

CHAPTER III

RESEARCH METHODOLOGY

This chapter deals with research methodological procedures. This includes research design, population and samples, instruments, data collection and data analysis.

3.1 Research Method

This research using the quantitative approach. The researcher uses quantitative approach due to the calculation between the result of pre-test and post-test. Arikunto (2006:12) stated that quantitative research is a kind of research that requires the use of number, ranging from the data collection, data interpretation and the appearance of the result.

In addition, according to Gunderson (2012), quantitative research is an inquiry into a sociable problem, describe phenomena by gathering numerical data that are analyzed using mathematically structured methods. It means that the quantitative research is the process of collecting and analyzing numerical data from the sample. Moreover, quantitative research is the opposite of qualitative research which involves collecting and analyzing non numerical data (e.g. video, text, document, or audio).

3.2 Research Design

The model of the research design used by researcher is pre-experimental design of one group pre-test and post-test design. The characteristics of pre-experimental design is the design may have pre-test and post-test without a control group (Sugiyono, 2017:41). Furthermore, according to Gay (2000:372),

the one group pre-test and post-test design takes a group that is pre-tested, exposed to treatment, and post-tested. In conducting the research, the researcher will use one class of the first-year students at SMA Negeri 2 Simeulue Barat.

In the first meeting, the students are given the pre-test in order to know their ability in speaking before using video in YouTube media. Then, the students are given the treatment. At the end, they are given post-test; it measured the students' ability in speaking after using video in YouTube media. According to Sugiyono (2013:108), the type of pre-experimental design of this research is comparing the result after and before giving treatment. The researcher only compares score of pretest and posttest, where the first is before using video in YouTube media and the second is after using YouTube media.

3.3 Location of the Research

The researcher conducts this research at SMA Negeri 2 Simeulue Barat. It is one of the schools in Simeulue. The Location of it is at Jln. Nusantara, Sigulai Village, Simeulue Barat District, Simeulue Regency, and Aceh Province.

3.4 Population and Sample

Population of this research is all of the first-year students of SMA Negeri 2 Simeulue Barat in academic year 2023/2024. There are two classes of the first-year; X IPA and X IPS. Population and sample can not be separated in quantitative method. They have very important role in every aspect of the research that used quantitative method. According to Arikunto (2017), population is the entire sample who are going to be observed in research.

In this study, the process of determining population and sample is

conducted. According to Arikunto (2017:62), sample is partial or representative of a particular population that is expected to be able to represent the characteristics of any individual in a population. It means that sample is the part of population. In this case, the researcher used purposive sampling as the sampling procedure.

According to Arikunto (2010: 183), purposive sampling is the process of selecting sample by taking subject that is not based on the level or area, but it is taken based on the specific purpose. Purposive sampling is where a researcher selects a sample based on the needs about the research. It means that the participants are selected according to the needs of the research. In this research, the researcher takes the students of class X IPS as the sample. The researcher chooses the students of class X IPS because class X social students still has less understanding than class X science students.

3.5 Research Instrument

The research instruments are devices which are used by the researcher to collect the required data. According to Arikunto (2017: 160), an instrument is a tool or facility used in collecting data in order to make the work easier and the better result. In other words, the result is complete and systemic, so it is easy to be processed. In collecting the data, the instruments used in this research is test.

3.5.1 Test

According to Arikunto (2017:150), test is a series of questions or exercises, other tools are used to measure the skills, knowledge, intelligence, ability, or talent possessed by individuals or groups. Test is the component to collect data in this research. In the pre-test, the researcher asks the students to

speak in front of the class about introducing self and others. The researcher does not use video in YouTube media in the pre-test to know the students' speaking ability before using the media.

In the treatment stage, the researcher asks the students to open the YouTube's application to show the video about introducing one self that predetermined. Then, the researcher asks the students to discuss with their friends to make simple introduction about introducing one self and perform it in front of the class. Next, in the post-test, the researcher asks the students to speak in front of the class about introducing one self.

