

## CHAPTER III

### RESEARCH METHOD

#### 3.1 Research Design

In this research, the method was applied by a pre-experimental method with one group pre-test and post-test design, this presented as follow:

$$E= O1 \text{ X } O2$$

Where: E= Experimental

O1= pre-test

X= treatment

O2= post-test<sup>1</sup>

In this experimental design, the effect of selected teaching material implementation was found out by comparing the result of the students' achievement in pre-test and post-test.

#### 3.2 Population and Sample

##### 3.2.1 Population

Population of this research was the second grade students of MAPI As'Adiyah Sengkang, academic year 2018/ 2019.

It consisted:

Table 3.1 Population

Class	Gender	Number of Students
XI IPA 1	Female	25

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<sup>1</sup>Sugiono, *Metode Penelitian Pendidikan (Pendekatan Kuantitatif, Kualitatif, dan R&D)* (Bandung: Alfabeta, 2010), p. 110-111.

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Class	Gender	Number of Students
XI IPA 2	Female	29
XI IPA 3	Female	27
XI IPA 4	Female	25
XI MAK 1	Female	26
XI MAK 2	Female	27
XI MAK 3	Female	25
XI MAK 4	Female	26
XI IPS	Female	18
		228

### 3.2.2 Sample

Sample was representative part of a single item from a larger whole or group especially when presented for inspection or shown as evidence of quality.<sup>2</sup> The researcher took class of XI IPA 1 to be sample because the students of this class have a little basic and interest in English language not like other classes.

### 3.3 The Instrument of the Research

This test was speaking test that used to measure the students' speaking skill. This test was applied in pre-test and post-test. The researcher used recorder in getting data from the students.

### 3.4 Procedure of Collecting Data

In collecting data, the researcher gave the students some steps as follows:

#### 3.4.1 Pre test

<sup>2</sup> Merriam-webster, "Sample", Official Site of Merriamwebster, (<https://www.merriamwebster.com/dictionary/sample>), (09 April 2019)

Before treatment begin, a pre-test was given to the both of groups to find out the initial skill or ability of students. The pre-test required the groups to solve problems in their school, these are:

Table 3.2 Problem Topics

No.	PROBLEMS
1.	How to make their school a more students friendly school
2.	How to vanish a student who breaks a rule in school (students are prohibited from using mobile phone in school)
3.	How to vanish a student who breaks a rule in school (students are prohibited from using over make up / stylish in school)

### 3.4.2 Treatment

The treatment was conducted after given a pre-test in classroom based on the material from syllabus. The researcher applied the procedure of each activity. The treatment was based on procedures for each activity in each meeting as follows:

#### 3.4.2.1 First meeting

- 3.4.2.1.1 The researcher greeted the students.
- 3.4.2.1.2 The researcher explained how to introduce ourselves.
- 3.4.2.1.3 The researcher gave some examples.
- 3.4.2.1.4 The researcher explained all difficult words and importance information.
- 3.4.2.1.5 Students did the problem solving as the previous session.
- 3.4.2.1.6 Students was divided into some groups consist of 5-6 persons.
- 3.4.2.1.7 Every group chose a person to be a leader of group.
- 3.4.2.1.8 The researcher gave the problem topic to every group.

