

CHAPTER III

RESEARCH METHODOLOGY

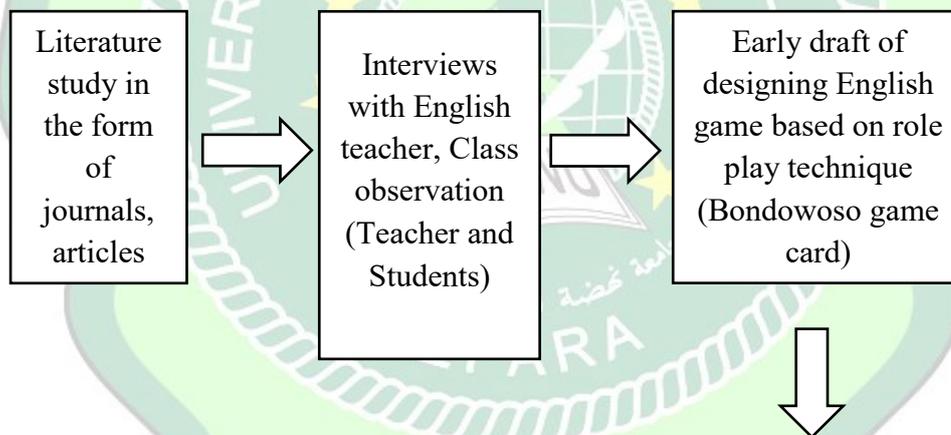
A. Research Design

As written in the first chapter, the research problem of this study are (1) What English game is needed for SMA Negeri 1 Tahunan students; (2) How is English game based on role play designed to improve students' speaking skill?; and (3) How is students' improvement in speaking skill after being taught by using English game based on role play? Therefore, this study use research and development design model proposed by Borg and Gall, 1983; Samsudi, 2009; Sugiyono, 2010 to solve the formulated problem. According to Borg and Gall, 1983; Samsudi, 2009; Sugiyono, 2010, Research and Development (R & D) study in education is to enhance and approve the educational products and the steps consists of three stages. They are preliminary study (literature study, field study about forms or similar patterns that already exist, description and finding analysis (factual model)), development stage (design formulation (preparation model of devices), limited trial, evaluation and improvement, more extensive trial, evaluation and completion, hypothesis model), and validation stage (model implementation, final model). In this study, a set of English speaking game for the tenth grade of SMA Negeri 1 Tahunan is intended to improve the students' speaking skill. Therefore, R & D study matched to the process of designing the game.

