CHAPTER III
RESEARCH METHOD

This chapter consists of: Research Type, Research Design, Variable of Study, Population and Sample, Research Instrument, Data Collection, and Data Analysis.

A. Research Type

This research classified into quantitative research. Quantitative research deals with questions of relationship, cause and effect, or current status that writer can answer by gathering and statistically analyzing numeric data.[1] In this research, writer collected and analyzed the data by using data quantitative research.

B. Research Design

The design of this study was experimental design. Experimental design is a plan for an experiment that specifies what independent variables applied, the number of levels of each, how subject are assigned to groups, and dependent variables.[2] Writer used experimental design because writer wanted to measure the effect of used Whole Class Interactive in teaching speaking. The type of this study was pre-experiment design. Experiment in this research used Whole Class Interactive Teaching Method. It used One-group pretest and posttest. The pre-test intended to find out the student's prior level on speaking competence while post-

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[1] Donald Ary Donald Ary,Lucy Cheeser Jacobs, Criss Sorensen, Asghar Razavieh, *introduction to Research in Educatoni,....*p. 39

[2] *Ibid*., p. 641

test will aim to measure the improvement of student's speaking competence after treatment.

Tabel 3.1
One Group Pretest-Posttest Design

Pre-test experiment design	Independent	Post-test experiment design
Y_1	X	$Y_2{}^3$

C. Variable of the Study

Variable is a construct or a characteristic that can take on different values or scores.[4] There were two variables:

Independent Variable : Whole Class Interactive Teaching

Dependent Variable : Student's result in speaking skill

D. Population and Sample

1. Population

Population is those people about whom you wish to learn something.[5] The population In this research, was all of students at the Seventh Grade Students of Junior High School Dusun Hilir.

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[3] Donald Ary, 2006, *introduction to Research in Education*, p. 303-304
[4] *Ibid.*, p. 32

[5] Donald Ary,Lucy Cheeser Jacobs, Criss Sorensen, Asghar Razavieh, *introduction Research Education…*p. 53

Table 3.2
Number of Students

No	Grades	The number of Students
1.	VII A	27
2.	VII B	24
The total of students		**51**

2. Sample

Sample is select individuals from the population who are representative of that population. [6] Because writer needed certain class so, writer used nonprobability sampling. The major forms of nonprobability sampling is purposive sampling. Writer used purposive sampling because, purposive sampling refers to as judgment sampling, sample elements judged to be typical, or representative, are chosen from the population.[7] Writer wanted to know measure quality of students in the certain class with certain purpose. Below the table of sample :

Table 3.3
Number of Students

No	Grades	The Number of Students
1	VII B	24
Total		24

[6] *Ibid*., p. 142
[7] Ibid,. p. 156

E. Research Instrument

1.Research Instrument

To get the data, writer needed some technique. Writer used two techniques. They were test and documentation. Below the elaboration of test and documentation.

a. Observation

Writer did observation before gave test to students. Writer ask english teacher about problem of students.

b. Test

Writer gave the instrument of pre-test to class VII B January, 22th 2016 time 09:15-10:35 WIB, and post-test to class VII B February, 11th 2016 time 10:10-11:30 WIB. Related to the study, writer got the data for measure students ability in speaking skill used whole class interactive teaching method. The major data in this study were the result of pre-test, and post-test.

1) Micro skill in speaking

a. Pronounce the distinctive sounds of a language clearly enough that people can distinguish them. This includes making tonal distinction.

b. Use stress and rhythmic patterns, and intonation patterns of the language clearly enough so that people can understand what is said

c. Use the correct forms of words. This may mean, for example, changes in the tense, case, or order.

d. Put word together in correct word order

e. Use vocabulary appropriately

f. Use the register or language variety that is appropriate to the situation and the relationship to the conversation partner

g. Make clear to the listener the main sentence constituents, such as subject, verb, object, by whatever means the language uses

h. Make the main ideas stand out from supporting ideas or information

i. Make the discourse hang together so that people can follow what you are saying

2) Item specification

Make 2 group and 1 dialogue about "what is your name?" (greeting)

Choose situation do you want!

1. School
2. Mall
3. Office
4. House

Examples : situation in school.
A : good morning. My name is Tiara. What is your name?
B : good morning my name is Heru.
A : are you new a new students?
B : yes, I'm. I'm I C. and you?
A : I'm in 1 C too.

B : then we are classmates
A : yes, we are
B : sorry, I have to go now. Nice to meet you, Heru
A : nice to meet you, too.
Speak up in front of your friends orally!

