

CHAPTER III

RESEARCH METHODOLOGY

This chapter presents the research methodology including research method, research design, subject, location, and instrument of the research.

3.1 Research Method

This research will use quantitative approach. Quantitative research is a systematic approach to collecting and analyzing numerical data in order to address research questions and test hypotheses. It involves working with a large sample size and using statistical techniques to objectively analyze the data, identify patterns, and draw meaningful conclusions. This research method emphasizes objectivity, reliability, and generalizability, making it suitable for studying relationships between variables, determining cause-and-effect relationships, and making predictions. Quantitative research is widely used across various disciplines, including social sciences, psychology, economics, marketing, and natural sciences.

According to Hardani (2020) The systematic, scientific study of the elements, phenomena, and relationships between them is known as quantitative research. The objectives of quantitative research include the creation and application of mathematical theories, models, and/or hypotheses relating to natural events. The methodology used for measuring is crucial in quantitative research. This clarifies or breaks down the fundamental link of the quantitative relationship. (Siyoto:2015). In quantitative research, numerical data are systematically gathered and analyzed to find patterns, correlations, and trends in a certain event or population. A focused research topic and an acceptable study design are the first steps taken by the

researcher. Following that, they gather data using organized techniques like surveys, experiments, or observations. To arrive at objective and generalizable findings, the gathered data is organized and then subjected to statistical procedures like descriptive and inferential statistics.

The number of samples will use in research with a quantitative method is often chosen based on the population. By utilizing a certain formula, the number of samples is calculating. Choosing the appropriate formula then modifying it (Priyono:2008). Due to sample collecting and data processing, quantitative research focuses on design challenges, measurement, and planning that are explicitly outlined (Sutinah:2007). The findings of this study can be utilized as a foundation for generalizations to the population represented since the method of assembling a quantitative study and sample size employed are believed to reflect the population.

To sum up, this study will use descriptive quantitative approach to accurate the information, where there are survey or questioner that can be used. As well, according to Sugiyono (2017), the characteristics of a descriptive quantitative study include: (1) a questionnaire as the instrument; and (2) an analysis of the instrument using statistical terms like mean, average, and percentage.

3.2 Research Design

The model of the research design will be use 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 (Nunan:2002). Furthermore, according to Gay (2000), 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 second year students at SMAN 9 Banda Aceh.

In the first meeting, the students will be given the pre-test in order to know students' speaking skill. Then, the students will be given the treatment. At the end, they are given post-test; it measured the students' speaking skill after using English Educational Content on Social media. According to Sugiyono (2005), 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 English educational content on social media and the second is after using English educational content on social media

3.3 Location of the Research

The researcher will conduct this research at SMAN 9 Banda Aceh. It is one of the schools in Banda Aceh. The location is at Lhong Raya, Banda Raya District, City of Banda Aceh and Aceh Province. Conducting the study at SMAN 9 Banda Aceh is practical in terms of resources, time, and logistics, making it a suitable and relevant setting for the research on enhancing students' speaking skills through English educational content on social media.

3.4 Population and sample

In research it is important to determine the population and the sample so the research opt the population and the sample as follow:

3.4.1 Population

The population in this research is the students at SMAN 9 Banda Aceh. From Sugiyono (2018) the population is the leveling region where phenomena or themes

that have certain powers and features are included and from which conclusions can be drawn. Handayani (2020) defines population as the sum of all elements being investigated that have the same traits. These elements might be individuals from a group, events, or something else.

3.4.2 Sample

The sample amount 35 students that will be taken from the first grade especially XI-1 of SMAN 9 Banda Aceh. According to Sugiyono (2018) the sample is part of the number and the characteristics possessed by the population are samples taken from the population must be truly representative or representative of the population being studied.

3.5 Research instrument

3.4.1. Test

The test is a tool or procedure used to find out or measure something in an atmosphere, in a way and rules that have been determined. (Arikunto, 2017: 89) The tests used are in the form of subjective tests, which are generally in the form of essays (descriptions). The essay form test is a kind of learning progress test that requires answers that are discussion or description in nature. (Arikunto, 2017: 178).