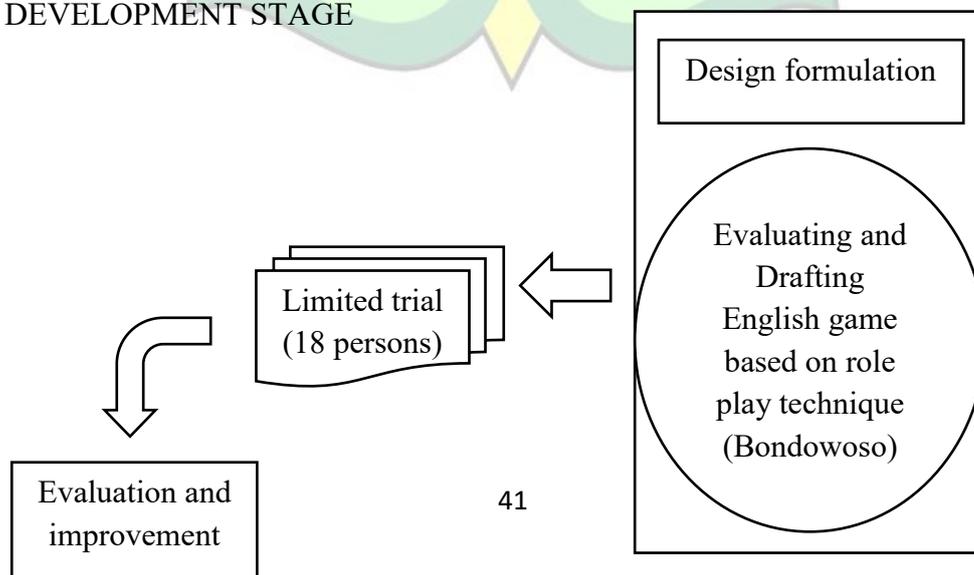
B. Development Stage

The research and development design model proposed by Borg and Gall, 1983; Samsudi, 2009; Sugiyono, 2010 is used in this study. The stages are preliminary studies, development stage, and validation stage. In the three main steps by Borg and Gall, 1983; Samsudi, 2009; Sugiyono, 2010. That conclude of preliminary study (literature study, field study about forms or similar patterns that already exist, description and finding analysis (factual model)), development stage (design formulation (preparation model of devices), limited trial, evaluation and improvement, more extensive trial, evaluation and completion, hypothesis model), and validation stage (model implementation, final model).

