CHAPTER 3
RESEARCH METHODOLOGY

3.1 Research Design

In this research, the researcher used the survey method with a quantitative approach. According to Sugiyono (2013), the survey method is a quantitative approach for the purpose to collect information from specific natural (which is not artificial) places, researchers use a study approach that involves using questionnaires, interviews, or observations. This survey was used to collect data effectively and find out whether pictures have an impact on improving students' vocabulary mastery by using a questionnaire as an instrument.

3.2 Population and Sample

3.2.1 Population

The population in this study were all 8th grade students in the 2024/2025 school year at one of the junior high schools in Tasikmalaya. There are 11 classes with a total of 353 students.

3.2.2 Sample

This study used a cluster random sampling technique, using Microsoft Excel, and using the formula (=rand). According to Arikunto (2006), as cited in Rahim et al. (2021) if the number of respondents is less than 100, then the sample is taken all, while if the number of respondents is more than 100, the sampling is 10%-15% or 20%-25%. Another opinion according to Gay and Diehl (1992) as cited in Rahim et al. (2021) if the research is descriptive, then the minimum sample is 10% of the population.

After going through the randomization process, the sample used in this research were 2 classes, which are class 8F with 33 students and class 8D with 33 students, with a total of 66 students. The sample proportion of 66 students out of a total of 353 students is around 18.7%, which is included in the general range of 10%-25% sampling for populations above 100 people, so that the sample size is quite representative.

3.3 Data collection

The data in this study was collected through a questionnaire to measure junior high school students' perceptions of the impact of visual literacy on their vocabulary acquisition. This questionnaire consisted of 3 indicators and 15 items adapted from cognitive load theory by Sweller (2011), which is about the impact of visual literacy on students' vocabulary recall and comprehension, and multimedia learning theory by Mayer (2009), which is about visual literacy on students' motivation to learn. The questionnaire was tested for validity and reliability first and then administered to students to find out whether the use of visual literacy in the learning process helps them in mastering vocabulary. This study used a likert scale of 1-6, and the researcher gave a score to each answer code in the questionnaire to generate quantitative data based on the likert scale.

Table 3.1 Rating of Likert Scale

Respond	Code	Score
Strongly Disagree (*Sangat Tidak Setuju*)	*STS*	1
Disagree (*Tidak Setuju*)	*TS*	2
Slightly Disagree (*Kurang Setuju*)	*KS*	3
Slightly Agree (*Agak Setuju*)	*AS*	4
Agree (*Setuju*)	*S*	5
Strongly Agree (*Sangat Setuju*)	*SS*	6

3.3.1 Validity Test

The validity test was carried out to determine whether the instrument can measure what will be measured. The questionnaire was given to non-samples. That is class 8B and 8E. To find out whether the test is valid or not, R observed results must be compared with R table df (56) = (0.259), if r observation > r table, it means that the instrument test is valid.

Table 3.2 Validity Test

Items	R Observed	R table	Desc
Q1	0,411	0,259	**Valid**
Q2	0,293	0,259	**Valid**
Q3	0,338	0,259	**Valid**
Q4	0,350	0,259	**Valid**
Q5	0,565	0,259	**Valid**
Q6	0,490	0,259	**Valid**
Q7	0,522	0,259	**Valid**
Q8	0,426	0,259	**Valid**
Q9	0,523	0,259	**Valid**
Q10	0,610	0,259	**Valid**
Q11	0,446	0,259	**Valid**
Q12	0,552	0,259	**Valid**
Q13	0,552	0,259	**Valid**
Q14	0,370	0,259	**Valid**
Q15	0,341	0,259	**Valid**

After calculating the data with Microsoft Excel, it can be seen in table 3.2 that R observed from items 1-15 is more than R table (0.259), which means there are 15 items that are valid and can be used as instruments.

3.3.2 Reliability Test

The reliability test was carried out to see the consistency of the instrument. To show whether the test is reliable or not, the researcher compared the Cronbach's alpha score with the reliability test table provided by Streiner (2003) as cited in Jugessur (2022),

Table 3.3 Reliability Test

Cronbach's Alpha	Internal Consistency/ Reliability Test
$\alpha \geq 0.9$	Excellent (High – stakes testing)
$0.7 \leq \alpha\ 0.9$	Good (low stakes testing)
$0.6 \leq \alpha < 0.7$	Acceptable
$0.5 \leq \alpha < 0.6$	Poor

For this study, the researcher calculated the test reliability using Microsoft Excel. After going through the calculation process, it was found that Cronbach's alpha result for this study was 0.713. Based on table 3.3, it can be seen that Cronbach's alpha result of 0.713 is good. In conclusion, the questionnaire consists of 15 items that are valid and reliable, and this instrument was used to know the

students' perception regarding the impact of visual literacy on their vocabulary comprehension.

3.4 Data Analysis

The data analysis technique used in this research is descriptive statistical data analysis using Microsoft Excel. According to Kaur et al. (2018), descriptive statistics are statistical methods used to summarize and describe data in a simple and easy-to-understand form. This study used mean using formula (=average) and standard deviation using formula (=stdev.s), then the results are displayed using tables and described accordingly. The data from the questionnaire was analyzed descriptively to see the perceptions of junior high school students regarding the impact of visual literacy in their vocabulary learning. The researcher described the results of this study based on the mean score interpretation table provided by Suharto and Hariadi (2021).

Table 3.4 The Interpretation of Mean Score based on Likert Scale

No.	Interval Mean Score	Interpretation
1	1,00 – 1,80	Very Low
2	1,81 – 2,64	Low
3	2,65 – 3,48	Low Enough
4	3,49 – 4,32	High enough
5	4,33 – 5,16	High
6	5,17 – 6,00	Very High

The researcher also described the standard deviation of the research results to see how much variation and consistency there is in the data, by looking at the standard deviation value whether it is smaller or larger than the mean value. According to Sekaran & Bougie (2016), a standard deviation value that is smaller than the mean means that it has a consistent value, while a larger standard deviation value tends to have a diverse or varied value.

3.5 Research Schedules

This research was conducted in one of the junior high schools in Tasikmalaya, in grade 8 of the 2024/2025 school year.

Table 3.5 Timeline of the Research

Description	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul
Research Proposal writing										
Research Proposal examination										
Data Collection										
Data Analysis										
Report										
Thesis Result Seminar										
Thesis Examination										