3.6 Data Collection

Data is needed in order to answer research questions. In this research, the data is collected by using several techniques of collecting data. There are two kinds of test in conducting the research. First is pre test, it is given before experimental teaching is conducted. It aims to know the students' ability in speaking before the use of video in YouTube media applied in experimental class. Second is post-test, it is given after the treatment is done. It is given in order to know the students' development in speaking after teaching by using the video in YouTube media. Experimental teaching is done for three meetings. In experimental class, the researcher will teach the students by using video in YouTube media. The teaching method used by the researcher is pairs work and roles play. The illustration of the meetings is described as follows:

3.6.1 Pre-test

At the first meeting, the researcher gives pre-test for the experimental

class. Before giving the test, the researcher asks to the students about introducing oneself that they had learned before. After that, the researcher gives the pre-test to the students.

On pre- test, the researcher asks the students in experimental class to speak in front of the class with the topic of “Introducing One Self”. The time allocation for the test was 90 minutes; 10 minutes for greeting and checking attendant list, 10 minutes for giving the instruction of doing the test, and 70 minutes for testing. Finally, the researcher collects the students’ worksheet.

3.6.2 Treatment

After conducting a pre-test, the researcher gives a treatment to the students. It takes for three meetings and spent 90 minutes in each meeting. The subject matter thought by the researcher is about “Introducing Self and Others”. Some steps of treatment are presented in the following table:

First Meeting:

Activities	The Description of Activities
Pre-Teaching	<ul style="list-style-type: none"> • Researcher greets the students • The researcher asked one of the students to lead the prayer • The researcher asked about the condition of the students • Researcher checks student attendance list • The researcher asks the topics to be studied today. • Researcher explains learning objectives • Researcher conveys the scope of learning materials and activities

While-Teaching	<ul style="list-style-type: none"> • The researcher explains the social function of the text introducing oneself and others • The researcher explains the structure of the text introducing himself and others • The researcher explains the linguistic elements of the text introducing oneself and others • The researcher plays the video and asks the students to pay attention to the video about introducing themselves and other people • Students write down important terms contained in the video • Students practice how to introduce themselves to the teacher and their friends in front of the class • Researchers and other students pay close attention when someone is introducing himself in front of the class
Post-Teaching	<ul style="list-style-type: none"> • Students and researcher giving reflection on learning activities and the benefits. • Researcher conveys information related to learning activity plans for the next meeting. • Students and researcher say hamdalah when they want to end the meeting. • Students and researchers say goodbye.

Second Meeting

Activities	The Description of Activities
Pre-Teaching	<ul style="list-style-type: none"> • Researcher greets the students • The researcher asked one of the students to lead the prayer • The researcher asked about the condition of the students • Researcher checks student attendance list • Researcher asks last week's lesson • Researcher connects the previous material with the material to be studied today • The researcher asks the topics to be studied today. • Researchers explain learning objectives • Researchers convey the scope of learning materials and activities

While-Teaching	<ul style="list-style-type: none"> • The researcher plays the video and asks the students to pay attention to the video about introducing themselves and other people • Students write down important terms contained in the video • Researchers ask students to sit in pairs (pairs) • In pairs, students practice how to introduce themselves and other people (seat mates) in front of the teacher and other friends alternately • Researchers and other students pay close attention when there are students who are introducing themselves and their friends in front of the class.
Post-Teaching	<ul style="list-style-type: none"> • Students and researcher giving reflection on learning activities and the benefits. • Researcher conveys information related to learning activity plans for the next meeting. • Students and researcher say hamdalah when they want to end the meeting. • Students and researchers say goodbye.

Third Meeting

Activities	The Description of Activities
Pre-Teaching	<ul style="list-style-type: none"> • Researcher greets the students • The researcher asked one of the students to lead the prayer • The researcher asked about the condition of the students • Researcher checks student attendance list • Researcher asks last week's lesson • Researcher connects the previous material with the material to be studied today • The researcher asks the topics to be studied today. • Researchers explain learning objectives • Researchers convey the scope of learning materials and activities

While-Teaching	<ul style="list-style-type: none"> • The researcher plays the video and asks the students to pay attention to the video about introducing themselves and other people • Students write down important terms contained in the video • Researchers ask students to sit in pairs (pairs) • In pairs, students practice how to introduce themselves and other people (seat mates) in front of the teacher and other friends alternately • Researchers and other students pay close attention when there are students who are introducing themselves and their friends in front of the class.
Post-Teaching	<ul style="list-style-type: none"> • Students and researcher giving reflection on learning activities and the benefits. • Researcher conveys information related to learning activity plans for the next meeting. • Students and researcher say hamdalah when they want to end the meeting. • Students and researchers say goodbye.