PRELIMINARY STUDIES STAGE



DEVELOPMENT STAGE



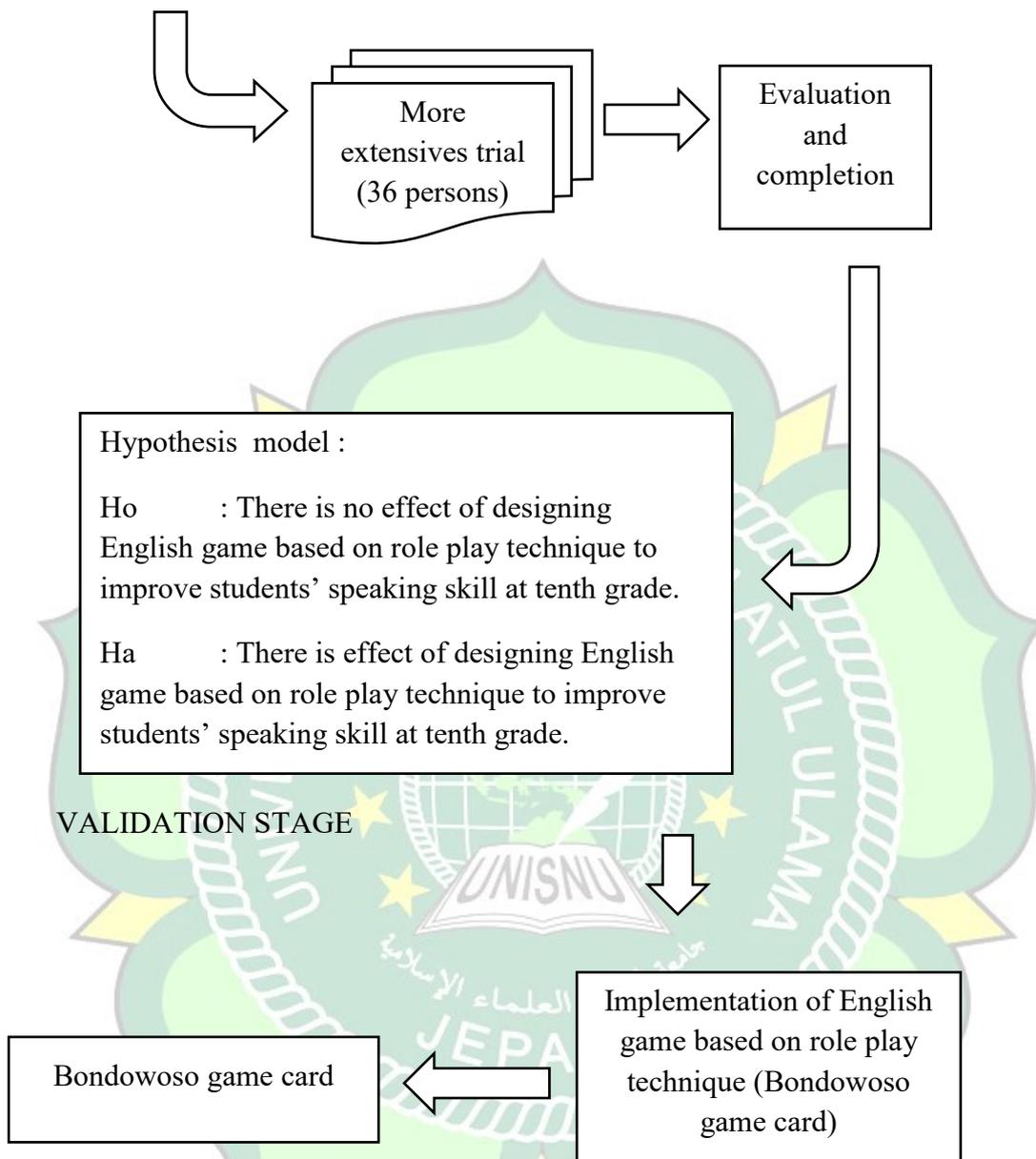


Figure 3. 1 Research and development flow adapted from Borg and Gall, 1983; Samsudi, 2009; Sugiyono, 2010.

The first is a preliminary study. Activities include studying literature or collecting field data related to the problems of students' speaking skills, and analyzing field findings.

Second, namely the development stage. Its activities include formulating development plans; establish goals to be achieved at each stage of development, and plan a limited feasibility study; developing initial products to be developed; conducting initial product trials on a limited scale; and conduct product trials involving a wider range of subjects. The main objective of this step is to determine the effectiveness of the model design in achieving the research objectives. Therefore, the researcher at this stage can test the model with a limited action approach or with a pre-experimental one-group pretest-posttest design. Based on the results of these trials, improvements were made, so that the developed model design is a model that is ready for validation testing.

The third is the validation stage. The activity at this stage is to test the results of the development and validate the product and make improvements in order to finalize the final product. The main objective that will be expressed in this step is to conclude whether the model being developed is effective and efficient. Model validation can be done, for example, by applying a broader action research or by applying a quasi-experimental research with a pretest-posttest design with a control group design. This third stage includes making final improvements to the model developed based on the results of validation tests, both action and experiment. The improvements made are of an improvement not in the main parts but in the technical and administrative sections, which can then be determined the formulation of the final model of the validation results.

C. Research Variable

Variable is a research that in basic everything that has anything is determined by the researcher to be learned so that can be found the result or getting information and conclusion. There are two variables in this research. They are dependent variable and independent variable. Sugiyono (2015:39) states that independent variable is variable

that influences or caused dependent variable change, while dependent variable is variable output, criteria, and consequence that variable is influenced or as an effect because of independent variable. In this research, independent variable is English game based on role play technique and the dependent variable is the improvement of students in speaking skill.

D. Population and Sample

Based on Rachman (2015 : 384), Population is all individuals or units or events that are designated as the subject of research and development. Technically a population is nothing but a collection of elementary units that have certain characteristics. Researchers will examine the characteristics of elementary units. Then, it will be concluded. So, population is a collection of measures about something to which the inference or conclusion will be made. Population is a generalization area consisting of objects or subjects that have certain qualities and characteristics applied by researchers to study and then draw conclusions. Population is the entire research object that will be the source of the data. The population in this research were all ten grade students of SMA Negeri 1 Tahunan Jepara. It consist of 6 clases, The population class of X MIPA 1 consist of 36 students. Class of X MIPA 2 consist of 36 students. Class of X MIPA 3 consist of 36 students. Class of X MIPA 4 consist of 36 students. Class of X MIPA 5 consist of 36 students. Class of X MIPA 6 consist of 36 students. So, total of the population is 216.

Based on Rachman (2015 : 385), Sample as a part of the population that has the same or similar characteristics or characteristics as the population. The sample must accurately describe the population or in other words the sample must be representative. The sample must have characteristics, be clear and complete so that it is representative of the population. For this research sampling, the researcher used simple random

sampling because it took members of the sample from the population was done randomly regardless of the strata that exist in that population.

According to Arikunto (2010 : 177), Random sampling is a sampling where the researcher “Mixes” the subjects in the population so that all subjects are considered the same. Thus, the researcher gave the same rights to each subject to get the opportunity to be selected as the sample. Because the rights of each subject are the same, the researcher is independent from the feeling of wanting to privilege one or more subjects to be sampled. Research by using a sample was saving time and effort. The sample used is the students of class X MIPA 6 36 students as an experimental class and X MIPA 5 as a control class. The experimental class uses English game based on role play technique and control class uses other technique.

E. Setting of Research

This research will be hold in SMA Negeri 1 Tahunan Jepara which is located in Amarta 3 street, Tahunan, Kec. Tahunan, Jepara Regency, Central Java 59451. The research will be done in second semester.

