

## **CHAPTER III**

### **METHOD**

In this chapter, the researcher will explain about the research design, the subject of the study, data collection technique and instrumentation and data analysis. The researcher will explain from general into the specific discussin which relate to the research.

#### **A. Research Design**

In conducting research we need to follow the rules or rules that apply, so that the research results obtained can be said to be valid. The research method is basically a form of scientific method in obtaining data with the intended purpose and usefulness of the researcher. Research methodology is a series of procedures or steps that are systematic or structured and carried out by a researcher with the aim of answering questions from the formulation of existing problems. Talking about research methodology, the point is to discuss or discuss scientific procedures with the aim of obtaining and discovering new knowledge. Findings themselves can be called a form of science if the search is based on the scientific method that should be used. According to Priyono (2016:1) research method is a way of doing something by using the mind carefully to achieve a goal obtain data with a specific purpose and use.

In this research, the researcher applied Classroom Action Research (CAR), the researcher chose this design because it was related to learning activities in the classroom so that it could confirm how to see an increase in

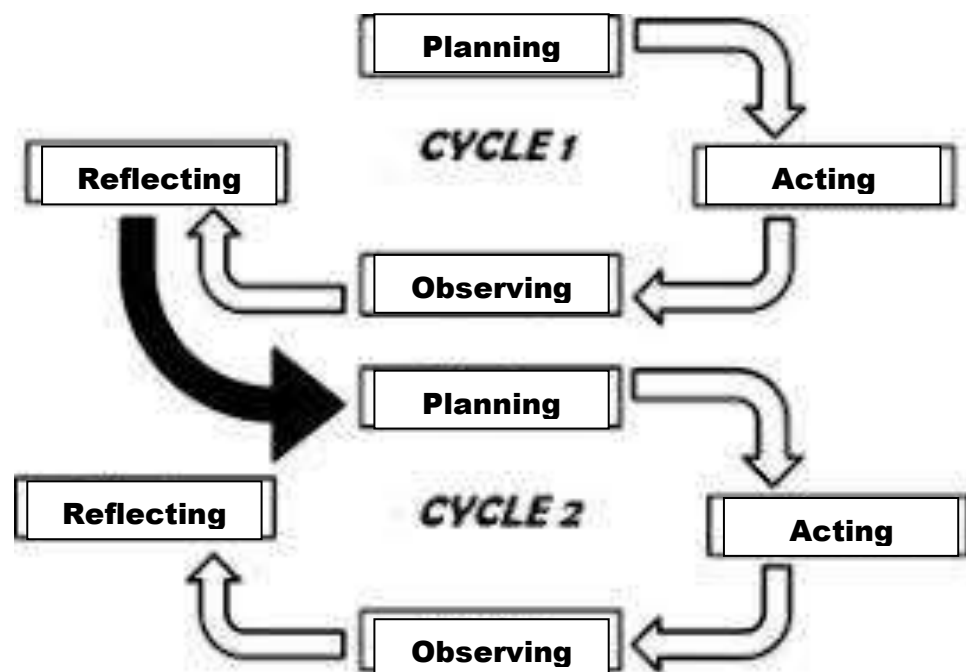
students' ability to use jigsaws in the classroom. Therefore, the authors chose the Classroom Action Research (CAR) design because it was in accordance with the needs of this research. Classroom Action Research (CAR) is research that is directly applied in the classroom. Classroom action research is a research carried out by educators in their own classrooms by designing, implementing and reflecting collaborative and participatory actions with the aim of improving their performance as educators so that student learning outcomes can increase. Classroom Action Research (CAR) can be defined as research conducted by educators in the classroom by designing, implementing and reflecting collaborative and participatory actions, with the aim of improving their performance as a teacher, so that student learning outcomes can be improved.

Classroom Action Research (CAR) is designed to improve all participants in the teaching and learning process. This means that the purpose of Classroom Action Research (CAR) is to improve the teaching and learning process in the classroom. By using Classroom Action Research (CAR), researcher not only improve students' mastery in speaking but also improve learning activities in the classroom.

