

CHAPTER III

RESEARCH METHODS

A. Research Design

This study used a quantitative approach. Quantitative approach used for analyzing the statistical data in pre-test and post-test score. This study is categorized as Experimental research. Experimental research is the way to find a causal relationship in determining cause and effect. Experimental research is a research method used to find a specific treatment effect against the other in uncontrolled condition.

Table.3.1

Research Design

01	X	02
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Information :

01 = Initial Test (Pre-test)

02 = Final Test (Post-test)

X = Treatment by using Talking Chips

B. Research Variable

Research variables are anything in any form that is determined by the researcher to be studied so that information about it is obtained, then conclusions are drawn Sugiyono. (2011). This research has two variables, namely the independent variable and the dependent variable. The independent variable is the influencing variable change or emergence of the dependent variable. The dependent variable is the variable that is affected or the result, because of the independent variables.

The variables in this research are:

1. Independent variable. The independent variable in this study is the Talking Chips technique (X).
2. The dependent variable. The dependent variable in this study is the students' speaking Ability (Y).

C. Place and Time of Research

The researcher determined the research location at MTsN Padang Panjang, precisely in Panyalaian, Kec. Sepuluh Koto, Tanah Datar Regency, West Sumatra.

D. Population and Sample

According to Gay (2000: 122) population is the group of interest to the researcher, the group to which she or he would like the result of the research to be generalized. The population in this study was class VIII

students of MTsN Padang Panjang. The population of this research consisted of 60 students, who were divided into two classes.

Table 3.2 population of Class grade students of MTsN Padang Panjang Year of 2024\2025

No	Class	Number Of Students
1.	VIII J	30
2.	VIII I	30

Sugiyono (2011: 120) defines that sampling is part of the number and characteristics of the population. If the population is large, and it is impossible for researchers to study everything in the population, researchers can use samples taken from that population. The sampling technique in this research uses total sampling or saturated sampling. Total sampling is a sampling technique in which all members of the population are used as samples (Sugiyono, 2017: 126). The reason for taking total sampling was because

According to Sugiyono, the total population was less than 100 and the entire population was used as the entire research sample. The sample taken from this research was 33 people. In doing this research the researcher needed two classes as the sample, the experimental class and the control class. In this case, class VIII J was an experimental class in this research, and class VIII I was a control class.

E. Instrument

The instrument used in this study was a speaking test designed to assess students' speaking ability before and after the implementation of the Talking Chips technique. This test aimed to evaluate the effectiveness of the technique in improving students' oral communication skills. The assessment consisted of a pre-test and a post-test, both of which were conducted under similar conditions to ensure validity and reliability. The evaluation was based on a scoring rubric adapted from Hughes (2003), which measured five key aspects of speaking: pronunciation, grammar, vocabulary, fluency, and comprehension. By using this instrument, the researcher aimed to obtain objective and measurable data on students' progress in speaking English as a result of the applied teaching strategy.

The students were given the pre-test to check their speaking skills before the application of the use of Talking Chips. After that, the post-test was given to them to find out their speaking skill after the application of the Talking Chips technique.

The speaking test was used as the primary instrument to assess students' speaking skills before and after the implementation of the Talking Chips technique. The test consisted of a pre-test and a post-test, designed to evaluate students' pronunciation, grammar, vocabulary, fluency, and comprehension. The assessment followed the criteria set by Hughes (2003), ensuring an objective and structured evaluation of

students' speaking performance. Those criteria can be seen in the table below:

Table. 3.3 Weighting Table

Criteria	1	2	3	4	5	6
Pronunciation	0	1	2	2	3	4
Grammar	6	12	18	24	30	36
Vocabulary	4	8	12	16	20	24
Fluency	2	4	6	8	10	12
Comprehension	4	8	12	16	20	24
Total Score						100

From this table the researcher revised column data into five assessment criteria, where each component of speaking accent, grammar, vocabulary, fluency, and comprehension has different scores. After that, it depends on the researcher what score will be given to calculate the student's speaking test. In addition, there are also indicators of students' scores on their speaking skills as shown in the following column.

F. Procedure of Research

This study was conducted in three main phases: Preparation Phase, Implementation Phase, and Final Phase.