- 3.4.2.1.9 Every group was given five minutes to study the problem, five minutes to analyze the problem, five minutes to formulate the possible solutions, and five minutes to discuss the possible solutions with their friends group.
- 3.4.2.1.10 After twenty minutes, every group chose a person to present the solution of problem that they have discussed, started from the first until the last group.
- 3.4.2.1.11 After presenting their solutions, other person in every groups was given a chance to give addition or comment solutions to others groups.
- 3.4.2.1.12 The researcher determined the final solutions from students.
- 3.4.2.1.13 The researcher gave motivation to students to always practice their English.
- 3.4.2.1.14 Before closing the class, the researcher gave some vocabulary that used in the next meeting to be memorized by students.
- 3.4.2.1.15 The researcher closed the class.
- 3.4.2.2 Second meeting
- 3.4.2.2.1 The researcher greeted the students.
- 3.4.2.2.2 Students did the problem solving as the first meeting.
- 3.4.2.2.3 Students was divided into a group consists of 5-6 persons.
- 3.4.2.2.4 Every group chose a person to be a leader of group.
- 3.4.2.2.5 The researcher gave the problem topic to every group.
- 3.4.2.2.6 Every group was given five minutes to study the problem, five minutes to analyze the problem, five minutes to formulate the possible solutions, and five minutes to discuss the possible solutions with their friends group.

- 3.4.2.2.7 After twenty minutes, every group chose a person to present the solution of problem that they have discussed, started from the first until the last group.
- 3.4.2.2.8 After presenting their solutions, other person in every groups was given a chance to give addition or comment solutions to others groups.
- 3.4.2.2.9 The researcher determined the final solutions from students.
- 3.4.2.2.10 The researcher gave motivation to students to always practice their English.
- 3.4.2.2.11 Before closing the class, the researcher gave some vocabulary that used in the next meeting to be memorized by students.
- 3.4.2.2.12 The researcher closed the class.
- 3.4.2.3 Third meeting
- 3.4.2.3.1 The researcher greeted students.
- 3.4.2.3.2 Students did the problem solving as the first meeting.
- 3.4.2.3.3 Students was divided into a group consists of 5-6 persons.
- 3.4.2.3.4 Every group chose a person to be a leader of group.
- 3.4.2.3.5 The researcher gave the problem topic to every group.
- 3.4.2.3.6 Every groups was be given five minutes to study the problem, five minutes to analyze the problem, five minutes to formulate the possible solutions, and five minutes to discuss the possible solutions with their friends group.
- 3.4.2.3.7 After twenty minutes, every group chose a person to present the solution of problem that they have discussed, started from the first until the last group.

- 3.4.2.3.8 After presenting their solutions, other person in every groups was given a chance to give additions or comment solutions to others groups.
- 3.4.2.3.9 The researcher determined the final solutions from students.
- 3.4.2.3.10 The researcher gave motivation to students to always practice their English.
- 3.4.2.3.11 Before closing the class, the researcher gave some vocabularies that used in the next meeting to be memorized by students.
- 3.4.2.3.12 The researcher closed the class.
- 3.4.2.4 Fourth meeting
- 3.4.2.4.1 The researcher greeted students.
- 3.4.2.4.2 Students did the problem solving as the first meeting.
- 3.4.2.4.3 Students was divided into a group consists of 5-6 persons.
- 3.4.2.4.4 Every group chose a person to be a leader of group.
- 3.4.2.4.5 The researcher gave the problem topic to every group.
- 3.4.2.4.6 Every group was given five minutes to study the problem, five minutes to analyze the problem, five minutes to formulate the possible solutions, and five minutes to discuss the possible solutions with their friends group.
- 3.4.2.4.7 After twenty minutes, every group chose a person to present the solution of problem that they have discussed, started from the first until the last group.
- 3.4.2.4.8 After presenting their solutions, other person in every groups was given a chance to give additions or comment solutions to others groups.
- 3.4.2.4.9 The researcher determined the final solutions from students.