F. Research Instrument

The instruments that will be used in this research are as follows.

1. Interview

Interview is activity that involves interviewer and interviewee where the interviewer will give some questions to be answered by interviewee. Ary *et.al* (1985: 342) stated “In an interview, data are collected through face-to-face or telephone interaction between the interviewer and the respondent”. Thus, in this case, the interviewer has to conduct collecting data with doing interaction or communication directly. But, it can be conducted face to face or through via electronic.

For additional, Syamsuddin (2011: 95) stated that in qualitative research, interview activity has two functions. First function is as main strategy in collecting data like data in the form of interview transcript, and second function is as additional strategy for other techniques like participatory observation, document analysis and photography. Then, Creswell (2008: 226) also classify the interview into four types, those types are (1) one-on-one interview, (2) focus group interview, (3) telephone interview, (4) electronic E-mail interview.

Based on the types of interview above, the researcher uses one-on-one interview. One-on-one interview is data collection process in which the researcher asks questions and records answers from only one participant in the study at a time. The researcher prepares thirteen questions relate to English speaking material. To collecting data of interview, the researcher makes some procedures. Those are (1) preparing the concept of questions that want to be asked to subject and (2) the researcher transcript the result of interview.

Table 3. 1 The Teacher's Interview Sheets

No	Variables	Indicators	Sub Indicators	Questions
1.	English Subject	Materials	<ul style="list-style-type: none"> • English material taught to students • Students' interest in learning English speaking material • Students difficulties in learning English speaking material 	<ol style="list-style-type: none"> 1. What English materials that teacher teaches to the students? 2. How the students response to the speaking material delivered by the teacher? 3. What are the difficulties experienced by teacher and students during English speaking learning?

2.	The Role of Teacher in Learning English	Technique	<ul style="list-style-type: none"> The use of techniques in delivery English speaking material 	<p>4. What is the technique used by the teacher in delivering English speaking material to students?</p> <p>5. What are the advantages of the technique used by the teacher in delivering speaking material to students?</p> <p>6. What are the deficiency of the technique used by the teacher in delivering speaking material to students?</p> <p>7. Have teachers ever used role play technique in teaching English speaking to students?</p> <p>8. What do teacher think about role play technique?</p>
		Media	<ul style="list-style-type: none"> Use of media for delivery of English speaking material Excess media used to convey English speaking material Lack of media used to convey 	<p>9. What media are used by the teacher in delivering speaking material to students?</p> <p>10. What are the advantages of the media used by the teacher in delivering speaking</p>

			English speaking material	<p>material to students?</p> <p>11. What are the deficiency of the media used by the teacher in delivering speaking material to students?</p> <p>12. Have the teacher ever used card media in teaching speaking English to students?</p> <p>13. How do teacher think about card media in teaching speaking English?</p>
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2. Observation sheet

The observation sheet used in this study were teacher observation sheets and student observation sheets. The teacher's observation sheet is used to collect data on the actions taken by teacher in the learning cycle, while the student observation sheets are used to collect information or student data due to (the effect) of actions given by the teacher in the learning cycle.

The teacher's observation sheet grid used in this study is as follows.

Table 3. 2 The Teacher's Observation Sheet

No	Indicators	Implementation		Description
		Yes	No	
1.	Pre-Activity			
	a. Brainstroms to choose a topic.			

	b. Understand and test the topic.			
	c. Prepare a discussion on framework (introduction, content, cover).			
	d. Heat up the atmosphere of the group.			
	e. Select participants.			
	f. Set the scene.			
2.	Main-Activity			
	a. Give students the opportunity to perform roles (role play).			
	b. Provide discussion and evaluation of roles.			
	c. Guide students to share experiences.			
3.	Post-Activity			
	Reflect on learning			

(Source: Modification of Ahmad Fawaid & Ateilla Mirza, 2011: 332)

The student observation sheet grid used in this study is observation when speaking. The observation grid is presented as follows.

