**CHAPTER III**

**RESEARCH METHOD**

In this chapter, the writer describes the research methodology. It consists of the research design, the population, sample and sampling; variable, data and data sources; the research instrument, the data collecting method, and the technique of data analysis.

1. **The Research Design**

This research will be conducted in an experimental design using quantitative approach with Nonrandomized Control Group, Pretest-Posttest design. Cohen (2007:72) states that:

 The essential feature of experimental research is that investigators deliberately control and manipulate the conditions which determine the events in which they are interested, introduce an intervention and measure the difference that it makes.

Therefore, in this study, the researcher will control and manipulate certain classess to investigate the influence of buzz group as an activity in teaching speaking. Then the researcher will measure the difference that is made before and after manipulating.

Best (1981:57) explains that:

 An experiment involved the comparison of the effects of a particular treatment with that of different treatment or of no treatment. In a simple conventional experiment reference is usually made to an experimental group and to a control group.

From Best’s explanation, the researcher will use the specific treatment which is buzz group to improve the students’ speaking ability, and choose two classess which a class is as an experimental class and another is as contol class. Then to know the effect of buzz group, the researcher will compare the scores of experimental class which gets treatment, to the control class which is no treatment.

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Ary (2006:57) declares that:

Design is the general plan for carrying out the experimental research study. The purpose of the experimental design is to enable researchers to estimate the effect of an experimental treatment. The design functions to (1) make sure that the outcome is a consequence of the manipulation of the independent variable and not some spurious factor and (2) to ensure that the subjects assigned to the treatment and control groups do not differ systematically on any variables except those under consideration.

Therefore, the research design precisely used by the researcher is Quasi Experimental design in the form of two-group, pretest-posttest design. In this case, a researcher turns to quasi experimental in which random assignment is not used.

 Ary (2006:341) explains that quasi experimental designs are similar to randomized experimental designs in that they involve manipulation of an independent variable but differ in that subjects are not randomly assigned. In other words, this design does not permit random assignment of subjects to the experimental and control groups. Therefore the design is also called Nonrandomized Control Group, Pretest-Posttest design.

The reason of choosing this research design is as follows: First, in a school situation, schedules can not be disrupted or classes reorganized in order to accommodate the experimenter’s study. In this case, it is necessary to use groups as they are already organized into classes. Therefore, the research is conducted in an organized classroom setting in which the classes have already been organized into seven classes. Those classes are XA, XB, XC, XD, XE, XF, and XG. Hence, the two out of these classes, exactly class XA and XB are selected by the researcher by using purposive sampling as the subjects of the research: class X A is used as the experimental group, and class XB is used as the control group. The two groups have to follow a fixed schedule which has been planned before the research is conducted.

Secondly, the two groups are compared with respect to the measurement on the dependent variables, namely, the students’ speaking ability. Both groups have been measured twice which are pre-test and post-test measurement. The pre-test has been tested to examine the initial mastery of the students’ speaking ability prior to the treatment and to know whether the experimental and control group are equal or not. After the treatment is given, the post-test has been conducted and assessed of the both tests which are analyzed.

The experimental group is a group which is given treatment by using buzz group as the independent variable. The researcher teaches speaking in the experimental group by applying buzz group. However, the control group is students who do not get buzz group as a standard comparison of the buzz group effect which is investigated in this research. In the control group, the experimenter will teach speaking by applying the teacher centered instruction. The two groups of research subjects are compared with respect measurement and the observation on dependent variable, which is the students’ speaking ability. The design of the research is presented as follows:

**Table 3.1. Nonrandomized Control Group, Pretest-Posttest Design**

|  |  |  |  |
| --- | --- | --- | --- |
| **Group** | **Pretest** | **Treatment** | **Posttest** |
| **Experimental group**  | Y1 | Buzz Group | Y2 |
| **Control group** | Y1 | ----- | Y2 |

(Campbell, 1963:47)

Where: Y1: The pretest (direct Oral test)

 Y2: The posttest (direct Oral test)

From the table above, it can be inferred that the both groups which are experimental and control group will get the pretest (Y1) and posttest (Y2). Meanwhile, the experimental group will obtain buzz group as the treatment and the control group will not receive buzz group as the treatment.

