

CHAPTER III

RESEARCH METHOD

This chapter discuss about research design, variable of the research, the subject of the research, population and sample, the research instrument, treatment procedure data collection, and data analysis.

A. Research Design

According to (Cohen et al., 2009) Experimental research is a methodical study conducted under controlled conditions to look at the correlations between variables' causes and effects. The objective of the research is to compare two study groups to determine the effectiveness of Google Lens affects students' vocabulary mastery at SMPN 2 ASEMBAGUS. Google Lens will be used to teach the experimental group, while a dictionary will be used to teach the control group. The research design could look like this::

Table 3. 1 The Research Design

CLASS	PRE-TEST	TREATMENT	POST-TEST
Experimental Group	X1	Google Lens Application	Y1
Control Group	X1	Dictionary Application	Y1

Note :

X1 = A test was given to both groups, the control group and the experiment group, before they started the process of learning how to teach.

Y1 = A test was given to both the control group and the experiment group after they completed the process of learning how to teach.

B. Variable of the research

This research that used a Google lens on student vocabulary mastery has two variable, those variable are:

1. Independent variable (X)

Google lens in this study is an independent variable

2. Dependent variable (Y)

Vocabulary mastery in this study is a dependent variable

C. The Subject of The Research

This study will be hold at SMPN 2 Asembagus which located on Krajan, Wringinanom, Kec.Asembagus, Kabubapten Situbondo, Jawa Timur (68373). This study is designed for seventh-grade students for the first semester, which progresses from September to November 2025.

D. Population and Sample

1. Population

The study's population consists of all seventh-grade students enrolled in SMPN 2 Asembagus during the first semester of the 2024–2025 school year. There are four classes in class 7, which are 7A, 7B, 7C, and 7D.

2. Sample

Students in the seventh grade at SMPN 2 Asembagus serve as the research sample. In this research, the researcher selected only two groups of learners as part of the sample population. The first learning group, known as class 7A, received education through the application of Google

lens and was considered the experimental group. In contrast, students in the second class, 7B, which served as a control group, were instructed using dictionaries. The English teacher at this school made recommendations that were used to choose the two classes.

E. The Research Instrument

The instrument employed by the researcher was a test. According to (Cohen et al., 2009), a test is a tool used to measure learners' performance and knowledge in a certain sector. Before starting treatment, students' basic achievement levels and vocabulary knowledge were assessed using the first pretest. Following treatment, the second post-test was utilized to determine the students' vocabulary mastery skills.

The objective of the post-test was to know whether students who were taught using Google Lens had better vocabulary mastery compared to those who were taught using a dictionary and to assess their vocabulary proficiency.

F. Treatment Procedure

The researcher follows specific procedures when conducting the study. To carry out this study, the researcher splits the part into three sections. The three types of activities are pre-teaching, teaching, and post-teaching. In this instance, the control group and the experimental group attended different classrooms.

1. Pre-test : The researcher administers a pre-test to both the experimental and control groups at the start. The researcher gives students twenty minutes to answer the test.

2. Treatment Phase : During the treatment phase, the researcher uses Google Lens to improve vocabulary mastery of the experimental group during the session. Yet, the researcher uses dictionary one million from John M. Echols and Hassan Shadily for the control group.
3. Post-test : Following the treatment phase, the students are given a post-test by the researcher. The test aims to determine how effectively students are vocabulary mastering after treatment.

Table 3. 2 The Differences Students' Activities in The Experimental Group and Control Group

Experimental Group	Control Group
Greet students	Greet students
Explaining learning objective	Explaining learning objective
- Teacher demonstrates how to use Google Lens to scan English words. - Students try scanning a sample sentence. - Teacher gives simple task: find 3 unknown words using Google Lens from a short text. - Students write down the words, meanings, and say them aloud.	- Introduce vocabulary learning through reading and dictionaries - Students are taught how to use English-Indonesian dictionaries effectively - Sample activity: find meanings of 3 words using printed dictionary
Ask students how they feel using Google Lens.	Short reflection
Closing	Closing

The following table displays the schedule of the research's activities:

Table 3. 3 The Schedule of The Research's Activities

Activity	Experiment Class	Control Class
Pretest	September, 11 th 2025	September, 15 th 2025
Treatment 1	September, 11 th 2025	September, 15 th 2025
Treatment 2	September, 16 th 2025	September, 17 th 2025
Treatment 3	September, 18 th 2025	September, 22 th 2025
Posttest	September, 18 th 2025	September, 22 th 2025

G. Data Collection

The researcher collected data using pre-test and post-test tests. The test was meant to see the outcome of the student's vocabulary mastery. The researcher gathered data through pre-test and post-test tests. The purpose of the test to was to evaluate the results of the student's mastering of vocabulary. To determine the student's achievement scores, tests were given to both the experimental and control groups. the results of the tests that were conducted to determine how efficiently Google Lens performed in the experimental class.

For both classes, the test was given twice by the researcher. The pre-test was the first, and the post-test was the second.

1. Pre-test

Before to the use of Google Lens, a pre-test was given in both the experiment and control classes. The aim of this test is to find out if the

students in the group have similar understanding of the research variable.

The pre-test was a vocabulary-based assessment.

2. Post-test

For both classes, a post-test was also administered. It is carried out after the course of treatment. This test's objective is to determine how much the students' vocabulary mastery has improved as a result of using Google Lens.

H. Data Analysis

After data collection, the next step is to process and analyze the data. The data analysis method employed in this study is statistical analysis because the data is quantitative. In this research, the information from the post-test scores is examined through the use of ANCOVA. Comparing whether the means of the experimental and control classes differ from one another is the main goal of the ANCOVA test. The ANCOVA test, a parametric test designed for data that follow a normal distribution, is also used in this study. The researcher used the SPSS 25 program to analyze the data.