

CHAPTER III

RESEARCH METHODOLOGY

A. Research Design

The researcher used quantitative research in conducting research on the basis of experimental research. According to Sugiyono (2008:51), quantitative research is a research method used to seek the effect of certain treatments on others under controlled conditions. The design of this research is a true-experimental that uses pretest-posttest control group design, which is intended to find out the influence of Inside Outside Circle (IOC) toward students' speaking skill at the second year students. According to Salkind (2008:324), true-experimental is considered the gold standard of experimental design. There are two variables in this study, they are:

Table 1 Variable of the Content

Independent Variable	X	Inside Outside Circle (IOC)
Dependent Variable	Y	Students' speaking skill

According to Urdan (2005:89), Independent variable is the variable that may cause, or simply we used to predict, the value of dependent variable. Independent variables are variables that can be manipulated or made up by the researcher. The independent variable can be called an independent variable because it can affect other variables. Or in other words the independent variable is a causal variable. Dependent variable (dependent variable) is a variable that gives a reaction or response when connected to the independent

variable, usually denoted Y. According to Urdan (2005:89), Dependent variable is a variable on which the scores may differ, or depend on the value of independent variable.

In this research, the pre-test and post-test are compared in order to determine the influence of using Inside Outside Circle (IOC) toward students' speaking skill. The design of this research can be illustrated as follows:

Table 2 True-Experimental Research Design

Group	Pre-test	Treatment	Post-test
Experimental Group	Y1	X	Y2
Control Group	Y3	-	Y4

(Sugiyono, 2008:112)

Based on the illustration above, treatment is only given to the experimental group. The experimental group is treated by learning speaking skill by using Inside Outside Circle (IOC), while the control group do not receive any treatments. The control group does not receive any treatments yet, it is still taught by using conventional strategy that is Discovery Learning.

B. Population and Sample

a. Population

The population of this research was the second year of students of MTs. N 2 Jepara in the 2019/2020 academic years. The number of the second year students of MTs. N 2 Jepara was 304 students. They were divided into eight classes: VIII A, VIII B, VIII C, VIII D, VIII E, VIII F, VIII G, VIII H

Table 3 The Total Population of This Research

No	Class	The number of students
1	VIII A	38
2	VIII B	38
3	VIII C	38
4	VIII D	38
5	VIII E	38
6	VIII F	38
7	VIII G	38
8	VIII H	38
TOTAL		304

b. Sample

Sample is part of the number and characteristic possessed by the population (Sugiyono, 2008:118). Sample can also be said that the sample is a small part take from a populations' member based on a predetermined procedures. So that the sample is part of the existing population, so for

sampling must use a certain method based on existing considerations. Based on the design of the research, the experimental group and control group are not chosen randomly. It is strengthened by Arikunto (2010:132) state's that, if the population is homogenous enough, for the population which is less than 100 persons, the sample is taken all, but the survey is taken between 10-15 percent or 20-25 percent or more if the population is more than 100. So, based on the statement above the writer take all of the population as the sample of this research.

In this research, the technique sampling used was non-probability sampling with a purposive technique sampling. According to Henry (2007:17), Non-probability samples are a collection of sampling approaches that have the distinguishing characteristic that subjective judgment play a role in the selection of the sample. While stated that, the purposive technique sampling is the technique of determining the sample with certain considerations (Sugiyono, 2008:84). The researcher chose purposive sampling because the researcher had discussed with the English teacher. The English teacher recommended conducting the research in VIII E and VIII F because they were two classes of eight classes had the same quality in understanding the material. It was proved by the score both classes. The mean English score of VIII E was 70 while VIII F was 72, the class VIII E consisted of 38 students was as an experimental class and VIII F consist of 38 students was as a control class. The number of sample was 76 students. The researcher took the sample 25% of population.

Table 4 The calculation of the sample

$$25\% \text{ of the population} =$$

$$(25 : 100) \times 280 = 70$$

C. Time and Setting

This research was held in MTs N 2 Jepara which was located in Jlegong Keling Jepara. It was done on second semester in the academic year 2019/2020. The research was begun on 28th September up to 8nd April 2020. The detail of the research schedule was as follow:

Table 5 The Schedule of the Research

No	Activity	Date of February							Place
		23 th	24 th	25 th	26 th	27 th	28 th	29 th	
1	Sending research permit								MTs N 2 Jepara
2	Test of validation								MTs N 2 Jepara
		Date of March							
		7 nd	11 rd	12 th	13 th	14 th	15 th	16 th	
3	Pre-Test Experiment and Control								MTs N 2 Jepara
5	Treatment								MTs N 2 Jepara

	Inside								MTs N 2 Jepara
	Outside Circle								MTs N 2 Jepara
6	Treatment conventio nal Method								MTs N 2 Jepara
									MTs N 2 Jepara
									MTs N 2 Jepara
		Date of April							
		8st	9nd	10rd	11th	12th	13th	14th	
7	Post-test Experime nt and Control class								MTs N 2 Jepara

D. Instrument

According to Sugiyono (2008:148), instrument is a tool used to measure the natural and phenomena that observed. In other words, instruments are designed to help collect data for research purposes. The instrument used in this research was test that was oral test. The oral test would be given in pre-test and post-test. Pre-test was given to the students to ensure their speaking skill before the treatment while the post-test was given to the students to measure their speaking skill after getting the treatment. The test was given to the experimental and control class. The test that given to both was same. The

total number of oral test was one question that was instruction. The question was the students were asked to describe picture that given by the researcher. Indicator of the questions was to describe about the thing. The pre-test and post-test were conducted in duration 2 minutes for every single student with the same questions.

