

CHAPTER III

RESEARCH METHOD

A. Research Design

In this research the researcher using experimental research. Experimental research is the only type of research that can test hypotheses to establish cause–effect relations. It represents the strongest chain of reasoning about the links between variables. In experimental research the researcher manipulates at least one independent variable, controls other relevant variables, and observes the effect on one or more dependent variables. Experimental research is the most structured of all research types. In an experimental study, the researcher is in on the action from the very beginning, selecting the groups, deciding how to allocate treatment to the groups, controlling extraneous variables, and measuring the effect of the treatment at the end of the study (Gay, 2012:250-251).

Experimental research is a research method carried out by experiment, which is a quantitative method used to determine the effect of the independent variable (treatment) on the dependent variable (outcome) under controlled conditions. Controlled conditions so that no other variables (aside from the treatment variable) influence the dependent variable. So that conditions can be controlled, experimental research uses a control group, and often experimental research is carried out in the laboratory (Sugiyono, 2021: 111).

According to Sugiyono (2001) there are several forms of experimental design that can be used in research, namely: pre-experimental design, true experimental design, factorial design, and quasi experimental design.

In this research the researcher using quasi experimental design. This form of experimental design is a development of true experimental design, which is difficult to implement. This design has a control group, but it cannot function fully to control external variables that influence the implementation of the experiment. However, this design is better than the pre-experimental design. Quasi-experimental design is used because in reality it is difficult to get a control group to use for research.

In this design a group of subjects is taken from a certain population, there are two groups in this model, that is the experimental group and the control group. The experimental group is the group that gets treatment by using the story completion technique, while the control group is the group that gets treatment with the conventional technique. Furthermore, both classes are given the same test at the end of learning (posttest), this research design is a control group posttest only design, can be seen in the following table.

Table 3. 1 Research Design

No.	Class	Treatment	Test
1.	Experiment	X ₁	T ¹
2.	Control	X ₂	T ¹

B. Variable (Quantitative)

In this study there are two variables, namely the independent variable, and the dependent variable. This is in accordance with the statement of Nana Sudjana (1988: 24) who expressed the following opinion: Variables in research can be divided into two categories, namely free variables and dependent variables or independent variables and dependent variable. The independent variable is the treatment variable or deliberately manipulated to determine its intensity on the dependent variable. The dependent variable is the variable that arises due to the independent variable, therefore the dependent variable becomes the benchmark. In this research, the use of the story completion technique in the experimental class is the independent variable (X), while student learning outcomes in the speaking skills as the dependent variable (Y).

C. Population and Sample

1. Population

The population in this research was all the eighth students of Islamic Junior High School 2 Pariaman year of 2024/2025. The total number of population was 216 students, which were divided into 7 classes as follow:

Table 3. 2 The Population of the Eighth Graders of MTSN 2 Kota Pariaman

Class	Number of the Students
VIII-1	32
VIII-2	32
VIII-3	32
VIII-4	32
VIII-5	32
VIII-6	32
VIII-7	24
Total	216

Source: The English Teacher at Islamic Junior High School 2 Kota Pariaman

In conclusion, at Islamic Junior High School 2 Kota Pariaman class VIII has divided into 7 classes (from class VIII-1 to class VIII-7) with a total of 216 students.

2. Sample

This research uses cluster sampling technique is the process of randomly selecting whole groups, not individuals, in a population that is determined to have the same characteristics. The researcher writes the numbers 1–7 on several small pieces of paper according to the total number of classes, and cluster random sampling is done by lottery. The samples of this research were class VIII.6 (32 students) as experimental class and VIII.7 (24 students) as control class.

D. Research Instrument

Speaking tests were the instrument employed by the researcher to gather data for this study. It was used to determine whether or not the story completion technique taught to pupils improved their speaking skills. It can be seen at the table blueprint of the speaking test below:

Table 3. 3 Test Blue Print of Speaking

No. of Student	Type	Topic	Duration	Indicators
1 2 3 ↓ 32	Performance/ with instruction	<i>The Rabbit and the Turtle</i>	1-2'	1. Vocabulary 2. Pronunciation 3. Grammar 4. Comprehension 5. Fluency

Base on the table above, it is explained that the performance was type of this speaking test. After treatment meeting finished, the researcher gives students speaking test. In this speaking test, students are asked to tell a story about The Rabbit and the Turtle in front of the researcher with durations of 1-2 minutes per individual. The student's presentation will be recorded by the researcher with audio or video depending on the situation and conditions of the student. Then the researcher observes and assesses the students' speaking according to the assessment rubric by hughes. Assessment will be based on pronunciation, grammar, vocabulary, fluency, and comprehension.

