CHAPTER III
RESEARCH METHOD

This chapter presents the research method of the present study. It contains research design, research population and sample, research instruments, data analysis, and research procedure

3.1 Research Design

This research can be classified as a quasi-experimental research type. The research employed test and questionnaire design. It was involving a group of students in the experimental group and those in the control group. The experimental group was given the special treatment using cooperative-instructional video. The control group was given the conventional technique without cooperative-instructional video, namely textbook-based as the teacher usually does. The research involved the independent variable and the dependent variable. The independent variable was the treatment consisting of two levels, the treatment within cooperative-instructional video in the experimental group and the treatment with the conventional technique in the control group. Meanwhile, the dependent variable were the students' motivation and ability in speaking English. The table below shows the design of the research.

Table 3.1:The Design of the Study

Group	Independent variable	Dependent variable
Experimental group	Cooperative-Instructional video technique	Students' motivation and ability in speaking English
Control group	Conventional technique (textbook)	Students' motivation and ability in speaking English

3.2 Research Population and Sample

The population of this research included the twelfth grade students from SMAN 5 Tuban, in the first semester. The school has five twelfth grade

classes with 127 students. They are XII-MIPA 1, XII-MIPA 2, XII-MIPA 3, XII-IPS 1, XII-IPS 2 in the academic year of 2019/2020.

Table 3.2:The Number of Students

Class	Number of students
XII-MIPA 1	25
XII-MIPA 2	25
XII-MIPA 3	25
XII-IPS 1	27
XII-IPS 2	25

A non-random sampling method was used to select the experimental groups. From the existing population, the researcher took two classes as the experimental class and the control class. After the sampling selection, XII-MIPA 1 was selected as the experimental class and XII-MIPA 2 as the control class.

Table 3.3:The Research Sample by Class

No.	Class	The number of students
1	XII-MIPA 1	25
2	XII-MIPA 2	25

The sample above was divided into two groups. The first group was class XII-MIPA 1 as the experimental group and the second group was class XII-MIPA 2 as the control group. The experimental group was given cooperative-instructional video method in their speaking class. The control group was given the same materials but without using cooperative-instructional video in their speaking class. The students read from the book and the teacher gave short explanation. Then, the students discussed in group and presented in front of the class. The table below shows the distribution of treatment in the research.

Table 3.4: The Distribution of the Treatment

Group	Class	Treatment	Number of Students
Experimental	XII-MIPA 1	Cooperative-Instructional video	25
Control	XII-MIPA 2	Conventional (textbook)	25

3.3 Research Instruments

Since the study was quasi-experimental, the instruments to collect the data were questioner and test.

Table 3.5:The Distribution of the Research Instruments

Group	Class	Instrument	Treatment	Instrument	Student's number
Experimental	XII-IPA 1	Pre-test	Cooperative-Instructional video	Post-test	25
				Questionnaire	
Control	XII-IPA 2	Pre-test	Conventional (textbook)	Post-test	25

In this study, the researcher compared the data gathered from test and questionnaire.

3.3.1 Test

There were two test which used by the researcher. These were pre and post test. Pre and post test were given to experimental group and control group to know any progress or not in their speaking ability. Researcher developed the test based on the syllabus which focuses on speaking skill. The test contains five tasks: talking about cause and effect correlation, prepositional phrase according to the picture, finite-non finite clause according to the picture, expressing conditional sentences, and make sentence using contrastive conjunctions.

a. Pre-test

The data will be collected by pre test in both of classes to know the differences between two classes which taught by conventional technique and cooperative-instructional video technique. Pre test will be held in both classes to know the student's speaking ability before giving treatment.

b. Post test

Post test was conducted after giving treatment. For the experimental group, cooperative-instructional video technique was used to improve their speaking ability. For control group used conventional technique in their activity. Post test was used to measure the student ability after giving the treatment.

3.3.1.1 Validity of Test

Before conducting pre and post test as instrument of the research, researcher will test the validity of the items. The validity of a test is an important feature for a research instrument. An instrument is said to have validity if it measures exactly what it is supposed to measure (Gay, Mills, & Airasian, 2009) in (Namaziandost et al., 2019). The researcher used content validity because researcher wants to measure the test item for students especially on speaking test. Besides, content validity is one of process which relate between the test item and task requirement. According to Ary (1990) content validity it can be used to test the item on objective course book, curriculum and syllabus. All the items on the speaking test were reviewed by the researchers as self-validation. Then the items were given to the experts to ensure the content validity of the test. The experts were asked to validate and evaluate the test by completing a checklist for validating the English-speaking test. The results of the experts' evaluation of the test and the scoring rubric showed that all of the criteria used to assess the test on the four-point scale were viewed positively by the experts. Instruments that have been compiled by the

researcher have been validated by Prof. Dr. Agus *Wardhono,* M.Pd as advisor 1 and Dr. Khoirul Anwar, M.Pd as advisor 2. The entire instrument is identified in order to know the students' improvement of their speaking in learning English.

