

CHAPTER III

METHODOLOGY

This chapter discusses the methodology and the procedure which are conducted is important for the study since it elaborates the appropriate steps of how to answer the research question systematically. The discussion covers they are: research method, design, location, research sample and population, instrument, pre-test, treatment, post-test, data collection, data validity, variable and data analysis.

3.1 Research Method

The research that used this Quantitative approach. Because the problem in this problem is comprehensive and requires several things to be traced in the development of the Busuu application. According to Williams E. A. (2018). Quantitative research, more so than qualitative research, appears to be a site of cogender collaboration, which has increased over time. Quantitative methods are suitable for research on large populations, the problem is clear, observable, measurable, and the researcher intends to test hypotheses.

3.2 Research Design

The research design use is Quasi experimentally, this study is used 2 class as sample. According to Liu, T, (2021), By realizing the quasi-experiment, the theoretical supposition about the positive influence of serious games on the development of a university student's personality can be confirmed. There is a treatment after giving pre-test, this continue to the post-test, because this study is a Quasi- experiment, it provides better evidence than previous studies regarding the true causal nature of these relationships for student in reading comprehension.

3.3 Research Location

The research was conducted at schools in high school Aceh at SMA N 9 Banda Aceh is located at JL. Sultan Maluku Saleh, Lhong Raya, Aceh, Kota Banda Aceh, Aceh, the school has complete facilities so that researchers can conduct research properly.

3.4 Research sample and population

1. Population

The population in this study will be grade XI students at SMA Negeri 9 Banda Aceh 2023/2024 school year conducted of eleventh classes grade of SMA Negeri 9 Banda Aceh. The data from registration office that showed are 20 students in seven classes is about 140 students. (The population of The Research)

Table population grade students XI at SMA 9 Banda Aceh

No	Class	Total
1.	XI-1A	20
2.	XI-2B	20
3.	XI-3C	20
4.	XI-4D	20
5.	XI-XA	20
6.	XI-X5	20
7.	XI-X3	20
8.	XI-1A	20
	Total	140

2. Sample

This sample the researcher applied random sampling. The sample of this research was Class XI -1A and class XI - 2B, class XI - 1A consists of 20 students and class XI-2B consists of 20 students, the total number of students consists of 40 students.

Table The sample of the grade students of SMAN 9 Banda Aceh

No	Class	Type	Score
1.	XI - 1A	Experiment	20
2.	XI - 2B	Control	20
Total		40	

3.5 Instrument

According to Sugiono (2013), a research instrument is a tool used to measure observed natural and social phenomena, Meanwhile, according to Purwanto (2018), research instrument are basically tools used to collect data in research. The instrument in this research will be used test which consist of pre-test and post-test. The instrument will be uses to measure students listening skills after treatment is done. There is task is multiple choice, pre –test research used was test of multi choice 10 numbers and post – test the research used was test of multi choice 10 numbers (appendix)

The total number of this test is 10 numbers. The student should answer all question according to the instructions that have been given. The post-test was intended to know the student's listening skills after giving treatment through pre-listening task.

The instrument used in this research is a test. The test is divided into 2 parts pre – test and post -test

1. Pre - test consists of 10 choice questions.
2. Post -test consists of 10 choice questions.

Therefore, the total number of pre -test and post-test questions is 20 choice questions.

3.6 Pre-test

Before giving the treatment by using pre-listening Tasks, the researcher given the students pre-test to identify their prior knowledge about listening text, pre-test was needed to find out the student's listening skills before giving the treatment. The researcher given 10 choice tasks for student with audio listening (Appendix). the researcher introduced herself and explain the aim of the research.

Meeting (1) pre – test

The researcher will introduce the definition of listening, learning objectives and the benefits of listening in daily activity, at the first meeting the researcher given the listening test (pre-test), because the researcher will test students listening skills personally.

1. The researcher opened the lesson by saying greetings and praying before learning.
2. The researcher checked the student's attendance list. Before getting into the material, the researcher gave an assignment to the students as an opening activity in the classroom.
3. The researcher gives the listening test for students (pre-test) there are have 10 questions choice.
4. The researcher plays the audio listening by speaker in classroom.
5. The researcher give 20 minute was done for listening pre-test.
6. After the pre-listening activity was completed, the researcher gave an introduction to the students about the Busuu application.
7. The researcher gives the explanation introduction the use of Busuu application
8. The researcher informed the material at the next meeting
9. The researcher closed the meeting.