E. Procedure of Experiment

Table 3. 4 Procedure of Experimental

1. The procedures for treatment in the experimental class are as follows:

Fase	Learning activity or syntax	Teacher activity	Time
Pre teaching activity	1. Apperception	• Greeting • Praying • Checking student attendance list	3'
	2. Motivation	• Teacher ask the student about last topic • The teacher show the picture to student about the fox and the cat • The teacher writing the topic on whiteboard and introduce the topic Teacher gives questions base on the topic build student background about narrative text.	4'
Main Activity	1. Student orientation to the problem	• The teacher monitors students' vocabulary and grammar based on students' knowledge which includes elements of belief, culture and religion. Example : Teacher ask the student base on relevant topic such as (<i>do you know?; can you describe?; what are the characteristics of?etc.</i>) (Critical thinking) • Teacher exposing the text to the student through paper of the text • After the text is shown, the teacher asks students to observe the text that has been given while underlining new vocabulary words and difficult words. • The teacher focuses students' attention on each generic structure by explaining grammar	15'

		and vocabulary.	
	2. Organizing students to learn	- The teacher divides students into several groups consisting of 5 or 6 people in one group - After the groups are formed the teacher asks students to analyze the text that has been given previously carefully (Collaboration)	15'
	3. Guiding individual and group investigations	- The teacher explains how to use the story completion technique. - Then, teacher starts telling the story - After a few sentences the teacher stops telling the story - Then, the teacher asks students to complete the story - And then, each student can speak freely and express their ideas based on the topic of the story (Communication)	15'
	4. Develop and present results	- The teacher asks one of the students to retell the story in detail and based on the generic structure of the text - The other group listen then correctly words mistake. (Creativity)	5'
	5. Analyze and evaluate the problem solving process	- Students together with the teacher evaluate the activities they have just carried out. (Communication) - Students are given reinforcement by providing answers	10'

Post activity	1. Closing	- Teacher concludes the material with the students while telling them about the next material - Teacher close the class with saying <i>hamdallah</i>	13'
Total JP			80'

F. Technique of Data Collection

a. Treatment

The researcher gives the treatment using the story completion technique to the students who are in the experiment class, while the control class is taught using the conventional technique.

b. Post test

After conducting the treatments, the researcher gives the students a posttest to get data in finding out the result of treatments. The procedure in administering the posttest is the student will give the oral test and the students are given one-two minutes to speak about the rabbit and the turtle story. The posttest is administered to measure the students' progress after having the treatment or to find out the improvement of the students speaking skill.

G. Technique of Data Analysis

Data analysis in quantitative research is an activity carried out after all data sources have been collected (Sugiyono, 2017). Data analysis activities

include presenting data for each variable studied, carrying out calculations to answer the problem formulation, and carrying out calculations to test the hypotheses that have been proposed. In analyzing this data, researcher used the SPSS 24 program as a tool. The data analysis techniques used for analyzing the problem in this research, as follows:

1. Description of Post test

Description data post-test is a statistical analysis used to describe the data that will be used in research to make conclusions that apply generally. The results of this description of post-test are a summary of the samples to be processed, such as average, max value, min value, range, etc.

- a. Mean

The mean is a representative of a data set or an average value which is considered to be the value closest to the actual measurement results. Determining the mean can be done by adding up all the data values, then dividing it by the number of data.

- b. Standard Deviation

Standard deviation is the distribution of data in a sample to see how far or how close the data values are to the average. One of the function of the standard deviation formula is to provide an overview of the distribution of data relative to the average.

- c. MAX

The MAX function is used to display the maximum (largest) value or number contained in a data cell/range.

d. MIN

The MIN function is the opposite of MAX where MIN is used to display the minimum (smallest) value or number contained in a cell/range.

e. Range

The range, which is usually given the symbol R, is a statistical measure that shows the distance between the lowest score and the highest score.

2. T-Test

a. Normality test

Normality test is a method used by researchers to find out whether the object under study is normal or not. The purpose of this normality test is to find out whether the data has a normal distribution or not, or whether the data comes from a population with a normal distribution or not (Anggun, 2021).

The normality test was used to know the data that was going to analyze whether both groups have a normal distribution or not. "If the sample used is less than 50, it is better to use Shapiro-Wilk, and if the sample used is less than 100, it is better to use Kolmogorov-Smirnov,"

Hidayat (2014). To analyze the normality the researcher analyzed the normality of data by using a formula as follows:

If significance > 0.05 = data is normal distribution

If significance < 0.05 = data is not normal significance.

b. Homogeneity test

Homogeneity test is a statistical test procedure intended to show that two or more groups of sample data come from populations that have the same variance. Homogeneity test calculations with the *Levene test* were carried out using SPSS 24 software. Data is categorized as normal if the significance is more than > 0.05 (Priyatno, 2010).

c. T- Test

In this research, researcher used the t-test to test the hypothesis that had been proposed. The t-test is used to test whether there is a significant difference in the level of learning success between Students' speaking skills who are taught by using Story Completion Technique and students who are taught by using conventional technique. To find the students derivation in experimental and control class, the researcher used the formula of t-test as suggested by Sudjana (2003:239). The t-test formula was developed which presented as follow:

$$t = \frac{X_1 - X_2}{S \sqrt{\frac{1}{n_1} + \frac{1}{n_2}}}$$

$$\text{With; } S^2 = \frac{(n_1 - 1) S_1^2 + (n_2 - 1) S_2^2}{n_1 + n_2 - 2}$$

Where;

t : The value of t-calculated

X_1 : Mean score of experimental group

X_2 : Mean score of control group

n_1 : Number of subject of experimental group

n_2 : Number of subject of control group

S_1^2 : Standard deviation of experimental group

S_2^2 : Standard deviation of control group

The t-table was employed to see whether there was a significant effect between the mean score of experimental and control class, the value of t-calculated with the value of t-table. The data were

analyzed by using regression for hypothesis with $5\%=(0.05)$ of significant level.

If the value of t-calculated was higher than t-table, it means that the hypothesis was accepted. And, the hypothesis was not accepted if the value of t-calculated was less than t-table.