Table 3. 3 The Student's Observation Sheets

No	Indicators	Scoring criteria			
		1	2	3	4
1.	Equal opportunity to speak.				
2.	Directness of the conversation.				
3.	Clarity of the language used.				
4.	The rigidity of the language used.				
5.	Reasoning in speaking.				
6.	The ability to come up with new ideas.				
7.	The ability to draw conclusions.				
8.	Politeness and mutual respect.				
9.	Control of the speaking process.				
10.	Speaking order.				
11.	Warmth and grace in speaking.				
12.	Control emotions.				

(Source: Valette, 1967; Harris, 1969, Akhadiyah, 1998 in Ahmad Rofi'uddin & Darmayatu Zuhdi, 1998/1999:245)

Description :

1 : None

2 : Some

3 : Most

4 : All

3. Test

Performance test or tasks that use verbal language, for example, interviews, retelling discourses that are heard or read, various types of reading aloud, such as reading poetry, short stories, drama, recitation, etc. (Burhar Nurgiyantoro, 2014:143).

The assessment in this study refers to the opinion of Ahmad Rofi'uddin & Darmiyati Zuhdi (1998/1999: 244) which is divided into two aspects, namely linguistic and non-linguistic aspects. The linguistic aspects include : (1) stress, (2) speech, (3) tone and rhythm, (4) vocabulary or expressions or diction, and (5) sentence structure used. Meanwhile, non-linguistic aspects include : (1) fluency, (2) disclosure of speaking material (mastery of material), (3) courage, (4) friendliness, and (5) attitude. Because the aspects considered are incomplete, the following describes the assessment made based on the opinion of Ahmad Rofi'uddin & Darmiyati Zuhdi (1998/1999: 244).

Table 3. 4 Grids for Assessing Students' Speaking Skills Developed by the Researcher

No	Rated Aspect	Maximum Score
A.	Language	
1.	Stress	6
2.	Speech	8
3.	Tone and rhythm	6
4.	Vocabulary or expressions or diction	10
5.	Sentence structure used	10
B.	Non-Linguistic	
6.	Fluency	10
7.	Mastery of the material	30
8.	Courage	10

9.	Friendliness	8
10.	Attitude	6
Maximum Score		100

(Source : Modifications from researchers who refer to Ahmad Rofi'uddin & Darmiyati Zuhdi, 1998/1999: 244)

G. Technique of Data Collection

Data collection technique is the most important step in research, because the main purpose of research is to get data. Without knowing the data collection technique, the researcher will not get data that meets the established data standards (Sugiyono, 2009: 308).

Data collecting techniques in this study include the following.

1. Observation

Observation is a complex process, a process composed of various biological and psychological processes. Two of the most important are the processes of observing and memory (Sutrisno Hadi (1986) in Sugiyono, 2009: 203).

Observations are carried out by observing the activities (actions) carried out by the teacher with reference to the observation guidelines. The researcher observed the teacher by collecting data (recording) the actions of the teacher which were carried out in accordance with the focus of the problem being addressed, while the observation of students was carried out by noting the student's behavior due to the teacher's actions in learning activities.

2. Interview

Prastowo (2014: 207) states that interview is a process of interaction, dialogue, question, and answer verbally committed by two or more persons directly

to obtain the required information. In the interview, the interview took only a guideline that outlines the things that will be requested. The researcher targets of interviewer is teacher. The researcher wanted to get all information about how the process of teaching speaking and the point is the technique that the teacher uses in the class.

3. Test

Assessing students' speaking skills is not an easy thing to do. Lee (2010) in (Kundharu Saddhono & Slamet (2012: 59) states that the assessment tool (test) must be able to assess the ability to communicate ideas which of course includes the ability to use words, sentences and discourse which also includes cognitive and psychomotor abilities.

The results of this test score were obtained by observing students during role play. According to Burhan Nurgiyantoro (2012: 142), a performance test is equated with a practical test, the practice of doing an activity as evidence of learning achievement. Performance tests or actions are carried out to determine the extent to which students' speaking ability in learning uses the role playing technique.

The assessment used in this study refers to the opinion of Ahmad Rofi'uddin & Darmiyati Zuhdi. The assessment is divided into two aspects, namely linguistic and non-linguistic aspects. The linguistic aspects include: (1) stress, (2) speech, (3) tone and rhythm, (4) vocabulary or expressions or diction, and (5) sentence structure used. Non-linguistic aspects include: (1) fluency, (2) material disclosure, (3) courage, (4) friendliness, and (5) attitude.

