

## **CHAPTER III**

### **RESEARCH METHODOLOGY**

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

Research design is a technical framework of research techniques devised by the researcher to collect accurate data. The researcher applied the appropriate method to carry out this study. Classroom action research is a method implemented by teachers, conducted when teachers want to solve problems students encountered in the teaching and learning process. According to (Cohen, 2017), the research design is a plan or technique for organizing and making research practical so that research questions can be addressed on the basis of evidence and tasks.

The researcher applied the classroom action research approach in this study. Classroom action research is a kind of research approach that is based on observations of specific classroom activities. Classroom action research is a study that details the reasons and consequences, as well as what happens when treatment is delivered and the entire process from start to finish (Arikunto, Suhardjono, and Supardi, 2017). Therefore, the researcher serves as both a teacher and a researcher in classroom action research. In general, teachers are practical individuals and therefore tend to focus on what needs to be done in the classroom to help their students learn (Burns, 2010). In a nutshell, action research in the classroom (CAR) is used when there is a specific educational problem that needs to be solved or improved in the teaching and learning process in order to improve the student's mastery of the lesson plan.

Based on the explanations above, it can be concluded that action research is a method or activity carried out by teachers to improve the performance and learning comprehension of students in the classroom, this purpose is to improve the quality of learning and help teachers solve learning problems. Therefore, the researcher chooses the Classroom Action Researcher (CAR) because it aligns with the researcher's goal of improving

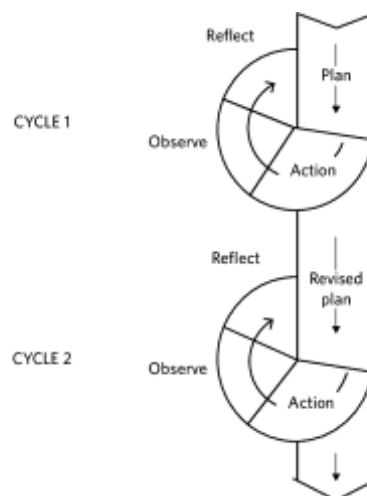
student performance and teaching skills, and improving the learning comprehension of students in the classroom.

It can be concluded that the researcher wanted to solve problems in the teaching and learning process in the classroom, especially the reading comprehension part for students. The researcher used the jigsaw technique as technique in the teaching and learning process. In addition, the researcher believes that carrying out this research can help teachers in the teaching process and may also improve students' reading comprehension.

## B. Research Procedure

Action research is a cyclical process with many steps. Teachers can use action research in the classroom to create lessons that help them improve classroom instruction. Action research is divided into several phases.

**Picture 3. 1**



Cycling process of Classroom Action Research

**Taken from Kemmis and Taggart in Burns (2010)**

## 1. Plan

Cycle 1	Cycle 2
<p>In this plan, the researcher acted as the teacher and the English teacher acts as the collaborator. The researcher and collaborator prepared to teach materials before teaching in class. The researcher and collaborator prepared lesson plans based on syllabus grade 8 for term 2. The researcher and collaborator then prepared materials to teach students in class. The researcher and collaborator then compiled a list of jigsaw groups to be used in the classroom and prepared a list of observations and field notes, which would be used for observations in the classroom. The researcher and collaborator then prepared exercises and tests to distribute to students, to assess students reading comprehension of the recounted text. In summary, at this stage, it can be said that the researcher and collaborator prepared all that is needed to carry out the research by applying jigsaw techniques to improve students' reading comprehension.</p>	<p>Plan In cycle 2, the researcher and collaborator revise the lesson plan to improve students' reading comprehension of the recount text by applying jigsaw techniques. The researcher and collaborator also discussed the teaching and learning deficiencies that arose in the classroom in cycle 1 and corrected them in cycle 2 in order to improve students' reading comprehension and facilitate learning and make conditions more pleasant than in the previous cycle. The researcher and collaborator then prepared teaching materials, tests, observation checklists and field notes for used in cycle 2.</p>