Table 3.6: The Basic Competence and the Questions of Pre-Post Test

Basic Competence	Learning Goal	Focus Item	Questions	
			Pre-Test	Post-Test
3.1 Applying the social function, text structure, and the linguistic elements of the interaction of oral and writing transactional text involves the act of giving and asking for information related to the causal relationship, in accordance with the context of its use. (Pay attention to the linguistic elements of 'such ... that; so ... that') 4.1 Composing the interaction of oral and writing transactional text involves	The students use "so…that and such … that" correctly	So…that and such…that	Look at these pictures and answer the questions: • According to the picture 1. How does the student win the competition and get the medal? • According to the picture 2. How does the student get a bad score?	Look at these pictures and answer the questions: • According to the picture 1. How does this businessman be success? • According to the picture 2. Why do the parents scold their son?

the act of giving and asking for information related to the causal relationship, with attention to the social function, text structure, the linguistic elements and the context.				
3.2 Applying the social function, text structure, and the linguistic elements of the interaction of oral and writing transactional text involves the act of giving and asking for information related to the objects with preposition in the form of nature, types, facts and circumstances of the event, in accordance with the context of its use (Pay attention to the linguistic elements of prepositional phrase).	The students use prepositional phrase correctly	preposition al phrase	Look at these pictures and answer the questions: • Where is the position of the book? • Where is the position of the cat?	Look at these pictures and answer the questions: • Where is the position of the bag? • Where is the position of Doraemon?

4.2 Composing the interaction of oral and writing transactional text involves the act of giving and asking for information related to the objects with preposition in the form of nature, type, and fact circumstances /events, with attention to the social function, text structure, the linguistic elements and the context.				
1.3 Applying the social function, text structure, and the linguistic elements of the interaction of oral and writing transactional text involves the act of giving and asking for information related to the description (circumstance), in accordance	The students use finite and non finite clause correctly	finite and non finite clause	Look at these pictures and answer the questions! • According to picture 1, what is the girl doing? • According to picture 2, what is the girl doing?	Look at these pictures and sentences, and then answer the questions! • According to the sentence, which one is the finite and non finite clause! • According to the sentence, which one is the finite and non finite clause!

with the context of its use. (Pay attention to the linguistic elements of relative pronoun, adjective clause, and finite or non finite clause)				
1.4				
4.3 Composing the interaction of oral and writing transactional text involves the act of giving and asking for information related to the description (circumstance), with attention to the social function, text structure, and the linguistic elements and the context				
3.4 Applying the social function, text structure, and the linguistic elements of the interaction of oral and writing transactional text involves the act of	The students use conditional sentence type 2 and 3 correctly	conditional sentence type 2 and 3	Look at these pictures and answer the questions: • According to picture 1. What would you do, if you were hungry? • According to picture 2.	Look at these pictures and answer the questions: • According to picture 1. What would you do, if you had a lot of money? • According to picture 2.

giving and asking for information related to supposition (conditional sentence) for something to happen or to do that is not real at this time and in the past, in accordance with the context of its use (Pay attention to the linguistic elements of conditional sentence in past dan past perfect) 4.4 Composing the interaction of oral and writing transactional text involves the act of giving and asking for information related to supposition (conditional sentence) for something to happen or to do that is not real at this time and in the past, with attention to the social			What would you have done, if you had been thirsty?	What would you have done, if you had been sick?

function, text structure, the linguistic elements and the context.				
3.5 Applying the social function, text structure, and the linguistic elements of the interaction of oral and writing transactional text involves the act of giving and asking for information related to opposite relation, in accordance with the context of its use. (Pay attention to the linguistic elements of even if ..., unless ..., however, on the other hand, in contrast, nevertheless)	The students use contrastive conjunctions correctly	contrastive conjunctions (even if ..., unless ..., however, on the other hand, in contrast, nevertheless)	Look at these pictures and answer the question: • Make a sentence according to these pictures using contrastive conjunction correctly!	Look at the picture and answer the question: • Make a sentence according to the picture using contrastive conjunction correctly!
4.5 Composing the interaction of oral and writing transactional text involves the act of giving and asking for				

information related to opposite relation, with attention to the social function, text structure, and the linguistic elements and the context.				