3) Scoring rubric

Scoring rubric of speaking :[8]

Table 3.4
Scoring Rubric of Speaking

No	Aspect	Criteria	Score
1	Leksikogramatika	1. Grammar and vocabulary appropriate	4
		2. Grammar and vocabulary sometimes less precise and does not affect the meaning	3
		3. Grammar and vocabulary are less precise and affect meaning	2
		4. Grammar and vocabulary elusive	1
		5. Silent	0
	Systematic	1. Conduct and to respond with appropriate speech acts in spoken language	4
		2. Conduct and respond to speech acts in spoken language where there is sometimes a misunderstanding	3
		3. Often there was an error in conducting and responding to speech acts	2
		4. Not being able to perform and respond to simple speech act	1
		5. Producing words are not in the form of text	0
	Pronunciation and	1. Very clear and approach native	4

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[8] Yenny Sukhriani, Pembelajaran dan Penilaian Bahasa Inggris, PT Leuser Cita Pustaka, 2010.,p 25

	Intonation	speaker	
		2. It is clear though accented mother tongue	3
		3. Less obvious and affect meaning	2
		4. It is not a clear and eliminates most meaning	1
		5. It is not clear and not meaningful	0
	Interactive Communicative	1. Confident and smooth in taking a turn to speak and be able to correct yourself if you make a mistake	4
		2. Confident though there was repetition and doubt	3
		3. More than initiative responds	2
		4. It is difficult to talk despite being lured	1
		5. Not being able to respond and take the initiative	0
	Total		16

4) Grading

To calculation of scoring rubric :

$$\frac{100 \; x \; score}{total \; scoring \; rubric \; (16)}$$

b. Documentation

Writer collected the data from SMPN 1 Dusun Hilir to complete the data of thesis. The documentation are:

1. Present list of students class VII B to know number of students

2. Score of pre-test and post-test class VII B.

The syllabus of SMPN 1 Dusun Hilir

3. Lesson plan of SMPN 1 Dusun Hilir

4. Photos of students while doing pre-test, treatment, and post-test

2. Research Instruments Try Out

Writer conducted try-out to know validity and reliability test. The procedures of the try out as follow:

a. The test for class VII A

b. Test of try-out at 20 January 2016. Time 10:10-11:30 WIB

Writer prepared the instrument of speaking test base on syllabus SMP

Make 2 group and 1 dialogue about "what is your name?" (greeting)

Choose situation do you want!

5. School
6. Mall
7. Office
8. House

Examples : situation in school.
A : good morning. My name is Tiara. What is your name?
B : good morning my name is Heru.
A : are you new a new students?
B : yes, I'm. I'm I C. and you?
A : I'm in 1 C too.
B : then we are classmates
A : yes, we are
B : sorry, I have to go now. Nice to meet you, Heru
A : nice to meet you, too.
Speak up in front of your friends orally!

c. The result of try-out there were in appendix

3.Research Instrument Reliability

For the reliability, there is inter-rater reliability. Inter-rater reliability is the consistency of the judgment of several rater on how they see a

phenomenon or interpreted the responses of the subject. It is indicates accuracy in scoring composition of two different raters. For this study, the training is done to get inter-rater agreement in order to give reliable scores to students' speaking product.[9] In this research, writer used inter-rater reliability, rater 1 was Mrs. Eva Handayana as English teacher of SMPN 1 Dusun Hilir and rater 2 was writer herself. Below is the coefficient correlation and the interpretation of inter-rater reliability proposed by Winkle et al as shown in table 3.4. [10]

Table 3.5
Inter-Rater Coefficient Correlation and Interpretation

Correlation Coefficient	Interpretation
.90 to 1.00 or- .90 to-1.00	Very high positive or negative correlation
.70 to .89 or-.70-to-89	High positive or negative correlation
.50 to .69 or-.50 to-.69	Moderate positive or negative correlation
.30 to .49 or-.30 to -.49	Low positive or negative correlation
.00 to.29 or - .00 to -.29	Little if any correlation

Table 3.6
Testing Correlation
Correlation

		Y1	Y2
Y1	Pearson Correlation	1	,879[**]
	Sig. (2-tailed)		,000
	N	24	24
Y2	Pearson Correlation	,879[**]	1
	Sig. (2-tailed)	,000	
	N	24	24

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[9] M. Adnan Latief, *Reliability of Language Skill Assesment Result,* Jurnal ilmu pendidikan VII No. 3, 214-224, 2010

[10] Anotomy C. Winkle, and Jo Roy Mc Cuen, *Writing the research Paper, Orlando: Harcount Brace Jovanovic Publisher, 1989, p. 35*

Based on calculation used in SPSS the result was 0,879. Then it was consulted with r_{table} product moment with df = 23-2 =21. Based on table significant 5% is r_{table} = 0,413. Because r =0,879 > r_{table} =0,413. Based on table Inter-Rater Coefficient Correlation and Interpretation was .70 to.89 or -.70-to-89 (high positive or negative correlation). So, writer concluded data of testing correlation by rater 1 and rater 2 was reliable.

a. Normality

kolmogorov –Smirnov test (K-s) is a test non-parametik the most basic and most basic and most widely used. Andrey Nikola evich Kolmograv first introduce the kolmograv –smirnov test (K-S test) on 1993. The tests used by one-sample test that possible the differences distribution of frequency with some popular distribution like normality test. Normality is a test normal to whether or not the distribution of research data. [11] Writer measure normality test used SPSS 16.00 and for normality test writer analyzed One sample kolmogrove. Significant level $\alpha = 0,05$

Interpretation :

If the result of normality test $> \alpha$ so, the data can be said normal distribution.