H. Method of Collecting Data

Data collection method is the most important step in research, because the main purpose of research is to get data. Without knowing the data collection method, the researcher will not get data that meets the established data standards (Sugiyono, 2009: 308).

Data collecting methods in this study include the following.

1. Observation

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about how the process of teaching speaking and the point is the technique that the teacher uses in the class.

3. Test

The procedure of collecting the data for experimental group and control group could be seen as follows:

a. Pre-test

Pre-test was given to know the ability students' speaking. The pre-test was given with the aim to determine the students' speaking skill before the treatment. The pre-test conducted in second semester of academic year of 2021/2022. The result of the pre-test was used to compare the ability of students before and after treatment was given.

b. Treatment

The treatment conducted for experimental group by using Bondowoso game card that was applied for three meetings. The aim of giving treatment was to give effect or improve the students' ability. The activities that conducted by the researcher in experimental class and control class as follow:

Table 3. 5 List of Activities in Treatments

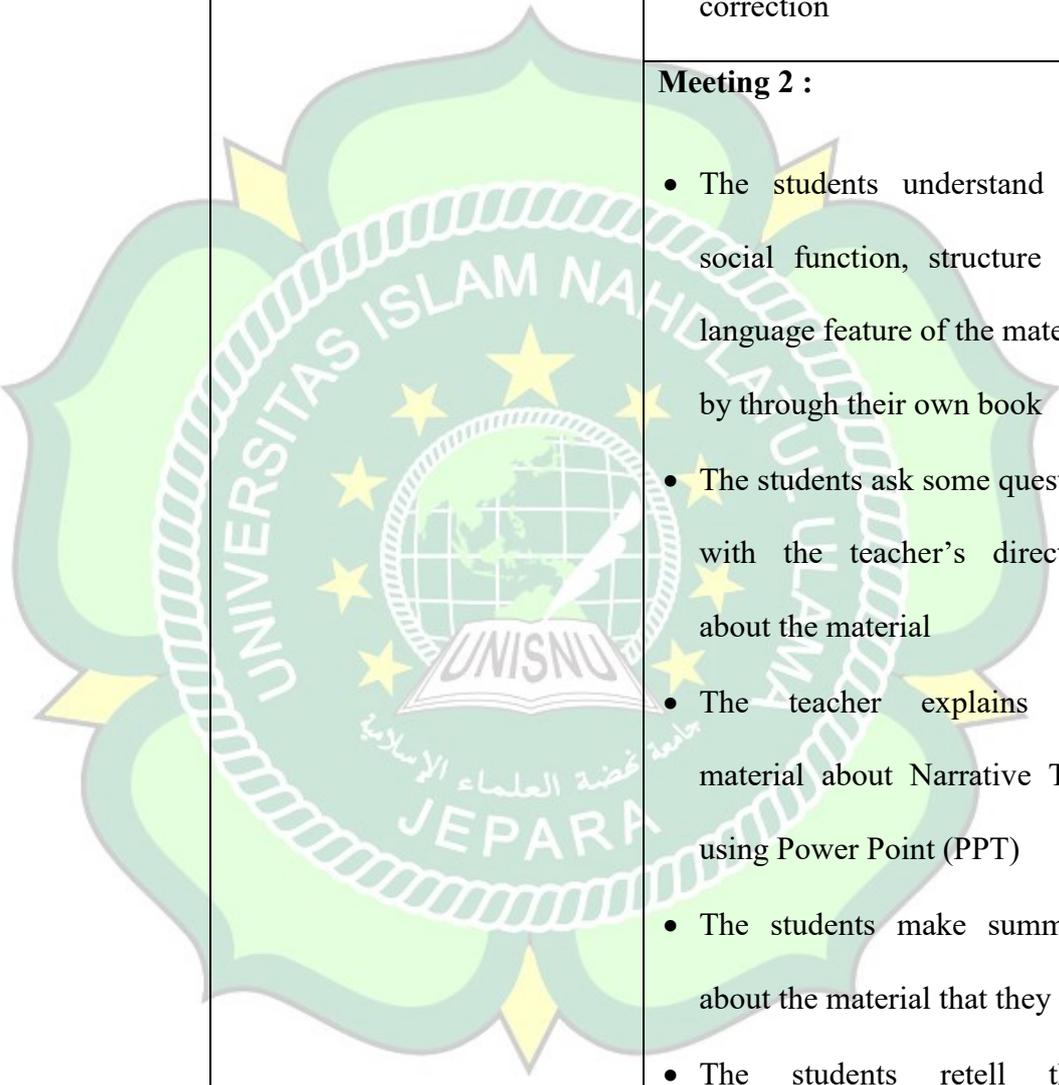
Experimental Class	<p>Meeting 1:</p> <ul style="list-style-type: none"> • The students understand the social function, structure and language feature of the material by through their own book
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	<ul style="list-style-type: none"> • The students ask some question with the teacher's direction about the material • The teacher play the video about Narrative Text material https://youtu.be/4x37NtYOHiw • Teacher begins to play video and explain about Malin Kundang story https://youtu.be/nllTOWCca2Y • The students listen and analyze the character, characteristic, plot and also moral value of the story • The students make summary about the story that they get • The students retell their summarize in front of the class • Some of the students perform the story in front of the class • Teacher gives comment and correction
	<p>Meeting 2 :</p>