3.3.1.2 Construct Validity of Test

Wiersma and Jurs (2009) state that construct validity refers to theoretical construct trait being measured, but not to the technical construction of the test. This validity is used to examine whether the test has a consistent representation with theories underlying the material given or not. To score students' speaking test, the researcher used scoring rubric adapted from Blaz (2001).

Table 3.7:The Oral Assessment Rubric

Categories	1	2	3	4
Task Completion	Minimal attempt to complete the task and/or responses frequently inappropriate	Partial completion of the task, responses mostly appropriate yet undeveloped	Completion of the task, responses appropriately and adequately developed	Superior completion of the task, responds with elaboration
Comprehensibility	Responses barely comprehensible	Responses mostly comprehensible, requiring interpretation by the listener	Responses comprehensible, requiring minimal interpretation by the listener	Responses readily comprehensible, requiring no interpretation by the listener

Fluency	Speech halting and uneven with long pauses or incomplete thoughts	Speech slow and/ or with frequent pauses; few or no incomplete thoughts	Some hesitation but manages to continue and complete thoughts	Speech continuous with few pauses or stumbling
Pronunciation	Major pronunciation errors	Frequent errors, little or no communication	Occasional pronunciation problems with communication	No or almost no pronunciation errors
Vocabulary	Inadequate and inaccurate use of vocabulary	Somewhat inadequate and inaccurate use of vocabulary and too basic for this level	Adequate and accurate use of vocabulary for this level	Rich use of vocabulary with frequent attempts at elaboration

Table 3.8: The Validity of Test Instrument

Item	Pearson Correlation	Significance	Meaning
Item 1	,763**	0,000	Valid
Item 2	,845**	0,000	Valid
Item 3	,521**	0,008	Valid
Item 4	,705**	0,000	Valid
Item 5	,570**	0,003	Valid

Based on the calculation of validity of the questions on the test instrument, the learning outcomes of students were obtained with the range of 0,521 – 0,845, then the results of test instrument has exceeded 0,396 (r table 25 (n-2)) of the provision, and the values of the significance test are smaller than 0.05, so five questions of test instrument are valid and can be used for research.

3.3.1.3 Reliability of Test Instruments

After having tested the validity of the instrument, the next step is to examine the reliability. A test is considered reliable if the same test is given to the same subjects or matched subjects in two different occasions, the test should yield similar result (Brown, 2004). Wiersman and Jurs (2009) added that reliability is the consistency of the instrument in measuring whatever it measures. It means that if the instrument has a consistent result in the second chances or more, the instrument is reliable. The instrument reliability was estimated by using Cronbach Alpha reliability test. The test instrument is declared valid based on the reliability index if the value of Cronbach Alpha > 0,07 which tested as many as 5 questions and tested on 25 students. Then it was obtained the following results.

Table 3.9: The Reliability of Test Instrument

Cronbach's Alpha	N of Items
,720	5

Based on the result, the value of α is 0.720. It means such a test has a reliability that is adequate because it has exceeded 0.7 of the provisions. So that 5 questions of the test instrument have been declared reliable and can be used in the research.

3.3.2 Questionnaire

The second instrument is a questionnaire that was used to measure students' motivation in speaking English using cooperative-instructional video after the treatment to experimental class. The items were constituted using four-point Likert-type scales. Items on the scales are anchored at 1 = strongly disagree, 2 = disagree, 3 = agree and 4 = strongly agree.

Table 3.10: The Questionnaire

No	Statement	Strongly Disagree	Disagree	Agree	Strongly Agree
1.	I like when the teacher shows a cooperative-instructional video in English subject, especially in speaking skills.				
2.	I like to speak English in class after watching cooperative-instructional video				
3.	After watching the cooperative-instructional video, I find it easier to understand the English material, especially spoken English.				
4.	After watching the cooperative-instructional video, I have spirit to do the duties of the English subject, especially in speaking skills.				
5.	After watching the cooperative-instructional video, I am more confident and brave speaking English in front of teachers and friends.				
6.	I prefer the teacher using the cooperative-instructional video rather than using a textbook when teaching English, especially in speaking skills.				
7.	The cooperative-instructional video keeps me challenged to be able to speak English fluently.				
8.	I would discuss in group if there is material that I don't understand from the cooperative-instructional video.				
9.	The difficult material in speaking English will be more easily understood with the discussion after watching the cooperative-instructional video.				
10.	I feel there is progress on my ability to speak English after watching several times the cooperative-instructional video.				
11.	I feel nervous when speaking English after watching the cooperative-instructional video.				
12.	I feel bored when the teacher showing the cooperative-instructional video.				
13.	I prefer to play and chat with friends when the teacher showing the cooperative-instructional video.				