## 2. Action

Cycle 1	Cycle 2
<p>The first cycle takes place on Monday, January 31, 2022. In the first cycle, the action is performed three times in one cycle. The first meeting teaches about general structure, and linguistic features, recount text topics, and explained jigsaw techniques and the researcher distributes jigsaw groups, the second teaches knowledge about information regarding reading comprehension indicators and the researcher applied jigsaw techniques, and the final meeting the researcher was reviewed all the material and giving tests. Before starting the teaching and learning process, the researcher asked the students to pray first, and then the researcher checked the students' attendance in class. The researcher explained the learning objectives. After that, researcher had provided brainstorming at the beginning of learning by connecting the used of recount texts with everyday life. The researcher then begins to explained the general structure of the recount text, and its linguistic features and discusses with students how to find information</p>	<p>Action During the second cycle beginning on Thursday, February 10, 2022, the researcher taught the same topic as in the first session of the first cycle, focusing on the retelling of the recount text. The difference is retelling text materials, from holiday topics to biographies, and providing material to students and then applied new lesson plans. In this meeting, the researcher used PowerPoint and showed a short video in front of the class, this activity was done to make students more interested in the learning material, and pay attention to listen to the explanation of the text given. The researcher showed a short video linked to the holiday-themed story text titled "Holidays at My Grandfather". Next, students were asked to pay close attention to the video and asked them to find, code, provide explanations, and reflect on the content of the text contained in the short video. Next, the researcher asked the students to return to the Jigsaw group as before.</p> <p>Next, the researcher explained again the application of the jigsaw technique. All students are attentive and actively</p>

<p>related to reading comprehensions, such as identifying main ideas, factual information, vocabulary, references, and conclusions.</p> <p>The researcher then begins to apply the jigsaw technique to find the main ideas and factual information and work on the given questions with the jigsaw group. The researcher then asks each jigsaw group (expert group) to discuss with each other to identify conclusions, references, and vocabulary. After completing the discussion in the jigsaw group (expert group), the researcher asks the students to return to the jigsaw group (original group) to share the information obtained from the expert group. The researcher gave a short reflection at the end of the lesson.</p>	<p>participate in the teaching and learning process, students cooperate well with their peers. Then the students who were passive in the class started going through the learning process, and even those students who were normally embarrassed when asking or giving opinions began to actively participate in the learning process. In addition, the teacher asked the students to randomly relate to the discussed topics and asked the representative of each group in the jigsaw group (original group) to present the results obtained.</p> <p>Furthermore, at the second and third meetings, the researcher continued to use the materials and lesson plans as in the first meeting of cycle 2. The researcher revised and continued the teaching and learning activities as in the previous meeting. Then, at the third meeting, the researcher gave the students a reading test to measure their ability in this second cycle.</p>
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### 3. Observe

Cycle 1	Cycle 2
<p>During this observation phase, the researcher and collaborator observed classroom activities during the teaching and learning process. Where the results of the observation were discussed in the observation checklist and field notes.</p> <p>Observation is made from beginning to end of the learning process. The collaborator then sat behind the students to observed a class and student activities by filling out observation sheets and field sheets. During the learning process, students are unaware that their activities are being observed by a collaborator.</p>	<p>In this observation stage, the researcher and collaborator observed the activities taking place in the classroom during the teaching and learning process as in the previous cycle. The collaborator then observed activities during the learning by filling out observation sheets and field notes, and the observations were discussed in the observation checklist and field notes.</p>

### 4. Reflect

Cycle 1	Cycle 2
<p>During the reflection phase, based on observed data by the researcher and collaborator, in the first cycle, the student's reading comprehension problem remained unresolved. In the process of learning and teaching used jigsaw techniques, students seem to pay less attention.</p> <p>Next, the researcher still need to improve students' reading</p>	<p>The reflection phase of the second cycle takes place after the planning, acting, and observing phases have been completed. The behavior of researcher and collaborator is based on discussion outcomes, as seen in terms of student performance, progress in test comprehension, and attitudes during classroom teaching and learning. Class conditions in the second cycle showed</p>