	<ul style="list-style-type: none"> • The students understand the social function, structure and language feature of the material by through their own book • The students ask some question with the teacher's direction about the material • The teacher explains the role play technique and how to play Bondowoso game to the students • Teacher and students begins to play Bondowoso game • The students listen and analyze the character, characteristic, plot and also moral value of the story • The students make summary about the story that they get • The students retell their impression about Bondowoso game • Teacher gives comment and correction
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	<p>Meeting 3 :</p> <ul style="list-style-type: none"> • The students understand the social function, structure and language feature of the material by through their own book • The students ask some question with the teacher's direction about the material • The teacher explains the role play technique and how to play Bondowoso game to the students • Teacher and students begins to play Bondowoso game • The students listen and analyze the character, characteristic, plot and also moral value of the story • The students make summary about the story that they get • The students retell their impression about Bondowoso game
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	<ul style="list-style-type: none"> • Teacher gives comment and correction
Control Class	<p>Meeting 1 :</p> <ul style="list-style-type: none"> • The students understand the social function, structure and language feature of the material by through their own book • The students ask some question with the teacher's direction about the material • The teacher play the video about Narrative Text material https://youtu.be/4x37NtYOHiw • Teacher begins to play video and explain about Malin Kundang story https://youtu.be/nllTOWCca2Y • The students listen and analyze the character, characteristic, plot and also moral value of the story • The students make summary about the story that they get

	<ul style="list-style-type: none"> • The students retell their summarize in front of the class • Some of the students perform the story in front of the class • Teacher gives comment and correction
	<p>Meeting 2 :</p> <ul style="list-style-type: none"> • The students understand the social function, structure and language feature of the material by through their own book • The students ask some question with the teacher's direction about the material • The teacher explains the material about Narrative Text using Power Point (PPT) • The students make summary about the material that they get • The students retell their summarize in front of the class • Some of the students perform their result in front of the class

	<ul style="list-style-type: none"> • Teacher gives comment and correction
	<p>Meeting 3 :</p> <ul style="list-style-type: none"> • The students understand the social function, structure and language feature of the material by through their own book • The students ask some question with the teacher's direction about the material • The teacher explains the role play technique and how to play Bondowoso game to the students • Teacher and students begins to play Bondowoso game • The students listen and analyze the character, characteristic, plot and also moral value of the story • The students make summary about the story that they get • The students retell their summarize in front of the class

	<ul style="list-style-type: none"> • Some of the students perform their result in front of the class • Teacher gives comment and correction
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c. Post-test

After conducting the treatment, the post-test administered and analyzed as final data of this research. The post-test conducted in second semester of academic year 2021/2022. The results of the post-test were used to find out the effectiveness of designing English game based on role play to improve students' speaking skill.

I. Method of Data Analysis

According to Sugiyono (2010: 335), what is meant by analysis techniques data is the process of searching for data, systematically arranging the data obtained from the results of interviews, field notes, and documentation, by way of organizing data into categories, breaking down into units, do the synthesis, arrange into a pattern of choosing which ones are important and that will be studied, and make conclusions so that they are easily understood by yourself and others.