The researcher took this method because the researcher saw the problems at SMAN 01 Ketungau Tengah especially in class X students, the ability to speak and greet friends and teachers using English was very low, their lack of how to greet in English, so they were not active and preferred well when the teacher enters the classroom and leaves the classroom and

outside the classroom. This is in accordance with research by experts that the purpose of Classroom Action Research (CAR) is to improve the quality of educational practice for the better. There are four stages that must be passed to conduct research using the Classroom Action Research (CAR) method, namely, (1) planning, (2) action, (3) observation, (4) reflection. The four stages are an element-forming cycle, namely with one round of activities that are sequentially then returned to the first stage. This Classroom Action Research (CAR) will be carried out in a participatory collaborative way, research by collaborating or collaborating between teachers and researcher.

The research design which used by the researcher is Classroom Action Research (CAR) is Kurt Lewin. The scheme of Classroom Action Research is following:



Picture 3.1 CAR model based on Kurt Lewin

### 1. Planning

Planning is a process that defines goals and actions to create strategies used to achieve learning and develop student learning activity plans. Planning is an important process of planning for controlling direction so that it can run well. Planning is developing a plan of action that is essential to correcting what has happened. Classroom Action Research (CAR) plans should be flexible enough to adapt to unforeseen effects and unseen obstacles. The Classroom Action Research Plan (CAR) should be prepared based on reflective initial observations. The results of initial observations of the processes that occur in the situation to be corrected in the form of field notes that are clearly described in snippets or episodes of the learning process in the situation that will be corrected or corrected.

### 2. Acting

Action is an act that is intentionally done consciously by a person, which is a variation of good and wise practice in his actions. Practices that are recognized as actions for the future, namely actions that are carried out with great intention and enthusiasm to improve a situation.

### 3. Observation

Observation is a series of agendas carried out to actively obtain information from the main source, to document data from observations in the field obtained directly to see the observed situation and circumstances. . Observations need to be planned and also based on open views and thoughts and are responsive, so as to get relevant results.

#### 4. Reflection

Reflection is contemplating and remembering an action that is in observation. Reflection tries to find out a process, obstacles and problems in action. Reflection also needs discussion between researchers and collaborators. Through discussion will provide the main basis for improving a plan. Reflection (reflection) is an activity of analysis, interpretation and explanation (explanation) of all information obtained from the observation of the implementation of the action.

Plans are made based on reflections obtained from observations so as to get better results. The plan consists of two scopes; they are mastery in greeting and leave taking class when the jigsaw is applied to students in class. In cycle II the researcher made lesson plans which consisted of material preparation, learning media, student exercises, and everything related to action. The second cycle was carried out in one meeting. The second cycle is carried out based on reflection in cycle one, so that the teaching and learning process through jigsaw is better than cycle one.

In using the jigsaw as a technique to be applied in the classroom, the teacher must pay attention to the jigsaw procedure, so that teaching and learning activities in the classroom can run well.

##### 1. Teaching Procedure through jigsaw

Based on the procedure of teaching jigsaw above, here are the step that will be apply in the classroom.

1. Form a heterogeneous group of 4-6 people

2. Each person in the group is given a different sub topic.
3. Each group reads and discusses their respective sub topics and assigns expert members who will join the expert group.
4. Expert members from each group get together and integrate all the sub topics that have been distributed according to the number of groups.
5. Expert groups discuss to discuss the topic given and help each other to master the topic.
6. After understanding the material, the expert group spreads and returns to their respective groups, then explains the material to their group colleagues.
7. Each group presents the results of the discussion.
8. The teacher gives an individual test at the end of the learning about the material that has been discussed.
9. Students take individual or group tests covering all topics.