1. Preparation Step

In this phase, the researcher carried out several steps to ensure the research was well-prepared:

- a) Designing the research schedule and determining the timeline for implementation at MTsN Padang Panjang.
- b) Developing a Lesson Plan (RPP) that incorporated the Talking Chips technique for the experimental class and conventional methods for the control class.
- c) Preparing research instruments, namely a speaking test in the form of pre-test and post-test, to measure students' speaking skills before and after the treatment.
- d) Conducting a pilot test to ensure the validity and reliability of the speaking test used in the study.

2. Implementation phase.

This phase involved the actual teaching process, which was carried out in two classes: the experimental class, where the Talking Chips technique was applied, and the control class, which was taught using a conventional method. The learning process took place over six sessions, following these steps:

Pre-Teaching Activities:

- a) The teacher opened the lesson with greetings and a prayer.

- b) The teacher conducted an introduction to connect prior knowledge with the new lesson.
- c) The teacher explained the learning objectives to the students.

Whilst-Teaching Activities:

In the experimental class, the Talking Chips technique was applied as follows:

- a) Students were divided into small groups (4–6 members).
- b) Each student received a certain number of chips, which acted as a speaking permit.
- c) A student could only speak after placing one of their chips in the center of the table.
- d) The discussion continued until all students had used all their chips.
- e) Once all chips were used, students retrieved them, and the discussion resumed.

In the control class, the teacher used traditional teaching methods, such as lectures and question-and-answer sessions, without the Talking Chips technique.

Post-Teaching Activities:

The teacher provided feedback on students' speaking performance.

- a) The teacher summarized the key points of the lesson.
- b) The teacher motivated students to improve their speaking confidence.
- c) The session ended with a closing prayer.

Teaching and learning process that the researcher will do during this study. It can be seen in the table below:

3. Final Phase

The final phase focused on evaluating the effectiveness of the Talking Chips technique through the following steps: Conducting the Post-Test: After six sessions, both the experimental and control class students took a speaking post-test to assess their progress. Data Analysis: The results from the pre-test and post-test were compared using statistical methods to determine whether the Talking Chips technique significantly improved students' speaking skills. Conclusion Drawing: The collected data were analyzed and presented to conclude the effectiveness of the Talking Chips technique in enhancing the speaking ability of eighth-grade students at MTsN Padang Panjang.

G. Data Collection Technique

Data collection techniques used by researchers in research. This data will be collected by giving the speaking test. Data of this research was the students' scores of post-test. The speaking test will be given to the post-test. Furthermore, the researcher will give a post-test by using the Talking chips technique in the experimental class and the conventional technique in the control class. Finally, to identify the effectiveness of the Talking chips technique in building students' speaking ability, the researcher will compare post-tests for both experimental and control classes.

H. Data Analysis Technique

The technique of data analysis would use statistical analysis. The data is analyzed by using the T-test formula. T-test is a statistical procedure used to determine whether there was any significant effect between the means of the two sets of scores or between two coefficients of correlation. The purpose was to see the significant effect of speaking ability between the Post-test of two classes.

1. This formula is applied to decide the mean of students' test scores in experimental and control groups.

$$x_1 = \frac{\sum f_1 x_1}{\sum f_1} \text{ (Experimental class)}$$

$$x_1 = \frac{\sum f_2 x_2}{\sum f_2} \text{ (Control class)}$$

2. This formula is used to decide the standard deviation of the experimental group :

$$S_1^2 = \frac{n_1 \times \Sigma f_1 x_1^2 - \{\Sigma f_1 x_1\}^2}{n_1 \{n_1 - 1\}}$$

3. This formula is used to decide the standard deviation of the control group :

$$S_2^2 = \frac{n_2 \times \Sigma f_2 x_2^2 - \{\Sigma f_2 x_2\}^2}{n_2 \{n_2 - 1\}}$$

4. This formula of the t-test is as (sugiyono, 2014:128).

$$t = \frac{\bar{X}_1 - \bar{X}_2}{S \sqrt{\frac{1}{n_1} + \frac{1}{n_2}}}$$

$$S^2 = \frac{\{n_1 - 1\} S_1^2 + \{n_2 - 1\} S_2^2}{n_1 + n_2 - 2}$$

Where :

t : The value of t calculated / observer / obtained.

$\bar{X}_1$: Mean score of experimental sample.

$\bar{X}_2$: Mean score of the control sample.

n_1 : The number of the subjects of the experimental group.

n_2 : The number of the subjects in the control group.