If the result of normality test $< \alpha$ so, the data can be said not normal distribution.

4.Research Instrument Validity

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[11] Sugiyono, statistika untuk penelitian, Bandung : CV. ALFABETA, 2006.p.77

Valid means correct.[12] Another research, Cronbach said how well a test or evaluative technique does the job that it is employed to do.[13] In this study, writer used face and content validity to measure speaking test valid or not. Below is type of Validity:

a. Face Validity

Face validity is test items look right to other testers, teacher, indicators and test.[14] For face validity of the test item as follow:

1) The test uses speaking test in speaking

2) The evaluation by speaking test based on scoring rubic

3) The evolution of speaking test based on scoring rubric

4) The language of item used English

5) The speaking test is suitable with syllabus of English speaking at SMPN 1 Dusun Hilir.

b. Content Validity

A test is said to have content validity if certain measure special-purpose parallel to the material or the content of the lessons given.[15] Evidence based on test content involves the test's content and its relationship to the construct it is intended to measure. The instrument of content validity is done by asking expert about instrument able to try or not, this instrument suitable with syllabus, and attainment purpose content in curriculum at SMPN 1 Dusun Hilir.

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[12] M. Adnan Latief, *Research Methods On Language Learning An Introduction,* Penerbit Universitas Negeri Malang, 2014, p. 223

[13] Gito Supriadi, *Pengantar dan Teknik Evaluasi Pembelajaran*, ..p. 108

[14] J.B. Heaton, *Writing English Language,* New York: Logman, 1974, p. 154

[15] Suharsimi Arikunto, *Dasar-dasar Evaluasi Pendidikan*, Jakarta : PT Bumi Aksara, 2008, p. 67

H. Data Collection

Writer did some steps to collect data:

1. Writer observed SMPN 1 DUSUN HILIR

2. Writer gave try out to A class before treatment (test of the students and audio recorder there is in appendix)

3. Writer gave pre-test orally. (test of students and audio recorder there is in appendix).

4. Writer checked the result of pre-test of experiment.

5. After that, writer taught students (lesson plan of whole class interactive there is in appendix). The procedures of treatment were:

 a. Writer prepared lesson plan

 b. Writer prepared whole class interactive teaching procedures

      1) Directing

      2) Before view

      3) Exploratory

      4) Demonstrating

      5) Explaining and illustrating

      6) Questioning and discussing

      7) Investigation

      8) Consolidating

      9) Evaluating pupils' response

      10) Reflection

      11) Summarizing

  c. Writer prepared check list (appendix)

  d. Writer prepared video recorder teaching (appendix)

6. Then, writer did post-test (test and audio recording there is appendix)

7. Writer gave guide interview to students, to know what they felt after learned English (the data in appendix). It is not as the primary data but as complement data to support the test result.

I. Data Analysis

   The data was Quantitative data. The data was and analyzed by inferential statistic. Writer did procedures to analysis data. Below are procedures:

1. Writer was observation

2. Writer did try out to class A

3. Writer gave pre-test to students class B

4. Writer collected the data of the students result

5. Writer gave score to students by using formula:

  Data analysis on students experiment for pre- test and post-test . Formula[16] :

$$\text{n} = \frac{skill\ result}{score\ maximal}$$

6. Writer tabulated the data, then looking for the mean, median and modus of students score.

  a. Mean[17]

  Mean for singular data:m

$$m_x = \frac{\sum X}{N}$$

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[16] Suharsimi Arikunto, dasar-dasar evaluasi pendidikan (edisi revisi), Jakarta: Bumi Aksara, 2008, p. 183

[17] Triwid Syafarotun Najah, *Statistik*, Stain Palangka Raya, 2010, p. 30

Where :

m_x = mean

$\sum X$ = the sum of the scores of existing

N = number of case

b. Standard deviation[18]

$$SD_1 = \sqrt{\frac{n\sum fx^2 - (\sum fx)^2}{n(n-1)}}$$

Where:
SD   = Standard Deviation
N   = Number of students

c. Standard Error

$$Sem = \frac{SD}{\sqrt{n-1}}$$

Where:

Sem   : Standard Error

Sd   : Standard Deviation

N   : Number of studentsTo get the answer on question or problems, the first writer show Hypothesis alternative (Ha) and Hypothesis nil as below:[19]

$$T_0 = \frac{Mo}{SEMo}$$

$$M_o = \frac{\sum D}{N}$$

[18] *Ibid* ., p. 37
[19] *Ibid.,* p. 74

$$df = N - 1$$

d. The writer calculated normality by using SPSS 16.0.

   1. Normality

      It is used to know the normality of the data that is going to be analyzed whether score of rater 1 and rater 2 have normal distribution or not.

e. Writer interpreted the result of analyzing

   If t $_{test}$ ≥ t$_{table}$, H$_a$ is accepted and H$_o$ is rejected

   If t$_{test}$ ≤ t$_{table}$, H$_a$ is rejected and H$_o$ is accepted

7. Writer discuss to clarify the research finding about result of study