To assess the oral test, the researcher used rubric. Analytical rubric was the type used in this research. In this study, aspects were assessed by researcher are grammar, vocabulary, comprehension, fluency and pronunciation based on Brown (2004:406) analytical scoring categories. The scoring may have also included the accuracy, articulation, eye contact, expression, intonation and gesture of the speaker. The test scoring rubric provided a performance quality measurement based on the following criteria:

Table 6 Oral Scoring Categories

No	Aspect	Description of Indicator	Score
1	Pronunciation	<ul style="list-style-type: none"> • Errors in pronunciation are frequent but can be understood by a native speaker used to dealing with foreigners attempting to speak his language • Accent is intelligible though often quite faulty • Errors never interfere with understanding and rarely disturb the 	5 4 3

		<p>native speaker. Accent may be obviously foreign</p> <ul style="list-style-type: none"> • Errors in pronunciation are quite rare • Equivalent to and fully accepted by educated native speakers. 	<p>2</p> <p>1</p>
2	Grammar	<ul style="list-style-type: none"> • Errors in grammar are frequent, but speaker can be understood by a native speaker used to dealing with foreigners attempting to speak his language • Can usually handle elementary construction quite accurately but does not have thorough or confident control of the grammar • Control of grammar is good. Able to speak the language with sufficient structural accuracy to participate effectively in most formal and informal conversation on practical, social, and professional topics. • Able to use the language accurately on all levels normally pertinent to professional needs. Errors in grammar are quite rare 	<p>5</p> <p>4</p> <p>3</p> <p>2</p>

		<ul style="list-style-type: none"> • Equivalent to that of an educated native speaker 	1
3	Vocabulary	<ul style="list-style-type: none"> • Speaking vocabulary inadequate to express anything but the most elementary needs • Has speaking vocabulary sufficient to express himself simply with some circumlocutions • Able to speak the language with sufficient vocabulary to participate effectively in most formal and informal conversations on practical, social and professional topics. Vocabulary is broad enough that he rarely has to grope for a word • Can understand and participate in any conversation within the range of his experience with a high degree of precision of vocabulary • Speech on all level is sufficiently accepted by educated native speakers in all its features including breadth of vocabulary and idioms, 	5 4 3 2 1

		colloquialisms, and pertinent cultural references	
4	Fluency	<ul style="list-style-type: none"> • No specific fluency description. Refer to other four language areas for implied level of fluency. • Can handle with confidence but not with facility most social situations, including introductions and casual conversations about current events, as well as work, family and autobiographical information. • Can discuss particular interests of competence with reasonable ease. Rarely has to grope for words. • Able to use the language fluently on all levels normally pertinent to professional needs. Can participate in any conversation with a high degree of fluency. • Has complete fluency in the language such that his speech is fully accepted by educated native speakers. 	5 4 3 2 1
5	Comprehension	<ul style="list-style-type: none"> • Within the scope of his very limited language experience, can understand 	5

	<p>simple questions and statements if delivered with slowed speech, repetition, or paraphrase.</p> <ul style="list-style-type: none"> • Can get the gist of most conversations of non-technical subjects (i.e., topics that require no specialized knowledge). • Comprehension is quite complete at a normal rate of speech. • Can understand any conversation within the range of his experience. • Equivalent to that of an educated native speaker. 	<p>4</p> <p>3</p> <p>2</p> <p>1</p>
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(By Brown, 2004:406-407)

The researcher evaluated the speaking tests of students starting with scores 1-5 based on the students' ability and the definition of the above aspects. Students' final score was based on the total score divided by the highest score of all aspects or sub-aspects, then multiplied by the score scale to calculate the final score is from Widoyoko (2016:227) can be formulated as follows:

$$SA = \frac{PS}{ST} \times SP$$

Explanation:

SA : Final scores

PS : Score acquisition (total score)

ST : The highest score in the assessment aspect (25)

SP : Scoring scale (100)

E. Validity of the Instrument

The researcher used validity content and construct are to provide students with valid instrument evidence. The researcher used the school English syllabus as the main achievement. In terms of understanding, fluency, vocabulary, pronunciation, and grammar, there are 5 points to be measured. The researcher would consult to the English teacher on the validity of the tool in which the students would be given the test. Based on the KI-KD (Kompetensi Inti-Kompetensi Dasar), the researcher made the rating scale, picture series and question (instruction).