<p>comprehension in the next meeting. In the next meeting, the researcher again explained the material of the recount text and the application of the jigsaw technique. The researcher then gave the students time to prepare before applying the jigsaw technique, so that students do not find it difficult in the reading test.</p>	<p>better improvement than in the previous cycle. This is seen in students who are attentive and actively involved in the teaching and learning process. Passive students in the classroom began to participate in the learning process, and even those students who were often embarrassed to ask or give opinions began to actively participate in the learning process. In the learning process, although not all students, the number of students passively decreased slightly compared to the previous cycle. At this stage of reflection, the researcher concluded that the application of the Jigsaw technique in Cycle II was successful, as the students increased their reading comprehension. In the end, the researcher and collaborator decided to stop the cycle.</p>
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### C. Participant of Research

This study concerned an English teacher and eighth-grade students of SMPN 2 Pontianak. Based on the pre-observation, the researcher discovered students' issues in reading. The issues confronted by students are restrained vocabulary, college students have trouble know-how English words, phrases, and sentences in English, and students have trouble know-how the content material of the textual content to determine: main ideas, factual information, inference, and references. Finally, students take a long term to reply to the teacher's questions. The researcher found the problems after interviewing the English teacher and students which to know that problem. Therefore, in this

research, the researcher, the researcher was used one class to be studied, namely class VIII A, because that class already represents all classes for researcher to conduct research..

#### **D. Techniques and Tools Data Collection**

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

The researcher used observational measurement techniques to collect the data. Observation techniques are used to observe and evaluate what is happening in the classroom, as well as the conditions that exist during teaching and learning. Although the objective of this study was to assess students' ability to understand texts in English, measurement techniques will be used. They were discussed in more detail based on the following:

##### **a. Observation Technique**

The researcher collected qualitative data using the observation technique, which is very significant in this study. According to (Cohen et al. 2017), using observation as the main research method is more likely to provide valid or valid data than using intermediate or inferential techniques. Therefore, the observation checklists and field notes were used to make notes and complete the classroom conditions during the teaching and learning process.

##### **b. Measurement Technique**

The researcher has given an action research data collection technique in the classroom, and one of the measuring techniques was to assess individual scores of students using a reading comprehension test. According to (Cresswell, 2012), measurement involves the researcher collecting information from individuals while following them and entering their scores into a checklist. The researcher used it to find out the reading ability of students by giving a test and determining the level of progress the students.



## 2. Tools of Data Collection

To get objective findings, it is critical to use the right instruments for data collection. The researcher gathered data using an observation checklist, a field note, and a reading comprehension test in this study.

### a. Observation Checklist

The researcher was the observation checklist as a data collection tool. In this study, the observation checklist was completed in two cycles: period I and period II. According to (Brown and Lee, 2015), one of the goals of this observation is to evaluate students as much as possible without the students being aware and may observe students' fear, in order to optimize the spontaneity in their language activities. Therefore, in teaching and learning activities in teaching reading comprehension, observation checklists have been used to observe student performance results, teacher performance results, and the classroom teaching environment. The researcher did this as a tool to observe classroom conditions during teaching and learning activities. The observation checklist is a piece of paper that the researcher used in this investigation, in this case, the collaborator filled the observation checklist.

The collaborator was mark the observation checklist list based totally on the 3 factors to this observation list: student performance, teacher performance, and classroom environment, with the completion of thirteen items, the collaborator filled yes and no (√ ) for the observation checklist.

### b. Field Note

The researcher was field notes to take notes during the teaching and learning process based on classroom action research steps. Field notes are used to document what happened, including why and where ideas arose, as well as the research process itself (Koshy, 2005). In this study, the researcher was assisted in writing field notes by the teacher as a collaborator. The results of a collaborator's writing

can be conceived as descriptions of people, places, objects, events, activities, and conversations.

c. Reading Comprehension Test

The reading test is a method for systematically monitoring individuals and classifying them using a numbering or classification system. According to (Brown and Lee, 2015), a test is defined as "a means of testing a person's competence or knowledge in a certain subject", emphasizing the concepts of methodology and measure. This test is intended to compare students' improvement in reading comprehension before and after using the technique. The teacher gave a reading test to see if there was an improvement. The exam is a multiple-choice test with 50 questions in which students must choose the correct answer (A, B, C, or D).

d. Validity

The researcher was content validity to data collection. According to (Ary et al., 2010), the main strategy for assessing content validity is to ask the instructor or subject matter expert to the best rate and assess whether the pattern is appropriate for the content and whether the objectives are evaluated and achieved. The researcher corrected the reading test questions so that could be used after validating. The researcher then had to investigate further using reading test questions.