3.6.3 Post-test

The post-test given after giving treatment in experimental research. The post-test given toward the students after they taught by using YouTube video in speaking class. The form of post-test is oral test. The researcher asks the students to speak in front of the class to introduce their self and their partner.

3.7 Data Analysis

The data were analyzed by using some criteria in assessing writing and some statistical formula. In analyzing the data, Mann-Whitney Test is used to find out the effectiveness of using video in YouTube media in developing students' speaking skill.

Mann-Whitney test is a test of null hypothesis which states that there is no

actual difference between the two groups of data and where the data is taken from unrelated samples. This test is also called the U test, because to test the null hypothesis, a statistical number called U is calculated. The procedures carried out for the Mann-Whitney test are: (1) stating the hypothesis and real level α ; (2) ranking the data without paying attention to the sample category; (3) adding up the rankings according to each sample category and calculating the U statistic, with the formula $U = n_1 n_2 + [n_1(n_1+1)/2] - R_1$, or $U = n_1 n_2 + [n_2(n_2+1)/2] - R_2$ and (4) drawing conclusion of null hypothesis.

There are five elements in assessing speaking namely grammar, vocabulary, pronunciation, comprehension, and fluency have level of measuring speaking ability. Brown (2004:29) states that to measure the students' ability in speaking, the researcher uses the scoring system as follows:

Speaking Elements	Score	Students' Ability
Pronunciation	17-20 (very good)	Students who have few traces of foreign accent
	13-16 (good)	Students who always intelligible, though one is conscious of a definite accent.
	9-12 (fair)	Students who have the pronunciation problems necessitate. Concentrated listening and occasionally lead to misunderstanding.
	5-8 (poor)	Students who very hard to understand because of pronunciation problems. It must frequently be asked to repeat.
	0-4 (very poor)	Errors in grammar and word order to serve as to make speech virtually unintelligible.

Vocabulary	<p>17-20 (very good)</p> <p>13-16 (good)</p> <p>9-12 (fair)</p> <p>5-8 (poor)</p> <p>0-4 (very poor)</p>	<p>The students who are able to use vocabulary and idiom are virtually that of native speaker.</p> <p>The students sometimes use in appropriate terms and or must rephrase idea because of lexical inadequacies.</p> <p>The students who frequently use the wrong words and conversation.</p> <p>The students who always misuse the words and very limited make vocabulary comprehension quite difficult.</p> <p>When the students have a very limited vocabulary and so extreme as to make a conversation visually impossible</p>
Grammar	<p>17-20 (very good)</p> <p>13-16 (good)</p> <p>9-12 (fair)</p> <p>5-8 (poor)</p> <p>0-4 (very poor)</p>	<p>Making few (if any) noticeable errors of grammar in word order.</p> <p>Occasionally makes grammatical and word order which occasionally obscure meaning</p> <p>Students make frequent errors grammar and word order which occasionally obscure meaning.</p> <p>Grammar and word order errors make a comprehension difficult, it must often rephrase sentences and restrict himself to basic pattern.</p> <p>Errors in grammar and word order so severe as to make speech virtually intelligible</p>
Comprehension	<p>17-20 (very good)</p> <p>13-16 (good)</p> <p>9-12 (fair)</p> <p>5-8 (poor)</p> <p>0-4 (very poor)</p>	<p>The students who understand everything without difficulty.</p> <p>The students, who understand nearly everything at normal speed, although occasional repetition may be necessary.</p> <p>The students who understand what is said at slower-than normal speed with repetition.</p> <p>The students who have great difficulty following what are said and can comprehend only “social conversation.”</p> <p>Students who understand nothing even the simple English conversation.</p>

Fluency	17-20 (very good)	The students who the speech as fluent and effortless as that of native speaker.
	13-16 (good)	The students who the speed of speech seem to be slightly affected by language problems.
	9-12 (fair)	Students who the speech and fluency are rather strongly affected by language problems.
	5-8 (poor)	The students who usually hesitant and often forced into silence by language limitation.
	0-4 (very poor)	The students who speech is as halting and fragmentary as to make conversation virtually impossible.