## 2. Teaching speaking through jigsaw

First the teacher must prepare the lesson plan, the second teacher must prepare the material that will be used in the learning process. The three teachers greeted and asked the students to attend. Fourth, the teacher gives clues to students about the material to be taught today and asks students to guess what material. Fifth, the teacher conveys today's learning objectives. Sixth, the teacher presents a video and explains today's learning material. Seventh, after listening to the delivery of material from the teacher, students are welcome to ask questions about

the material they have not understood. Eighth, the teacher will answer questions from students and re-explain the material that students have not understood. Next the teacher will divide the students into several groups consisting of four students in one group, then ask a representative from the group to take the paper that has been prepared by the teacher in front. then the teacher asks students to have an oral dialogue with their group friends based on the paper they get. Finally, students and teachers conclude the learning outcomes at this meeting and the teacher closes today's meeting.

#### **B. The Subject of the Study**

In a research, researcher need a population to be studied as a research subject. This research will be conducted at SMAN 1 Ketungau Tengah. So in this study the researcher used a sample of class X students of SMAN 1 Ketungau Tengah in the 2020/2021 school year. Arikunto (2010), defines the research subject as a place where data for research variables are obtained and determined in a framework of thought. The subjects of this study were students of class X which consisted of 20 students, 11 males and 09 females. The sample will take based on the researcher interest in the problem of learning English at school that the class X students of SMAN 1 Ketungau Tengah still needed to handle English subjects, especially to congratulate the the others.

## **C. Data Collection Technique And Instrumentation**

### **1. Data Collection Techniques**

#### **a. Observation**

Basrowi (2012) Observation is defined as a technique that is carried out by systematically observing and recording. Researcher observe student behavior and observe the learning process in the classroom to find problems faced by students and see how to learn after using the techniques that researcher and teachers use.

According to the Cambridge dictionary, observation is observing carefully about something that happens or the way someone does something, in order to learn more about it. Researcher need to make observations because researcher want to see something that happens in the classroom. The researcher also wanted to see the students' responses when the jigsaw technique was applied.

In this observation, the researcher uses participatory observation to observe the teaching and learning process in the classroom. Participant of observation is an observation in which the person conducting the observation participates in taking part in the life of the person being observed. This observation is used to determine the atmosphere of the learning process and student behavior when the action is taken. In this observation, the researcher was assisted by the teacher when teaching English in the classroom.



In this observation, the researcher observed student behavior in teaching and learning activities. Researcher observed to determine whether there was an increase in student learning activities through the jigsaw technique. The researcher observed during the teaching and learning process before using the jigsaw technique and after using the jigsaw technique, so that the researcher could see an increase in student learning when using a jigsaw and without using a jigsaw.

a. Interview

Creswell (2008) also classifies interviews into four types, namely (1) one-on-one interviews, (2) focus group interviews, (3) telephone interviews, and (4) electronic interviews. In this study, researcher use one-on-one interviews. Interviews are a data collection technique by which researcher can conduct face-to-face interviews (face-to-face interviews) with participants in Interviews were conducted in a semi-structured manner, where the researcher used a framework of questions to ask and these questions could develop so that researcher could obtain as much information as possible about the subject's self-development abilities. Interviews were conducted on the subject's parents who could provide information in connection with this study. With this technique, it is hoped that direct, flexible and flexible and open communication will occur, so that more and more information can be obtained.

Researcher will conduct interviews with students and teachers, first the researcher will interview teachers before conducting research into the

classroom. Researcher need to conduct interviews with teachers because researchers want to know the problems faced by teachers and students in English subjects in this class, so that researcher will know what to do. The researcher also conducted interviews with the teacher after the jigsaw technique was applied in the classroom, to see the response and find out the teacher's opinion in applying the jigsaw technique in the classroom. The researcher also conducted interviews with several students, to see the responses and find out students' opinions about the use of the jigsaw technique in the classroom.

In this interview, the researcher only interview a few students. Researcher selected students based on grades and gender. The researcher interviewe two male and one female students who got high scores, students who got moderate scores and two students who got low scores. Researcher also interviewe teachers who teach English subjects. There are two types of interviews that are often used by researcher, namely:

1. Open interview, is open-ended questions. When the researcher asks the subject to answer with their own ideas. The answer can be long or short, it really depends on the personality of the subject.
2. Closed interviews, namely interviews with closed answers. When the subject chooses an answer to a question that is provided in multiple choice or contains a combination of two types of questions or statements.