3.7 Treatment

After giving the pre-test, the researcher used pre- listening tasks to develop students' listening skills for four meeting.

Meeting (2) Treatment

The researcher will introduce the definition of listening and Busuu application, learning objectives and the benefits of listening in daily activity, at the first meeting the researcher explains about the definition of listening and using of Busuu application.

1. The researcher opened the lesson by saying greetings and praying before learning.
2. The researcher checked the student's attendance list. Before getting into the material, the researcher opening with ice breaking to the students as an opening activity in the classroom.
3. The researcher explains the material is definition of listening skills.
4. After the researcher done explains about the definition of listening skills, then the researcher explains the use of Busuu application for students.

Step 1

Download the app on our phone or portable device. click Busuu in the play store, then click download. After installing the application, click on its icon and you will start with the first step of setting up the application. In this first step, take advantage of the moments and lists on the platform, this allows you to save the processes you have in the app.

Step 2.

In the app you will find a language selection that is among the options. By clicking on that option, you will go to a screen where the languages you can learn for free, which are: English, German, French, Portuguese, Chinese, Japanese, Italiano, Arabic, Russia, Turkish, and more. (click on English)

Advance through levels as long as you choose a language to learn, you will access several levels, as you progress, the exercises and tasks will become more difficult, even if you have studied well. To select an answer, simply check on the screen with the translation option,

depending on what the app asks for. In other cases, it will invite you to write the correct answer.

Being this a good way to learn to write in another language.

5. The researcher gave instructions before students start to learning material with use of Busuu application.
6. The researcher asked students to explain the general description of the text given with Busuu application.
7. The researcher informed the material at the next meeting
8. The researcher closed the meeting.

Meeting (3) Treatment

This meeting the researcher will discuss the Busuu application and the material is Report text.

1. The researcher opened the lesson by saying greetings and praying before learning.
2. Before getting into the next material, the researcher gives the material is Report text.
3. The researcher gives instruction for student about how the use Busuu application.
4. The researcher teaches for student about how to access Busuu application for study.
5. The researcher informed the material next meeting.
6. The researcher closed the meeting.

Meeting (4) Treatment

The researcher will teach the material using the Busuu application and will provide Dialog text.

1. The researcher opened the class by saying greetings and praying before learning.
2. The researcher getting into the next material, the researcher gives assignments in Busuu application to students as an opening activity in the classroom.
3. The researcher gives instructions for student for open the Busuu application and explained the text before students start to listen the text.

4. The researcher asked students to explain the general description of the text given.
5. After finishing the pre-listening activity, the researcher called students randomly to explain about the previous material Dialog text and explains the contents of the material in the Busuu application.
6. The researcher explained about the previous lesson.
7. The researcher continued the material which is Busuu application.
8. The researcher give informed the material to next meeting.

Meeting (5) Treatment

The researcher continues learning using the Busuu application, but at the end the researcher will conduct a competency test for students in the form of independent assignments in the form of narrative texts.

The researcher will teach the material using the Busuu application and will provide descriptive text that is different from the previous meeting.

1. The researcher opened the class by saying greetings and praying before learning.
2. The researcher getting into the next material, the researcher gives assignments in Busuu application to students as an opening activity in the classroom.
3. The researcher gives instructions for student for open the Busuu application and explained the text before students start to listen the text.
4. The researcher asked students to explain the general description of the text given.
5. After finishing the pre-listening activity, the researcher called students randomly to explain about the previous material and explains the contents of the material in the Busuu application.
6. The researcher explained about the previous lesson.
7. The researcher continued the material which is Busuu application.
8. The researcher gave the explanation the material from Busuu application.

9. The researcher gives informed the material to next meeting.

3.8 Post-test

The last meeting, after giving treatment for students in four meeting, the researcher gave a post – test for students as 10 tests as multichoice, to measure the result of the treatment after pre – test and post- test is given with teaching by pre-listening task. (Appendix)

Meeting (6) post – test

The researcher will give the listening test for students, at the last meeting the researcher gives the test based on Busuu application which they are learn last meet.

