

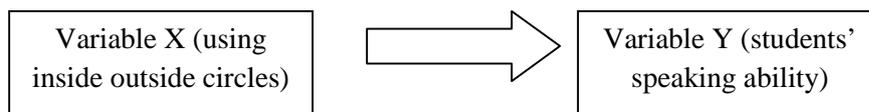
## CHAPTER III

### RESEARCH METHODOLOGY

#### A. The Research Design

The design of this research is experimental research. Experimental research is procedures in quantitative research in which the investigator determines whether an activity or materials make a difference in result for participants.<sup>1</sup> According to Gay, experimental research is the only type of research that can test hypotheses to establish cause-and-effect relationships.<sup>2</sup> There were two variables in this research, there were using inside-outside circles as variable (X) and students' speaking ability as variable (Y). The type used was quasi-experiments. The design was non equivalent control group design. In this design, the writer used two classes as the sample; control group and experimental group. Both group took a pretest and posttest. Only the experimental group received the treatment.

#### The Research Design



#### B. Location and Time of the Research

The research was conducted of the second year students at Islamic Senior High School Al-Usmaniyah Bagan Batu District of Rohil Regency on

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<sup>1</sup>Jhon w. Creswell. *Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research*, (New York: Pearson,2008),p.60

<sup>2</sup> L. R. Gay. *Educational Research: Competencies for Analysis and Application*. New jersey: prentice-hall, 2000., p.367

Haji Imam Munandar street. The research was conducted from July to August 2013.

### **C. The Subject and Object of the Research**

The subject of this research was the second year students at Islamic Senior High School Al-Usmaniyah Bagan Batu District of Rohil Regency. The object of this research was the effect of using Inside-Outside Circles strategy on speaking ability of the second year students at Islamic Senior High School Al-Usmaniyah Bagan Batu District of Rohil Regency.

### **D. The Population and Sample Of The Research**

The population of this research was the second year students at Islamic Senior High School Al-Usmaniyah Bagan Batu District of Rohil Regency. There were two classes in the second year: XI IPS 1 and XI IPS 2. Total of the students was 40 person. The specification of the population can be seen on the table below:

**Table III.1**  
**The Population of the Second year Students at**  
**Islamic Senior High School AL- Usmaniyah Bagan Batu**

<b>NO</b>	<b>CLASSES</b>	<b>POPULATION</b>
1	XI IPS 1	20
2	XI IPS 2	20
<b>Total</b>		<b>40</b>

The sample of this research was total sampling that involves all entire population as the respondents of the research. It had 2 classes, the first class (XI IPS 1) for control class and the second class for experimental (XI IPS 2). The selected participants for the sample had an equal probability of being

selected from the population.<sup>3</sup> The population in the second year was 40 students. So, all of the students were sample.

#### **E. The Technique of Collecting Data**

The writer used a technique in collecting the data. It was oral presentation test. The writer collected the data by giving pretest before the treatment and giving a posttest after the treatment, but only the experimental group received the treatment. The speaking test consisted of five components. The components are accent, grammar, vocabulary, fluency and comprehension.<sup>4</sup> Before giving the posttest to the students, the writer gave the treatment based on inside-outside circles strategy procedures. The treatment given to the experimental class was to know the effect of using inside-outside circles strategy on students' speaking ability. Furthermore, there was no treatment in control class, so the writer used the monotonous strategy that was used by the English teacher. At the last, the writer gave posttest to the experimental and control classes. The result of posttest was analyzed as the final data in this research.

In this research, there were two raters who gave score about students' speaking ability based on the indicators of speaking. Next, the score from the rater was analyzed by the writer.

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<sup>3</sup> Jhon w. Creswell., *Loc. Cit*

<sup>4</sup> Arthur Hughes, *Testing For Language Teachers Second Edition*, Cambridge: Cambridge University Press, 1989, p.131-132

## **F. Procedures of the Research**

In conducting the experimental research, the writer did some research procedures of both: experimental and control groups. The research procedures are as follows:

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

The pre-test was carried out to know the basic of students' speaking ability to both experimental and control groups. The test was making a speech and presenting the speech based on the text form in the text book used by the students.

### **2. Conducting Treatment**

The treatment was given only to the experimental group. The treatment was given based on the inside outside circles procedures. The treatment was given as follows:

Pre-teaching:

- a. The teacher explains to the students the materials based on the topic given.
- b. The teacher demonstrates the topic and tries to make the students understand.

While-teaching:

- a. Divide students into some groups. One group consists of 6 person.
- b. Place students in two circles – one circle within the other.
- c. Face Students each other between circles.
- d. Put a question on the board.

- e. Ask students to think about it; allow reasonable wait time.
- f. Ask the students on the inside to share the answer to the outside and the outside person will share or extend the thinking of the inside person.
- g. When being finished, outside people rotate one to the left or right.
- h. Now they are ready for the next question.

Post-teaching:

- a. Asking students' difficulties during the lesson.
- b. Correcting the students' speaking.
- c. Concluding the material studied.

### 3. Conducting Post-test

The researcher gave the post-test to both experimental and control groups after conducting the treatment for eight meetings. The post-test was conducted to know the improvement of students' speaking ability after practicing inside outside circles. The post-test was the similar model to the pre-test to know the students' speaking ability.