14.	I feel confused and struggling to understand the material English, especially speaking skills while watching the cooperative-instructional video.				
15.	I feel watching the cooperative-instructional video is just a waste of time.				
16.	I'm not interested in watching the cooperative-instructional video, especially in speaking Englısh				
17.	English material which delivered using the cooperative-instructional video is not beneficial in the ability to speak English.				
18.	The cooperative-instructional video creates a classroom atmosphere becomes unpleasant.				
19.	I become lazy to follow English lessons since aired the cooperative-instructional video.				
20.	The classmates do not focus on the English material which taught when the teacher showing the cooperative-instructional video				

3.4 Research Procedure
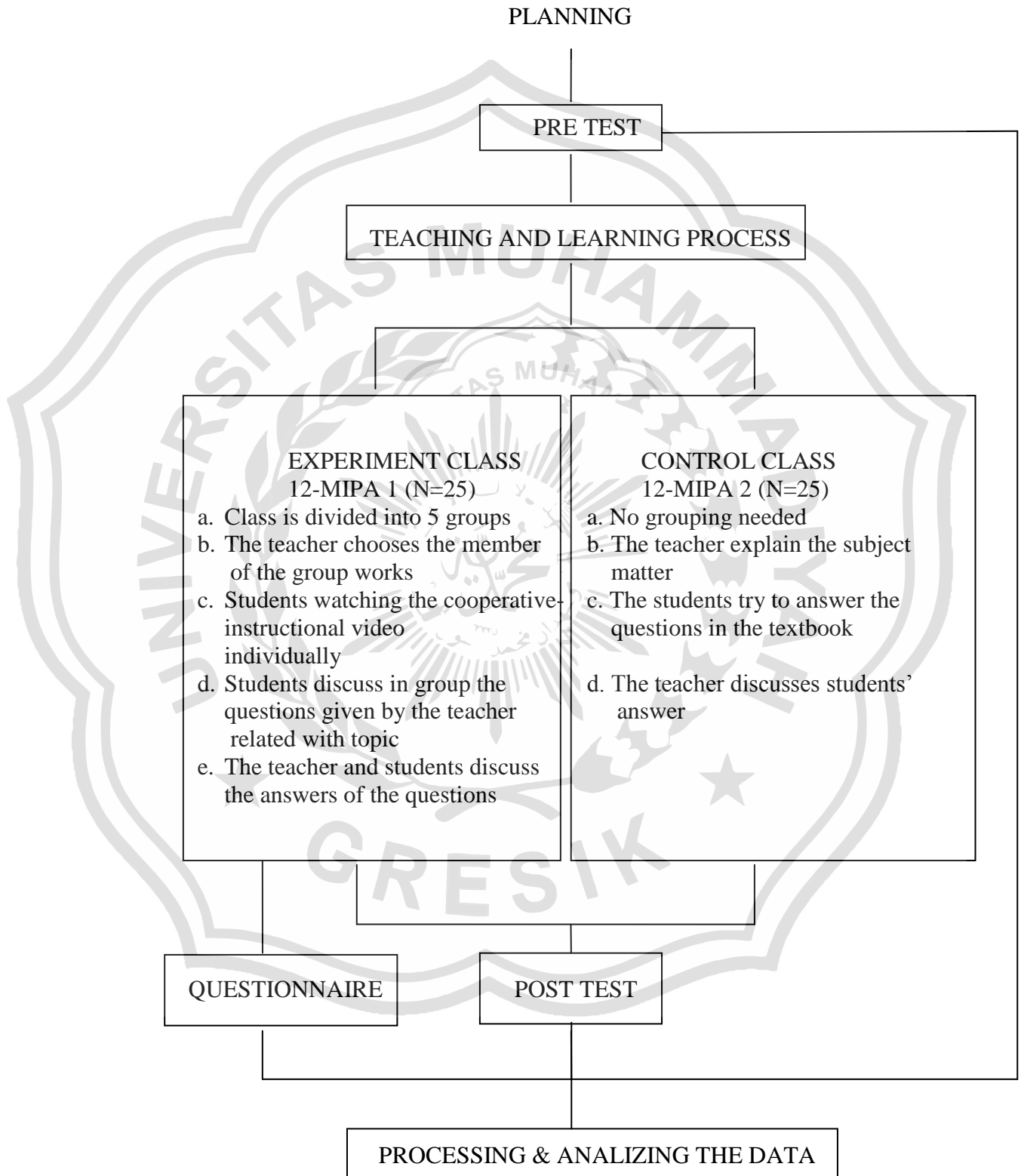
Table 3.11: The Procedure of the Study

PLANNING

PRE TEST

TEACHING AND LEARNING PROCESS

EXPERIMENT CLASS 12-MIPA 1 (N=25)	CONTROL CLASS 12-MIPA 2 (N=25)
a. Class is divided into 5 groups b. The teacher chooses the member of the group works c. Students watching the cooperative-instructional video individually d. Students discuss in group the questions given by the teacher related with topic e. The teacher and students discuss the answers of the questions	a. No grouping needed b. The teacher explain the subject matter c. The students try to answer the questions in the textbook d. The teacher discusses students' answer

QUESTIONNAIRE

POST TEST

PROCESSING & ANALIZING THE DATA

Table 3.12: Timeline of Research Procedure

No	Date	Activities
1.	July 22, 2019	Pre test to XII-MIPA 1 (Experimental Class)
2.	July 23, 2019	Pre test to XII-MIPA 2 (Control Class)
3.	July 25 - September 21, 2019	Treatment
4.	September 24, 2019	Post test to XII-MIPA 1 (Experimental Class)
5.	September 25, 2019	Post test to XII-MIPA 2 (Control Class)
6.	October 1, 2019	Distributing the questionnaire to the students' of XII-MIPA 1 (Experimental Class)
7.	October – November, 2019	Processing and analyzing the data

3.5 Data Collection

The pre-test, post-test and questionnaire were the instruments to collect the data of this research. They were attempted to find out the influence of using cooperative-instructional video toward students' motivation and their ability in speaking. The data was collected incorporating pre-test, post-test and questionnaire for the experimental group, then pre-test and post-test for control group. Pre-test was administered before the treatment to experimental and control group. The students were asked to answer the pre-test which administered in spoken test. Then the treatment was done. The treatment by using cooperative-instructional video technique was designed for experimental group. Control group was treated with conventional teaching. Students in the experimental group were divided into five groups, each consisting of five students. However, the researcher selected the group member that