1. Analysis of Observation Results (Observation)

The data obtained from the observation sheet consisted of two kinds. Data it includes observational data on skills learning speaking by the teacher and observational data on students when playing roles.

a. Observation of Speaking Skills Learning

Observation data on learning speaking skills conducted by the teacher presented with a qualitative descriptive.

b. Observation of Discussion Activities and Evaluating Students' Role

All score data obtained from the activity observation sheet students in the discussion and evaluate the role play summed so that the raw score (R) is obtained, the analyzed using percentage with the following formula and assessment criteria.

$$NP = \frac{R}{SM} \times 100$$

Information :

NP = Percent value sought or expected

R = Raw score obtained

SM = Maximum score

100 = Fixed number (Ngalim Purwanto, 2010: 102)

Based on that formula, the criteria used in this study according to Suharsimi Arikunto as follows.

Assessment criteria

81 – 100% = Very Good

61 – 80% = Good

41 – 60% = Enough

21 – 40% = Less

≤ 21% = Very Less (Suharsimi Arikunto, 2010: 35)

2. Analysis of Interview Results

Several stages of Miles and Heberman's interactive analysis model through four stages, namely data collection, data reduction, data presentation and drawing conclusions :

d. Data collection

Data obtained from interview is recorded in field notes which consist of two aspects, namely description and reflection. Description notes are natural data contains what they see, hear, feel and experience themselves research without the opinion and interpretation of the researcher about the phenomena encountered.

e. Data Reduction

Data reduction is a process of selection, simplification, and abstraction. The way to reduce data is to make a selection, make a summary or brief description, classify them into patterns by making transcripts, research to confirm, shorten, make focus, make unimportant parts and arrange for conclusions to be drawn.

f. Data Presentation

Presentation of data is a set of information structured so that provides the possibility of drawing conclusions and conclusions action.

g. Drawing a conclusion

Drawing conclusions is an attempt to seek or understand meaning, the regularity of explanatory patterns, the flow of cause and effect or proportion.

3. Analysis of Test Results

Performance tests are conducted to measure students' speaking skills in English lessons with the role play technique. The results of this test analyzed quantitatively.

The results used in this study are the final test scores students' speaking skills. Hence the results of the skills assessment speaking of the results in the form of scores, then the score results are converted to in the form of value. The value is obtained using the following formula.

$$S = \frac{R}{N} \times 100$$

Information :

S = expected value (sought)

R = total score in item (score obtained)

N = maximum score of the test (Ngalim Purwanto, 2010: 112)

Quantitative descriptive analysis is done by calculating mean of students' test results when the action was taken. Average calculation calculated using the mean formula as follows.

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

Information :

\bar{X} = class average (mean)

Σx = total student score

N = number of students

(Suharsimi Arikunto, 2007: 284-285)

The data were analyzed using quantitative analysis. In other words, the data analysis performed to analyze pre-test and post-test data: the objective of pre-testing to measure the initial score of speaking ability, and the purpose of post-testing to measure the improvement of speaking ability of students. The score calculated by applying the t-test statistical analysis to examine the differences between the pre-test and post-test groups. Furthermore, the significance of the test was analyzed using Statistical Product and Service Solution (SPSS) computer programmed 2.0.

Students are said to have achieved completeness if the scores are obtained have reached the Minimum Completeness Criteria (KKM) ≥ 68 with a range between 1-100. The class is said to have achieved completeness if there are many students achieving KKM ≥ 68 of the total number of students (Source: SMA Negeri 1 Tahunan 2021/2022, which is presented in attachment 4).

4. Analysis of Quality Product

The quality of product is defined as the degree or level at which the product is able to satisfy the desires of consumers or users (fitness for use). In this

study, in calculating the quality of Bondowoso game product, researcher used the following checklist and formula;

$$Q = \frac{R}{SM}$$

Information :

Q = Quality Product

R = Total Score

SM = Maximum Score

(Garvin, 2005:130-131)

Score of Product Quality :

Score	Criteria
80-100	Very Good
66-79	Good
50-65	Enough
40-49	Less