- 3.4.2.4.10 The researcher gave motivation to students to always practice their English.
- 3.4.2.4.11 Before closing the class, the researcher gave some vocabulary that used in the next meeting to be memorized by students.
- 3.4.2.4.12 The researcher closed the class.
- 3.4.2.5 Fifth meeting
- 3.4.2.5.1 The researcher greeted students.
- 3.4.2.5.2 Students did the problem solving as the first meeting.
- 3.4.2.5.3 Students was divided into a group consists of 5-6 persons.
- 3.4.2.5.4 Every group chose a person to be a leader of group.
- 3.4.2.5.5 The researcher gave the problem topic to every group.
- 3.4.2.5.6 Every group was given five minutes to study the problem, five minutes to analyze the problem, five minutes to formulate the possible solutions, and five minutes to discuss the possible solutions with their friends group.
- 3.4.2.5.7 After twenty minutes, every group chose a person to present the solution of problem that they have discussed, started from the first until the last group.
- 3.4.2.5.8 After presenting their solutions, other person in every group was given a chance to give additions or comment solutions to others groups.
- 3.4.2.5.9 The researcher determined the final solutions from students.
- 3.4.2.5.10 The researcher gave motivation to students to always practice their English.
- 3.4.2.5.11 Before closing the class, the researcher gave some vocabulary that used in the next meeting to be memorized by students.

3.4.2.5.12 The researcher closed the class.

#### 3.4.2.6 Sixth meeting

3.4.2.6.1 The researcher greeted students.

3.4.2.6.2 Students did the problem solving as the first meeting.

3.4.2.6.3 Students was divided into a group consists of 5-6 persons.

3.4.2.6.4 Every group chose a person to be a leader of group.

3.4.2.6.5 The researcher gave the problem topic to every group.

3.4.2.6.6 Every group was given five minutes to study the problem, five minutes to analyze the problem, five minutes to formulate the possible solutions, and five minutes to discuss the possible solutions with their friends group.

3.4.2.6.7 After twenty minutes, every group chose a person to present the solution of problem that they have discussed, started from the first until the last group.

3.4.2.6.8 After presenting their solutions, other person in every group was given a chance to give addition or comment solutions to others groups.

3.4.2.6.9 The researcher determined the final solutions from students.

3.4.2.6.10 The researcher gave motivation to students to always practice their English.

3.4.2.6.11 The researcher closed the class.

#### 3.4.3 Post test

After doing the treatment, the research gave the post-test to the student. It was aimed to identify the influence of problem solving method in achievement speaking skill of students of MAPI As'adiyah Sengkang.



### 3.5 Technique of analysis data

#### 3.5.1 Speaking test

The data collected through the test was analyzed quantitatively in percentage to measure the students' achievement. This quantitative analysis employed statically calculation to test the hypothesis. The steps were:

3.5.1.1 To find out the student's speaking ability, it was viewed from the five components, and they are: pronunciation, grammar, vocabulary, fluency and comprehension.

Table 3.3 Scoring Formulation for Students' Communicating Ability

Classification	Score	Criteria
<b>Pronunciation</b>	<b>9-10</b>	Equivalent to and fully accepted by educated native speaker
	<b>7-8</b>	Errors in pronunciation are quite rare
	<b>5-6</b>	Errors never interfere with understanding and rarely disturb the native speaker. Accent may be obviously foreign.
	<b>3-4</b>	Accent is intelligible though often quite faulty.
<b>Pronunciation</b>	<b>1-2</b>	Errors in pronunciation are frequent but can be understood by a native speaker used to dealing with foreigners attempting to speak his language.
<b>Grammar</b>	<b>9-10</b>	Equivalent to that of an educated native speaker
	<b>7-8</b>	Able to use the language accurately on all levels normally pertinent to professional needs. Errors in grammar are quite rare.
		To be continued

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Classification	Score	Criteria
<b>Grammar</b>	<b>5-6</b>	Control of grammar is good. Able to speak the language with  Sufficient structural accuracy to participate effectively in most formal and informal conversation on practical, social and professional topics.
	<b>3-4</b>	Can usually handle elementary constructions quite accurately but does not have thorough or confident control of the grammar.
	<b>1-2</b>	Errors in grammar are frequent, but speaker can be understood by a native speaker used to dealing with foreigners attempting to speak his language.
<b>Vocabulary</b>	<b>9-10</b>	Speech on a levels is fully accepted by educated native speakers in all its features including breadth of vocabulary and idioms, colloquialisms, and pertinent cultural references
	<b>7-8</b>	Can understand and participate in any conversation within the range of his  Experience with a high degree of precision of vocabulary.
		To be continued

