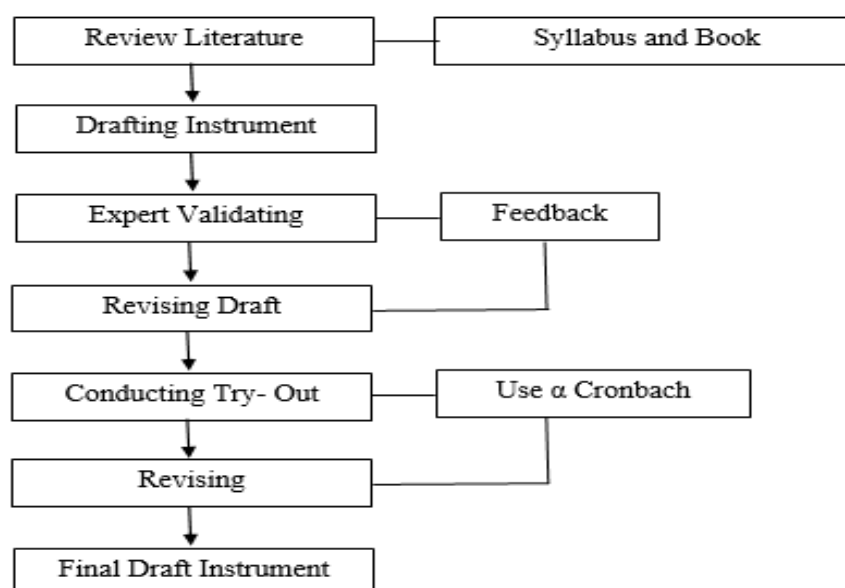
The research instrument was a kind of tool or facility which is used by the researcher in collecting data in order to researcher's work is easier and the result is better, it means was more accurate, complete, and systematic so it was easier to process (Arikunto, 2006:160).

Generally, there were two kinds of instruments namely test and non-test. The methods of collecting data used non-test are a questionnaire, interview, observation, rating scale, and documentation. In addition, states that an instrument is implementation or a piece of apparatus used for a particular purpose, especially for delicate or scientific, works.

In this research, the researcher used the hearer test to collect the data. The observation is used to obtain data related to the implementation. The test is used

by the researcher to compare the result of English listening comprehension between B & C class of MTs Darul Huda Wonodadi Blitar.

Stated by Bordens (2011), the instrument of research was the tools to measure something that the researcher observed in order to obtain the data and answer the research problems. The research instrument used in this research was a test which was given before and after taught by using drilling and dictation techniques. The instrument was developed through the following steps:



**Figure 3.2 research instrument**

The steps of instrumentation were:

#### 1. Review Literature

The first steps to get the valid and reliable test was reviewing the literature concerning with teaching listening using drilling and dictation,

especially that in junior high school. Therefore, the researcher reviewed some literature from syllabus and book used in junior high school to get some important information's as sources to drafting instrument that related to the materials of junior high school.

## 2. Drafting Instrument

After getting some information from reviewing literature, the researcher started to draft instrument that appropriates with the materials of junior high school.

## 3. Expert Validating

After finishing the drafting instrument, the instrument should be validated by the expert like English teacher or lecturer who mastered the materials. The purpose of the expert validating was to know how much valid the instrument is either related to its construct validity, face validity, or content validity. So, in this steps, the researcher would get feedback and validation guide.

## 4. Revising Draft

In revising the draft of the instrument, the researcher used feedback collected from the expert validation.

## 5. Conducting Try- Out

After revising the draft of the instrument, the researcher conducted try the instrument out to the second-grade students of MTs Darul Huda Wonodadi Blitar who share common characteristics with the subjects of this research. The result of trying out which was analyzed using Alpha Cronbach

to revise the draft to be the valid instrument because the reliability and validity of the instrument could be objectively computed by using the formula of Alpha Cronbach.

#### 6. Revising

In revising, it was part to revise the instrument again based on the feedback to get the final draft instrument. So, the researcher would revise the instrument to make the questions ideal or not easy or too easy, difficult or too difficult.

#### 7. Final Draft Instrument

The last step was the final instrument means that the instrument has the good or best quality where the instrument is appropriate.

In this study, the researcher applied pre-test and post-test. The pre-test was given before teaching by using drilling and dictation; in this pre-test, students were given task for 60 minutes. For the experimental group, the researcher gave 60 minutes again for giving treatment to the students. The next treatment the researcher gave in the second meeting for 60 minutes. Post-test which was given after teaching by using drilling and dictation, in this post-test the students given task by using drilling and dictation technique during 60 minutes after the last meeting for giving treatment.

To get the data, which was both of groups that become an experimental group the researcher as a teacher teaches the students during three meetings. The first meeting, in the teaching-learning process the teacher gives pre-test in learner's interest. The second meeting, the teacher teaches material by

using drilling and dictation technique just for the experimental group. In the end, the teacher gave post-test in learner's interest to the students.

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

As mentioned above, the researcher's instrument is tested. The good instrument should be valid and reliable; the more explanation about it was discussed as follows:

### **1. Validity**

According to Gay, validity was the appropriateness of the interpretations made from the tests score. Furthermore, Gay said that there are three kinds of validity. They are content validity, criterion-related validity, and construct validity. All of them have different usage and function (Gay & Airasian, 2000:161).

Content Validity was used to compare the content of the test to the domain being measured. Gay also stated that there is no formula used in this kind of validity and there was no way how to express it quantitatively (Gay & Airasian, 2000:164). Content validity just focused on how well the items represent the intended area. In addition, Hadari Nawawi stated that this kind of validity is also said as a curricular validity (Hadari & Martini, 2006:181-182). It meant that the content of the curriculum of a course that must be mastered by the students becomes the standard in determining the validity.

The first validator is Munawati of English teacher in MTs Darul Huda Wonodadi Blitar, she said that worthy of testing to the students'. The second validator is Istiqomah as the English lecturer, she said that good and feasible to be tested on students. And the last validator is Soengkono as the English lecturer, she also said that revisions based on her suggestions and can be tested to the students.

Based on the explanation above, the researchers' used the content validity to measure whether the test was valid or not in this research. In other words, the tests given to the students were based on the material that they have learned.

## **2. Reliability**

According to Gay, reliability is the degree to which the test consistently measures whatever it is measuring. Furthermore, he said that to know the reliability of the test such as essay tests, short-answer tests, performance, and product tests, and projective test, we were concerned with inter-judge or intra-judge reliability. The inter-judge reliability is also said as inter-scorer, inter-rater, or inter-observer reliability (Gay & Airasian, 2000:175).

## **G. The Technique of Analyzing Data**

The technique of collecting data in this research tested. The data were analyzed by using SPSS 16.

In analyzing the data, the researcher used scores of the pre-test and post-test of the experimental and control group. These scores were analyzed

by using statistical analysis. The difference mean was analyzed by using independent sample T-test SPSS.

The following formula was T-table. It was employed to see a significant different between the mean score of both experimental and control class. The T-obtained value was consulted with the value of t-Table as a degree of freedom.

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Statistically hypothesis:

$$H_0 = t_0 < t_{table}$$

$$H_a = t_a < t_{table}$$

Criteria of hypothesis:

1.  $H_0$  is an accepted if  $t_0 < t_{table}$ . It can be said that there is no significant difference in listening comprehension between the students taught by using the technique.
2.  $H_a$  is accepted if  $t_a < t_{table}$ . It can be said that there is a significant difference in listening comprehension between the students taught by using the technique.