1. **The Population, Sample, and Sampling Technique**

According to Ary (2006:167), the small group that is observed is called a sample, and the larger group about which the generalization is made is called a population. In this research, the sample will be taken from the students of class X of MAN Kunir Blitar. The researcher hopes that the result of the research is generalizable.

Sampling is the technique which is used to take a sample (Sugiono, 2008:81). As we know, there are two sampling technique which are probability sampling and non-probability sampling. As presented before that the research design of this study is quasi-experimental with nonrandomized control group preteset-postest. In other words, this research is imposible to use random sampling or posibility sampling to make the new class or classify the equal students on one class.

One of non-probability sampling is purposive sampling. Arikunto (2006:139) explains that:

 Purposive sampling is sampling technique which researchers do not consider strata, random or area when they handpick a subject. However, they consider the certain purpose. In addition, this technique is done because there are some consideration such as the limitation of time, energy, and money.

Therefore, the researcher used purposive sampling technique to take the sample. The researcher had taken two classes of seven classes from the first grade students of MAN Kunir Blitar in academic year 2011/2012 exactly class X A and X B. Both classes were the existing classes which almost had the same average in speaking ability. Class X A consisted of 32 students and X B consisted of 36 students. The researcher used this technique by giving test to the student of class X A and class X B at MAN Kunir Blitar. Every student in class X A and X B almost had the same average in speaking ability.

1. **Variable, Data and Data sources**
	* + 1. Variable

Ary (1979:28) explains that:

 A variable is an attribute, which is regarded as reflecting or expressing some concept or construct. There are several ways to classify variables. The most important classification is on the basis of their use within the research under consideration, when they are classified as independent variables or dependent variables.

In other words, variable is a term to convey some concept of a research. In the research, there are two crucial variables which are independent and dependent variable.

Therefore, there are also two important variables in this research, they are as follows:

* + - * 1. Independent variable

The independent variable is the variable that is manipulated or changed by the experimenter. In this research, the use of buzz group is independent variable.

* + - * 1. Dependent variable

The dependent variable is the variable upon which the effects of the manipulation are observed. It is so named because its value depends upon and varies with the value of the independent variable. In this research, the dependent variable is students’ speaking ability.

* + - 1. Data and Data Sources

Data are whole fact and number that can be used as material for arranging information. Information is data that are needed in conducting a research (Arikunto 2006:118).

Source of data of this research only uses primary data. Primary data are the data which collected by the researcher directly (Suryabrata, 2005: 39). The primary data of this research is the students’ score of pretest and posttest.

1. **The Research Treatment**

As mentioned previously, the treatment will be given especially for the experimental group is buzz group. The experimental group gets a buzz group treatment, whereas the control group receives no treatment. However, the control group will be taught based on teacher centered instruction or conventional method.

The treatments will be given to the experimental group about four times after the pretest is conducted. Then after applying the treatment, the researcher will give the posttest to the both groups. Consequently, the research will be conducted on March 26th to April 14th, 2012.

As cited previously, pretest will be conducted before implementing the method. It is conducted to know the students’ speaking ability from the both groups. Then posttest will be given to the both groups at the end of the experiment. Finally, the two groups of research subjects are compared with respect measurement and the observation on dependent variable, which is the students’ speaking ability.

In this study, the researcher has chosen class X A to become the experimental group which will be guided with buzz group. However, class X B has been determined to become the control group which will not be guided with buzz group. Therefore, the differentiation of the both groups is in applying the activity of buzz group which is only given to the experimental group.

1. **Research Instrument**

This research involves one dependent variable that needs to be measured, the students’ speaking ability of class X at MAN Kunir Blitar in academic year 2011-2012. To measure the students’ speaking ability as a source of data, a research instrument is used. The instrument which is used in collecting data is in the form of direct oral test since there is no other direct measurement of the students’ speaking ability except asking them to speak. Through the test, the students are asked to speak based on the topic and instructions given.