**Table III.2**  
**Topic of the Teaching Speaking in Each Meeting**

No	Meeting	Topic
1	I	Being fat matters
2	II	Is Smoking Good for us?
3	III	Computers are very important for us
4	IV	The importance of school bus
5	V	The power of music in our life
6	VI	Old enough?

## G. Validity and Reliability of the Test

### 1. Validity of the Test

According to Brown<sup>5</sup>, a test is a method of measuring a person's ability, knowledge, or performance in a given domain. According to Gronlund (in Brown), validity is the extent to which inferences made from assessment result are appropriate, meaningful, and useful in terms on the purpose of the assessment. According to Nation and Newton, a test is valid if it measures and when it is used for the purpose for which it is designed.<sup>6</sup> According to Hughes<sup>7</sup>, a test is said to be valid if it measures accurately what it is intended to measure. Based on some experts above, the writer concludes that a test can be said valid if it is really measured person's ability appropriately. Furthermore, Gay states that there are three kinds of validity. They are content validity, criterion-related validity, and construct validity.<sup>8</sup>

In this research, the writer used content validity. Brown states that content validity is if a test actually samples the subject matter about which conclusion is drawn, and if it requires the test taker to perform the behavior that is being measured.<sup>9</sup> In conclusion, the test was given to the students based on the material that they have learned.

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<sup>5</sup>H. Douglas Brown, *Language Assessment: Principles and Classroom Practices*, (San Francisco:San Francisco State University, 2003), p. 3.

<sup>6</sup>I.S.P Nation and Jonathan Newton, *Teaching ESL/EFL Listening and Speaking*, New York: routledge, 2009, p.167

<sup>7</sup> Arthur Hughes, *Op Cit*, p. 26.

<sup>8</sup> L.R. Gay and Peter Airasian, *Op. Cit*, pp. 163-167.

<sup>9</sup> H. Douglas Brown, *Op Cit*, p. 22.

## 2. Reliability of the Test

According to Nation and Newton, a reliable test is one whose results that are not greatly affected by change in the condition under which it is given and marked.<sup>10</sup> Reliability is a measuring of test that is consistent and dependable.<sup>11</sup> It means, the test should consistently measure the person's ability. Furthermore Brown states that there are two scoring process in reliability. They are inter-rater reliability and intra-rater reliability. Inter-rater reliability occurs when two or more scores yield inconsistent scores of the same test. Intra-rater reliability is a common occurrences for classroom teachers because of the unclear scoring criteria, bias on particular 'good' and 'bad' students, or simple carelessness.

In this research, the writer used inter-rater reliability. It means that the scores of the test were evaluated more than one person. The students' speaking scores were evaluated by two raters.

## H. The Technique of Analyzing Data

In this research, the writer used students' post-test scores of the experimental and the control groups as the data of the research. The writer analyzed the data by using statistical method. First, to analyze the category of speaking ability, the researcher used the category standard as follows:<sup>12</sup>

1. 80-100 = Very good
2. 66-79 = Good

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<sup>10</sup> I.S.P Nation and Jonathan Newton, Op. Cit, p.166

<sup>11</sup> H. Douglas Brown, *Op Cit*, p.20.

<sup>12</sup> Suharsimi Arikunto, *Dasar-Dasar Evaluasi Pendidikan*, (Jakarta:PT. Rineka Cipta, 2007), p. 245.

3. 56-65 = Enough
4. 40-55 = Fair
5. 30-39 = Poor

Second, the researcher used t-test<sup>13</sup> to know whether or not the result of the research was statistically significant. The data were analyzed by using SPSS program with the formula of t-test as follows:

$$t_o = \frac{Mx - My}{\sqrt{\left(\frac{SD_x}{\sqrt{N-1}}\right)^2 + \left(\frac{SD_y}{\sqrt{N-1}}\right)^2}}$$

Where :

- $t_0$  : the t-value or t-observation
- $Mx$  : the mean of variable x
- $My$  : the mean of variable y
- $SDx$ : standard deviation of variable x
- $SDy$ : standard deviation of variable y
- $N$  : the number of class

After computing t-test, it was necessary to obtain the degree of freedom that was used to determine whether or not the t-score was significant or not. The t-obtain value was consulted with the value of the t-table by using degree of freedom. The formula of degree of freedom was as follows :<sup>14</sup>

$$df = (N_x + N_y) - 2$$

Where :

- df : the degree of freedom
- $N_x$  : the number of students in experimental class
- $N_y$  : the number of students in control class

If the writer had consulted the t-obtained value with t-table by using degree of freedom, the writer concluded that if  $t_o < t\text{-table}$ ,  $H_0$  is accepted. It

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<sup>13</sup> Hartono, *Statistik untuk Penelitian*, (Yogyakarta:Pustaka Belajar, 2009), p. 208.

<sup>14</sup> *Ibid* p.212

means that there is no influence of inside-outside circles strategy on students' speaking ability. If  $t_o > t\text{-table}$ ,  $H_a$  is accepted. It means that there is significant effect of using inside-outside circles strategy on students' speaking ability.