In this research, researcher used open interviews when interviewing subjects. The researcher used an open interview technique because the researcher wanted to find information and the researcher wanted to know more about students' responses to the application of the jigsaw technique in improving students' speaking skills.

#### c. Measurement

According to Cangelosi (1995: 21) measurement is the process of collecting data through empirical observations that are used to collect information that is relevant to the goals that have been determined. In this case the teacher assesses student achievement by reading or observing what students do, observing their performance, hearing what they say, and using their senses such as seeing, hearing, touching, smelling, and tasting.

So, measurement is an activity carried out to determine quantitative facts by comparing something with a standard unit of measure that is adjusted according to the object to be measured. Measurement is not only able to measure things that are visible but can also measure things that can be imagined such as consumer confidence, uncertainty, etc. Measurement in the field of education means measuring the attributes or characteristics of certain learners. In this case, what is measured is not the student, but the characteristics or attributes.

In this research, researcher use measurements to collect relevant information, researcher can also measure student characteristics.

With measurement techniques, researcher will assess student achievement and observe what students do. With measurement, researcher can also determine quantitative facts by comparing things and adjusting to the object to be measured.

## **2. Instrumentation of Data Collection**

In this research, to collect the data the researcher uses some tools of data collection, namely: Observation sheets, Interview guideline and Test sheet.

### **a. Observation sheets**

Observation sheet is a record of observations observed by fellow teachers who act as observers. This observation sheet contains notes on the learning process that is observed as it is in accordance with what happens in the process of action that includes teacher activities, student activities and environmental conditions in the process.

### **b. Field notes**

Field notes in qualitative research, field notes are an important part as a data collection tool. Field notes are notes about events or events during observations regarding behavior, mental attitudes or events that were not previously planned, attitudes or behaviors that arise spontaneously or in an organized manner.

In classroom action research, field notes are used to record events related to teacher or student activities during the learning process or outside the learning process, this is intended to provide strength to the expected

research results. Because basically those related to aspects of human attitude or behavior are always changing at any time and field notes can be immortalized even though they are not as optimal or as recorders. According to Nasution (1992: 92) explains that, the note consists of two parts, namely:

1. A description of what we actually observe, which really happens according to what we see, hear or observe with our instruments
2. Comments, interpretations, reflections, thoughts or our views on what we observe.

In this research, research notes are very useful for researcher as an intermediary tool that researchers see, hear, feel in the context of collecting data. Field notes were prepared after observation and after conducting interviews with research subjects. This is an interview with the research subject. This is to facilitate the preparation of reports because the data obtained will be easily forgotten by researchers. Therefore, field notes can be used as the heart of qualitative research because a theory must be supported by data and material in memory. Likewise, in making research reports, everything must be supported by data in the field, in this case field notes. Field notes must be descriptive, given the date and time, and recorded by including basic information such as where the information was obtained, who was present, the physical setting of the environment, social interactions, activities that occur.

### 3. Interview guideline

Interview guideline is made to capture research patterns that have the special nature of verbal interactions between researchers and respondents, which is initiated for a purpose of research. Before conducting an interview, you need an interview guide that you can use to help direct the conversation to the research topic and formulation of the problem you want to study. Interview guides vary from being written in great detail to relatively loosely, but they are basically to: help you know what to ask, in what order, how you ask questions, and how to submit follow-up. This provides guidance on what to do or say next, after the person you interviewed answers the last question. Interview guidelines are used to determine teacher responses regarding learning that has been carried out and to find out there whether or not learning obstacles.