The essential use of the test is to find out the samples of the students’ actual speaking ability. Pretest and posttest will be extended to the subjects. Then the time allotment for each test is 90 minutes. There are some requirements that the researcher should do in order to get the significant data. Those can be obtained using these following points:

1. Instruments Validation

In designing and developing a test to assess the students’ skill. A crucial consideration is made so that the test can get a valid (right, appropriate, or correct) result. The validity of the test is the extent to which it measures what is claimed to measure and nothing else. (Heaton, 1988:159).

In other words, in measuring the subjects’ skill, the test measures appropriately the intended skill so that the result of the test is convincing measurements that actually reflect the subjects’ correct, right, or appropriate performance.

In order to prove that the result of the test fulfills construct validity evidence, the task is in the form of direct oral test. The reason of choosing direct speaking test is because of its strengths as follows:

a. Speaking test or oral test requires the students to convey their ideas orally so that the test measures what it is intended to be measured which is speaking ability;

b. Speaking test, in addition, is the easier and quicker to prepare but it takes a long time to assess.

To provide the internal validity evidence, there are two points that should be taken. Those are as follows:

1. Setting the tasks which are specifying all appropriate tasks and selecting samples;
2. Obtaining samples that properly represents each candidate’s ability.

Therefore, to get internal validity, the researcher provides the test which is neither too easy nor too difficult so that the students will point out their speaking ability properly.

The researcher provides content validity evidence by creating the test as the instrument which suits to the course objectives so that the instrument will show that it fairly and comprehensively covers the domain or items that it requires the course objectives to cover. In this case, the subjects of the study are supposed to speak orally in 90 minutes on given topics.

1. Reliability

The researcher achieves reliability through the use of reability as equivalence. Through using equivalent forms of a test. If an equivalent form of the test is devised and yields similar result, then the instrument can be said to demonstrate this form of reliability (Cohen, 2005:118).

In this case, the pretest and post-test in the experimental model of evaluation are predicted on this type of reliability, being alternate forms of instrument to measure the same issues. This type of reliability will also be demonstrated if the equivalent forms of a test yield consistent results if applying those samples to be matched simultaneously (the control and experimental group). Hence, the both classess which are as the subjects of research will get the same tests so that the realiability will be achieved. Here reliability can be seen through the demonstration of means and standard deviations between two groups.

1. **The Data Collection Method**

Data collection method is the method that is used by the researcher to collect data, and instrument is the tool that is used to get the data (Arikunto, 2006:160). Thus, Data of this study are collected by administering test.

Test may be constructed primarily as devices to reinforce learning and to motivate the students or primarily as a means of assessing the students’ performance in the language. Therefore, the researcher uses test in the form of oral test.

In this case, there are two kinds of tests that should be done by the researcher. Those are as follows:

* 1. Pretest

Pretest is a test that is given to all students in class X A and X B at MAN Kunir Blitar. The test is conducted to know the students’ speaking ability in both classes before conducting the treatment. In this pretest, the experimenter asks every student in two classes to express and tell the idea based on the topic which is given by the experimenter during 90 minutes.

* 1. Posttest

Posttest is a test that is given to all students in class X A and X B at MAN Kunir Blitar to measure the students’ speaking ability between the students who are taught using and without using buzz group. In this posttest, the experimenter asks every student to express the idea based on the topic which is given by the teacher during 90 minutes.

In this case, the researcher tries to classify the score into three parts which are accuracy, fluency, and comprehensibility. Those are as follows:

**Table 3.2. The Classifying of Rubric Scoring**

|  |  |  |  |
| --- | --- | --- | --- |
| **Aspect of speaking** | **Weight** | **Scores** | **Criteria** |
| **Accuracy** | **40%** | **6** | Pronunciation is only very slightly influenced by the mother-tongue. Two or three minor grammatical and lexical errors. |
| **5** | Pronunciation is slightly influenced by the mother-tongue. A few minor grammatical and lexical errors but most utterances are correct. |
| **4** | Pronunciation is still moderately influenced by the mother-tongue but no serious phonological errors. A few grammatical and lexical errors but only one or two major errors causing confusion. |
| **3** | Pronunciation is influenced by the mother-tongue but only a few serious phonological errors. Several grammatical and lexical errors, some of which cause confusion. |
| **2** | Pronunciation is seriously influenced by the mother-tongue errors causing a breakdown in communication. Many ‘basic’ grammatical and lexical errors. |
| **1** | Serious pronunciation errors as well as many ’basic’ grammatical and lexical errors. No evidence of having mastered any of the language skills and areas practiced in the course. |
| **Fluency** | **20%** | **6** | Speaks without too great an effort with a fairly wide range of expression. Searches for words occasionally but only one or two unnatural pauses. |
| **5** | Has to make an effort at times to search for words, Nevertheless, smooth delivery on the whole and only a few unnatural pauses. |
| **4** | Although he has to make an effort and search for words, there are not too many unnatural pauses. Fairly smooth delivery mostly. Occasionally fragmentary but succeeds in conveying the general meaning. Fair range of expression. |
| **3** | Has to make an effort for much of the time. Often has to search for the desired meaning. Rather halting delivery and fragmentary. Range of expression often limited. |
| **2** | Long pauses while the student searches for the desired meaning. Frequently fragmentary and halting delivery. Almost gives up making the effort at times. Limited range of expression. |
| **1** | Full of long and unnatural pauses. Very halting and fragmentary delivery. At times gives up making the effort. Very limited range of expression. |
| **Comprehensibility**  | **40%** | **6** | Easy for the listener to understand the speaker’s intention and general meaning. Very few interruptions or clarification required. |
| **5** | The speaker’s intention and general meaning are fairly clear. A few interruptions by the listener for the sake of clarification are necessary. |
| **4** | Most of what the speaker says is easy to follow. His intention is always clear but several interruptions are necessary to help the speaker to convey the message or to seek clarification. |
| **3** | The listener can understand a lot of what is said, but the listener must constantly seek clarification. Can not understand many of the speaker’s more complex or longer sentences. |
| **2** | Only small bits (usually) short sentences and phrases) can be understood-and then with considerable effort by someone who is used to listening to the speaker. |
| **1** | Hardly anything of what is said can be understood. Even when the listener makes a great effort or interrupts, the speaker is unable to clarify anything the speaker to have said. |

(Heaton, 89:100)

The scoring rubric which is used in this study is presented in table 3.2. The quality of the students’ speaking is valued from the three components – accuracy, fluency, and comprehensibility, with the lowest score is 1 and the highest score is 6 for each component of speaking assessed. Each score is divided with all indicators provided, multiplied by 40 for accuracy, 20 for fluency, and 40 for comprehensibility. The formula for obtaining individual score is as follows:

**Table 3.3. The Individual Score**

|  |
| --- |
| The student’s score :  |

1. **The Technique of Analyzing Data**

Quantitative data involves data in the form of numbers. Therefore, in managing and analyzing quantitative data collected from the research, the researcher uses statistical technique.

The technique of data analysis is used to test the hypothesis and to find significant different scores between the students who are taught using and without using buzz group.

The statistical technique which is used by the researcher is t-test stated by Butler (1985:85) as formulated below:

$$t = \frac{⃒M\_{1}^{}-M\_{2}^{}⃒}{\sqrt{\left(\frac{∑x\_{1}^{2} + ∑x\_{2}^{2}}{n\_{1}^{}+n\_{2}^{}-2}\right)\left(\frac{1}{n\_{1}^{}}+ \frac{1}{n\_{2}^{}}\right)}}$$

$∑$*x2* and *M*can be calculated by the formula below:

**M =** $\frac{X²}{n}$

$∑$x2 = $∑$x2 - $\frac{(∑x)\_{}^{2}}{n}$

Where

$M\_{1}^{}$ : the difference between two means of control group

$M\_{2}^{}$ : the difference between two means of experimental group

n1 : the total number of testees of control group

n2 : the total number of testees of experimental group

x12 : the squared deviation scores in control group

x22 : the squared deviation scores in experimental group

$∑x\_{1}^{2}$ : the sum of the squared deviation scores in control group

$∑x\_{2}^{2}$ : the sum of the squared deviation scores in experimental group