3.6 Data Collection

Data is needed in order to answer research questions. In this research, the data will collect 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 skill before using English educational content on social media in experimental class. Second is

posttest, it is given after the treatment is done. It is given in order to know the students' development in speaking skill after teaching by using English educational content on social. Experimental teaching is done for three meetings. In experimental class, the researcher will teach the students by using English educational content that have been chosen by the researcher in social media. The illustration of the meetings is described as follows:

3.6.1 Pre-test

At the first meeting, the researcher will give a pre-test for the experimental class. In the pre-test, the researcher asks the students in speaking experiments in front of the class on related topics.

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.

3.6.3 Post-test

The post-test will be given after giving treatment in experimental research. Giving a post-test to students after being taught procedure text using social media..

3.7 Data Analysis

The data will be analyzed by using some criteria in assessing writing and some statistical formula. In analyzing the data, t-test will be used to find out the effectiveness of using think pair and share method in developing students' writin ability though descriptive text. There are several steps to prove the hypothesis, as the following formula:

In assessing student test results, evaluate them based on one of the five aspects of speaking below:

Table 3.2 Speaking Rubric Assessment

ASPECT	SCORE	INFORMATION
Pronunciation	5	Easy to understand and like a native speaker
	4	Easy to understand even with a certain accent
	3	There are pronunciation problems that make hearing have to be fully concentrated and sometimes there are misunderstandings
	2	Difficult to understand because there is a problem of pronunciation often asking to repeat
	1	Serious pronunciation problems that cannot be understood
Grammar	5	No or slightest grammatical error
	4	Sometimes makes grammatical errors but does not affect the meaning
	3	Often make grammatical errors that affect meaning.
	2	Many grammatical errors hinder meaning and often rearrange sentences
	1	Grammatical errors are so severe that they are difficult to understand
Vocabulary	5	Use vocabulary and expressions like native speakers
	4	Sometimes Use Inappropriate Vocabulary Sometimes
	3	Often use inappropriate vocabulary, conversations become limited due to vocabulary limitations
	2	Using vocabulary incorrectly and vocabulary is limited so that it is difficult to understand
	1	Vocabulary is so limited that conversations are impossible
Fluency	5	Fluent as a foreign speaker
	4	Fluency seems a little distracted by language issues

	3	Fluency is somewhat interrupted by language problems
	2	Often hesitating and stalled due to language disability
	1	Intermittent and Stopped Speech Until the Conversation Is Impossible
Understanding	5	Understand all without experiencing difficulties
	4	Understand almost everything, even if there is repetition in certain parts
	3	Understand most of what to say when speaking is somewhat slowed down despite the repetition
	2	It's hard to follow what is said
	1	Can't understand the conversation even if it's simple

(Hanik, 2011)

Calculating the scores of the students with the following formula:

$$\text{Total score} \times \frac{100}{25}$$

After all components are assessed and calculated, the researcher will classify the students, that students obtained through the result of pre-test and post-test. After the students' reading ability is assessed by using some criteria, the researcher will use some statistical procedures to calculate data as explained in bellow:

1. After obtaining all test results, assign a value between 1 - 100. The obtained scores were then analyzed.
2. After evaluating the work of each student, the average grade was calculated. Using SPSS (Statistically Product and Service Solution), the value of the students was determined
3. Using SPSS to determine the average test score of the students

4. To find out the significant different between the pre-test and post-test by N-Gain score. The test using SPSS.

Table 3.3 Interprets N-Gain

Percentage	Interpretation
< 40	Low
40 – 55	Less
56 – 75	Sufficient
>76	Effective

5. Interpreting values to see the comparing score pre-test and post-test
6. Using a different test using SPSS
- a) Normality test to find out whether the data is normally distributed or not.
 - b) After carrying out the normality test then proceed with the parametric test if the data is normally distributed otherwise continue with the alternative (non-parametric) test Wilcoxon test to find out if there is an increase before using social media and after using social media.