## **E. The Technique of Data Analysis**

The technique of data analysis originates from the interpretation of data collection. The data analysis process is necessary to determine the answer to the research question, and to analyze the information obtained from the researcher's observation checklist, field notes, and reading test. Observation checklists and field notes are a type of qualitative data, while a reading test is a type of quantitative data. It will be specified as follows:

## 1. Observation Checklist

To classify the result of the range of the observation checklist the researcher used the table observation checklist form modified from (Fardila,2020).

**Table 3.1 Observation Checklist Sign**

<b>NO</b>	<b>Activity</b>		<b>Statement</b>	
<b>A</b>	<b>Students Performance</b>		<b>YES</b>	<b>NO</b>
	1.	The students attention to the teacher explanation about recount text.		
	2.	The students pay attention to the teacher explanation about greeting card by using Jigsaw Technique.		
	3.	The students ask the teacher about recount text.		
	4.	The students show their interest and enthusiastic in learning recount text by using Jigsaw Technique.		
<b>B.</b>	<b>Teacher Performance</b>			
	1.	The teacher explains about recount text correctly.		
	2.	The teacher explains about Jigsaw Technique.		
	3.	The teacher explains about recount text by using Jigsaw Technique.		
	4.	The teacher monitors the students during learning the task.		
	5.	The teacher does the reflecting activity.		
<b>C.</b>	<b>Class Environment</b>			
	1.	The class is not noisy.		

	2.	The class climate look joyful and fun for students.		
	3.	The class condition is tidy.		
	4.	There is a good interaction between students to students and students to teacher.		

## 2. Field Note

Qualitative data was collected using the observation technique used in this study. According to (Miles and Huberman at Hopkins, 2008), there are different procedures for qualitative data analysis including data reduction, data presentation, conclusion, and verification. The researcher was interpret these events based on the following:

### a. Data Reduction

In data reduction, the researcher selected information from a checklist of observations and field notes to report what was needed for the researcher to perform the study. Data reduction is the process of selecting, centralizing, simplifying, summarizing, modifying, and summarizing data found in field comments or records.

### b. Data Display

The researcher moved on to the next step, presenting the data, after completing the data reduction. Information or data is organized and compressed using a data monitor. The data display shows what stage the study is in and serves as a basis for future research. In general, a view is a condensed, orderly set of data that allows conclusions to be drawn and actions to be taken.

### c. Conclusion Drawing and Verification

The purpose of reducing and displaying facts is to aid in the conclusion process. This is the final step in the qualitative data analysis process. These processes begin when the previous analysis

is sorted and integrated. The goal of this step is to bring everything together into a coherent and logical picture of data.

## 2. Reading Comprehension Test

The researcher used quantitative analysis to examine the data for this study, presented in numerical form. Information is gathered from the results of reading comprehension tests. The researcher used individual scores to determine the students' individual reading comprehension scores. Here is the formula for determining an individual's score:

### a. Student Individual Score

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

Note: S : Score Number of the test

R : Number of Correct Answer

N : the total number of the question

100 : maximum score

Taken from Sianturi & Sumarsih (2012)

### b. Mean Score

After the calculation of individual student scores, the researcher calculated the mean score using the following formula:

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

Note:  $\bar{x}$  : Mean of the students' score

$\sum X$  : Total score of students

N : Number of the students'

Taken from Ary *et al.*, (2010)

The researcher graded the students' scores after taking their scores to determine their reading comprehension level. The researcher then calculates their grade point average or grade point

average to determine whether the students' reading comprehension test improved. This study is considered successful if students' learning activities increase over time and they achieve good results in class. The student's score must be above the average.

After each student's score is calculated into the mean score, the researcher classifies the students into several categories. Therefore, the researcher ranked them based on criteria like the table below:

**Table 3.2**

**Range Score Classification**

<b>Criteria</b>	<b>Level of Mastery</b>
90-100	Excellent
80-90	Good
70-79	Adequate
60-69	Inadequate
<60	Unacceptable

Taken from Brown (2003)