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Classification	Score	Criteria
<b>Vocabulary</b>	<b>5-6</b>	Able to speak the language with sufficient vocabulary to participate effectively in most formal and informal conversations on practical, social, and professional topics. Vocabulary is broad enough that he rarely has to grope for a word.
	<b>3-4</b>	Has speaking vocabulary sufficient to express himself simply with some circumlocutions
	<b>1-2</b>	Speaking vocabulary inadequate to express anything but the most elementary needs.
<b>Fluency</b>	<b>9-10</b>	Has complete fluency in the language such that his speech is fully accepted by educated native speakers
	<b>7-8</b>	Able to use the language fluently on all levels normally pertinent to professional needs. Can participate in any conversation within the range of this experience with a high degree of fluency.
	<b>5-6</b>	Can discuss particular interest of competence with reasonable ease. Rarely has to grope for words
	<b>3-4</b>	Can handle with confidence but not with facility most social situations, including introductions and casual conversations about current events, as well as work, family and autobiographical information.
		To be continued

Classification	Score	Criteria
Fluency	1-2	(No specific fluency description. Refer to other four language areas for implied level of fluency.)
Comprehension	9-10	Equivalent to that of an educated native speaker.
	7-8	Can understand any conversation within the range of his experience.
	5-6	Comprehension is quite complete at a normal rate of speech.
	3-4	Can get the gist of most conversation of non-technical subjects (i.e., topics that require no specialized knowledge)
	1-2	Within the scope of his very limited language experience, can understand simple questions and statements if delivered with slowed speech, repetition, or paraphrase.

(Brown, H. Daughlas. *Language Assessment and Classroom Practice*<sup>3</sup>)

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<sup>3</sup>Daughlas H Brown. *Language Assessment and Classroom Practice*, (San Francisco: State University, 2004), p. 406-407.

3.5.1.2 The data was classified into the following ways of classification as the table below:

Table 3.4 Classification the Students' Communicating Score

No	Classification	Score
1	Excellent	86-100
2	Good	71-85
3	Fair	56-70
4	Poor	41-55
5	Very poor	$\leq 40$

(Suharsimi Arikunto, *Dasar-Dasar Evaluasi Pendidikan*)<sup>4</sup>

3.5.1.3 Finding out the mean score of pre-test and post-test by using the following formula:

$$\bar{X} = \frac{\sum E}{N}$$

In which:

X = Mean score

$\sum E$  = Total f row score

N = Number of Students<sup>5</sup>

<sup>4</sup>Suharsimi Arikunto, *Dasar-Dasar Evaluasi Pendidikan* (edisi revisi)(Jakarta: PT. Bumi Aksara, 2005), p.245.

<sup>5</sup>L.R. Gay, *Educational Research*(New York: Charles Merril Publishing Company, 1987), p.298.

3.5.1.4 Calculating the mean score of difference between pre-test and post-test by using the following formula:

$$\bar{D} = \frac{\sum D}{N}$$

In which:

$\bar{D}$  = the mean score of difference

$\sum D$  = the total scores of difference between pre-test and post-test  
( $X^1 - X^2$ )

$N$  = Total sample

3.5.1.5 Finding out the difference by calculating the T-test value by using the following formula;

Notation:

$$t = \frac{\bar{D}}{\sqrt{\frac{\sum D^2 - \frac{(\sum D)^2}{N}}{N(N-1)}}$$

$T$  : the test of significance

$\bar{D}$  : the mean score of difference ( $X1-X2$ )

$\sum D$  : the sum of the total score

$\sum D^2$  : the square of the sum score of difference

$N$  : the total sample.<sup>6</sup>

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<sup>6</sup>L.R. Gay, *Educational Research*, p. 331.