in one group is composed of students who have diverse abilities, ranging from low to high abilities to work with on alternate days during the study period. Each group discussed a chosen topic, exchanged ideas, helped each other, and shared knowledge. Then the group works had to present a dialogue in accordance with the topic of learning. Each group member was assigned a role and responsibility that must be fulfilled if the group was to function effectively. Those roles were assigned to ensure interdependence. At the end of the study, post-tests of oral performance were given to the students.

The students in the experimental class were also asked to answer the questionnaire of students' motivation using cooperative-instructional video in learning English.

3.6. Data Analysis

To analyze the data from the test, the researcher used the inferential statistics which is used test of normality, test of homogeneity, and test of hypothesis. The pre-test score was used as a covariance. It answered the question in the formulation of the problem, namely whether or not the cooperative-instructional video was effective and significant enough to improve the students' speaking ability.

a. Test of Normality

This test aimed to find out whether or not the collected data showed a normal distribution. This research used Kolmogorov-Smirnov test. Kolmogorov-Smirnov test assessed whether the data were normally distributed or not. If the P-values (significance) is less than $\alpha = 0.05$, the data were not normally distributed, otherwise if the *P*-values is more than $\alpha = 0.05$ then the data is normally distributed (Carver, 2012).

b. Test of Homogeneity

The test was used to find out whether or not the sample variance was homogeneous. The homogeneity test was intended to test the equality of variance-covariance matrix of the dependent variable of this study. One test for assessing whether variances are homogeneous is Levene's Test, which is simply one-way analysis of variance on the absolute deviation of each score from the mean for the group (Cramer, 2003). If the value of significance (probability) on the Levene's Test is greater than 0.05, then the variance in variables are homogeneous.

c. Test of Hypothesis

T-test calculates to find out the comparison of two means between pre and post test score of experimental and control group.

The hypothesis of this study as follow:

1. If T-test score is bigger than T-table, the alternative hypothesis (H_1) is accepted. It means that there is significant different in the score to the twelfth grade of students SMAN 5 Tuban taught using cooperative-instructional video and taught without using cooperative-instructional video. The difference is significant.

2. If T-test score is smaller than T-table, the Null Hypothesis (Ho) is rejected. It means that there is no different score to the grade of students SMAN 5 Tuban taught using cooperative-instructional video and taught without using cooperative-instructional video.