According to Mcintre & Miller (2007:203), content validity is most appropriate for test such us achievement tests that measure concrete attributes because the job of an achievement test is to measure how well the content of a course or training program has been mastered. This means the content's quality depends on the subject and the knowledge is consistent with the learning goals. The material validity, on the other hand, is based on the syllabus. A structural procedure would be provided to the experts to determine the validity of the material of the instrument. The chosen experts needed to have specific criteria to decide if the material is applicable to the

topic. To make sure the instrument was accurate, it would be finished.

While the construct validity is concerned with the extent to which an instrument measures the concept or construct it was designed to measure (Brink & Wood, 2008:274). It means that construct validity focuses on the concept-based and abstract type of test that can assess the ability to speak in particular. The researcher performed a speaking test to determine the participants' speaking ability, where the scoring included five speaking Brown-adapted criteria. Those consisted of: grammar, vocabulary, comprehension, fluidity, and pronunciation. The researcher would consult the instrument to the English teacher of MTs N 2 Jepara to ensure that the instrument was accurate or not. To find out the validity of the instrument, the researcher would consult and also test validity the instrument to the experts. In this case, the researcher would conduct it to the two experts. The format of validation experts (See Appendix).

F. Method of Collecting Data

The procedure of collecting the data for experimental group can be seen as follows:

a. Pre test

The pre-test was given to know the students' capability in speaking skill before they got treatment. The question for speaking skill was oral test. The pre-test would be given in the second semester. The result of pre-test was to compare the students' capability before and after treatment given.

b. Treatment

The treatment was conducted for experimental group by using Inside Outside Circle (IOC) was applied for three meetings. The purpose of the treatment was to give impact for students' capability. The activities that will be conducted by the researcher in experimental class and control class as follow:

Table 7 List of the activities in the treatment

<p>Experimental Group</p>	<p>Meeting 1:</p> <ul style="list-style-type: none"> • The teacher gives picture to the students and explains what the students do • The students in inside circle show the picture and students in outside circle describe it and alternately. • The students in outside circle move one step to the right in order to change the partner • In the last step, some students describe the picture in front of the class with the partner
	<p>Meeting 2:</p> <ul style="list-style-type: none"> • The teacher gives picture to the students and explains what the students do • The students in inside circle show the picture and students in outside circle describe it and alternately. • The students in outside circle move one step to

	<p>the right in order to change the partner</p> <ul style="list-style-type: none"> • In the last step, some students describe the picture in front of the class individually
	<p>Meeting 3:</p> <ul style="list-style-type: none"> • The teacher gives picture to the students and explains what the students do • The students in inside circle show the picture and students in outside circle describe it and alternately. • The students in outside circle move one step to the right in order to change the partner • In the last step, some students describe new picture from the teacher in front of the class individually
<p>Control Group</p>	<p>Meeting 1:</p> <ul style="list-style-type: none"> • The students understand the material by themselves • The students are asked to describe the thing around the class with five sentence in pair • Every students are asked to describe it in front of the class in pair <p>Meeting 2:</p> <ul style="list-style-type: none"> • The teacher continue the material

	<ul style="list-style-type: none"> • The students are asked to describe people around them • The students present in front of the class one by one
	<p>Meeting 3:</p> <ul style="list-style-type: none"> • The teacher continue the material • The teacher show the picture in slide and students are asked to describe it • The students describe the picture individually based on structure of descriptive text

c. Post test

After conducting the treatment, the post-test was administered and analyzed as final data of this research. The post-test given was the same test as the pre-test.

G. Method of Data Analysis

The researcher was analyzed the data by using t-test after collecting the data. There were two assumptions that needed to be made before the researcher used t-test to analyze data.

1. Normality Test

The normality test was used to calculate data in the experimental class and control groups were usually distributed or not distributed. In this analysis, the researcher used statistical calculation using SPSS (Statistical Package for Social Science) for test normality. Kolmogorov-Smirnov and Shapiro Wilk were the measurements of normality used. The hypotheses

for the normality test were formulated as follows:

Ho: The data have normal distribution.

Ha: The data do not have normal distribution

2. Homogeneity Test

After the researcher had completed the normality test, the researcher could do this homogeneity test to determine whether or not the data was homogeneous. The researcher used SPSS (Statistical Program for Social Science) to calculate the Levene's test. The hypotheses for the homogeneity test were formulated as follows:

Ho = the variance of the data is homogenous

Ha = the variance of the data is not homogenous

While the criteria for acceptance of the homogeneity test is as follows:

Ho is accepted if Sig (P value) $> \alpha = 0.05$

Ha is accepted if Sig (P value) $< \alpha = 0.05$

After the researcher knew the data was normal and homogeneous, the data was analyzed using t-test to determine the significance of the impact of the procedure. The researcher was used to measure the independent t-test using SPSS (Statistical Social Science Program) 2.0 version.

H. Statistical Hypothesis

The statistical hypothesis used in this research was as follows:

Ho is accepted if Sig. > 0.05

Ha is accepted if Sig. < 0.05

Ho is accepted if to > 0.05 or there is significant effect of Inside Outside Circle (IOC) toward students speaking skill.

Ha is accepted if $t_o < 0.05$ or there is no significant effect of using Inside Outside Circle (IOC) toward students speaking skill.