### 4. Test

The test used in this research will in the form of a student's speaking ability test. The test is an experiment conducted to determine whether or not there are certain learning outcomes for students. A test is a stimulus (stimulus) given by someone with the intention of getting an answer that can be used as the basis for a score. This test contains themes that are in accordance with the syllabus material for class X. The test is in the form of a congratulation ability test, how many students are able to say and have a short dialogue with the congratulation requested by the researcher which refers to several elements and adapted to the theme of the lesson given by

the researcher at that time. research is underway. The researcher will give some conversation themes with greeting and leave taking students and they have to make a conversation based on what is given by. After they made a conversation, they had to convey the conversation they had made based on what the researcher had instructed and they had to fill out questions about congratulation given by the researcher. The test will be conducted in pre-test and post-test, before applying the jigsaw technique and after applying the jigsaw technique to see the improvement of students' abilities and the effectiveness of using the jigsaw in the classroom.

To evaluate students' speaking improvement, the researcher will give 5 items to students. There will be 5 items in the test and students will take the test in 10 minutes. The test is scored using a score rating from 0-100 by counting the correct answers. The correct answer will be given 20 while the wrong answer will be given 0 and apply the following formula.

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

Where:

S = Score of tests

R = Number of the correct answer

N = Number of test items

To categorize the students who got up to 80 calculated by applying the following formula:

$$P = \frac{R}{T} \times 100\%$$

Where:

P = Percentage of students who get the point 80

R = The number of the students who get point above 80

T = The total number of students who do the test

#### D. Scoring rubric and assessment indicators

This rubric is designed based on the indicators of students speaking skills in related theories used in this research.

Table 3.1 Scoring rubrics and assessment indicator

Aspects	Score	Criteria	Indicator
Pronunciation and Intonation	1	Poor	Makes frequent problems with pronunciation an intonation
	2	Fair	Pronunciation and intonation are somentimes not clear or accurate
	3	Good	Pronunciation and intonation are clear or accurate
	4	Excellent	Pronunciation and intonation are almost always clear or accurate
Fluency	1	Poor	Hesitates too often when speaking,which interferes the communication
	2	Fair	Speaks with some hesitation,which often interferes the communication
	3	Good	Speaks with some hesistation,which seldom interferes the communication
	4	Excellent	Speaks smoothly,with little hesistation that does not interferes the communication
Accuaracy	1	Poor	Uses basic stuctures and makes frequent errors
	2	Fair	Usesa variety of structures with frequent errors,or uses basic structures occasionally
	3	Good	Uses a variety of gramatical structures,but makes some errors



	4	Excellent	Uses a variety of structures with only occasional grammatical errors
Vocabulary	1	Poor	Uses only basic vocabulary and expressions
	2	Fair	Uses limited vocabulary and expressions
	3	Good	Uses a variety of vocabulary and expressions, but makes some errors in the word choice
	4	Excellent	Uses a variety of vocabulary and expressions and almost never makes some errors in the word choice

*O'Malley and Pierce (1990)*

### **E. Data Analysis**

This Classroom Action Research (CAR) uses qualitative and quantitative data. Qualitative data as primary data and quantitative data as additional data. Analysis with qualitative descriptive techniques was carried out for qualitative data in the form of observations, interviews and measurements. The data in this study were obtained through observation. Observations were made for each activity. The main function of observation is to find out whether the jigsaw technique can improve students' speaking mastery. There were also interviews used to collect data for qualitative data analysis. Qualitative data is used to describe everything that happens in the classroom. And there is also a measurement used to measure the character of students. Qualitative data is also used to describe the results of the application of the jigsaw technique, about how students respond, about the extent to which the jigsaw technique can improve student learning activities in the classroom.

Meanwhile, quantitative data were analysis using descriptive statistics, quantitative data in the form of scores on students' speaking mastery test results in each cycle. Researcher used tests to obtain data as a quantitative data collection technique in this study. The information obtained will be discussed, studied and solved together between researchers and collaborators. Quantitative data is used to describe the increase in student scores. Descriptive statistical methods were used to analyze quantitative data. This is done to compare the students' speaking mastery before and after the action by dividing the number of students' scores by the number of students before and after the action.