1. The researcher opened the lesson by saying greetings and praying before learning.
2. The researcher checked the student's attendance list. Before getting into the material, the researcher gave an assignment to the students as an opening activity in the classroom.
3. The researcher gives instructions and tasks (appendix – posttest) for student.
4. The researcher gives 25 minute was done for the tasks.
5. After the student done about test post-test the researcher closed the meeting.

3.9 Data collection

In collecting data, the researcher conducted step, as follows:

3.9.1 Before Data Collection

Before implementation, researchers conducted initial observation of the teaching and learning process to identify problems. Observations were also made during action to record things related to several aspects that occur in the classroom. in the classroom, these aspects relate to students' attitudes in listening activities, and teachers' actions in the classroom including listening activities, and the teacher's actions in the classroom including the strengths and weaknesses.

3.9.2 During Data Collection

During data collection, the researcher stated that he would conduct a test using two classes, XI-1A and XI-1B, as control and experimental classes. To confirm that the data collected is complete and that there are no mistakes or disparities in finishing out during testing.

3.9.3 After Data Collection

After collecting data, the researcher will continue the research at SMA N 9 Banda Aceh, the researcher will check the location and the class for teach the material, the researcher also will ask the situation student when teach this study. the researcher will conduct treatment or practice teaching at the school. treatment is carried out by researchers to get the results of using the Busuu application.

3.10 Instrument Data Validity

Validity in quantitative research is a measure of how accurately the research answers the questions and hypothesis it was commissioned to answer. In order for research to be considered credible, and to ensure there is no uncertainty in the integrity of the data, it is important to achieve high validity, in this study, researchers used validity by using process validity.

3.10.1 Data Validity

Process validity is related to reliability and competency of the research. To gain the process validity, the researcher had the data of observation during the action through the observation checklist. According to Zhu, L. (2019), Simulation experimental results show that the proposed validity function can effectively partition the data.

3.11 Research Variable

A variable is very important in research because they are object of research and has its own role in investigating an event of phenomenon to be studied. Research variable is basically anything in the form of anything that is determined by the researcher to study, so that

information is obtained about it, then conclusion is drawn. In this study, there are two variables, namely:

1. Independent variable of free variable (X)

Independent variable is the variable that causes the dependent variable (dependent variable) to arise or change. The independent variable in this study is animated interactive learning media.

2. Dependent variable or dependent variable (Y)

Dependent variable is a variable that is influenced or which is the result, because of the independent variable. The dependent variable in this study is student learning outcomes, with indicators and descriptions, namely learning outcomes that include aspect of learning. Indicator and their descriptions, namely, learning outcomes that include cognitive aspects. Cognitive aspects, cognitive ability is closely related to thinking ability.

3.12 Data Analysis

After getting the pre-test and post-test from students, the researcher needs to analyze the data and correlate the pre-test and post-test score of the listening skills. According to Sugiono (2012) from the understanding aside, it can be ignored that the data analysis technique is very important step in a study. Because at this data analysis has been collected will be described to see the result of researcher.

3.12.1 Mann-Whitney U Test

The Mann-Whitney U test is used to compare whatever there is difference in the dependent variable for two independents. It compares whether the distribution of the dependent variable is the same for the two class and therefore form the same population. The test ranks all of the dependent values i.e. lowest value gets a score of one and then uses the sum of the ranks for each class in the calculating of the test statistic.

Dependent : Numerical/continuos (skewed) or ordinal.

Independent : Nominal (binary)

$$U = n_1 n_2 + \frac{n_1(n_1 + 1)}{2} - R_1 \text{ (Populasi 1)}$$
$$U = n_1 n_2 + \frac{n_2(n_2 + 1)}{2} - R_2 \text{ (Populasi 2)}$$

3.12.2 Homogeneity of Variances

The homogeneity test determines whether two or more groupings of data from samples based on populations have the same variance. This test is required before doing any additional tests. This test is used to guarantee that the data group comes from a population with the same variance (homogeneous).

The foundation for Decision Creating:

1. If A sig value greater than 0.05 indicates consistent data distribution.
2. If the sig value is greater than 0.05, then the data distribution is not normal.