CHAPTER III
RESEARCH METHODOLOGY

A. Research Design

This study utilized a quantitative methodology with a quasi-experimental design. Quantitative research methods, as described by Sugiyono (2013, p.148), involve examining the relationship between variables to test theories (Aini et al., 2023). In this research, variables were measured using numerical data and analyzed using statistical procedures. The experimental design was chosen to investigate the effects of implementing the partner reading strategy on students' reading comprehension.

This study incorporated two classes in its research design: the experimental class, where the partner reading strategy was implemented, and the control class, where the individual reading strategy was employed. The researcher utilized a quasi-experimental design to conduct the study, aiming to investigate the effectiveness of the partner reading strategy in enhancing reading comprehension. These groups were assigned different techniques, but both the experimental and control classes underwent the same test.

Table 2 Research Design

Group	Pre-Test	Treatment	Post-Test
Experimental	T1	X	T2
Control	T1		T2

Source: Sharpe & Cribbie (2023)

Note

T1   : The same initial test in two group

X   : The treatment using Paired Reading Strategy

T2   : The same final exam in two groups

From the statement above, the researcher administer a pre-test to the experimental class and control class to determine their original ability in reading comprehension before conducting the treatment. Subsequently, the researcher used treatment X (Partner Reading Strategy) in the experimental class while the control class was given a conventional teaching without using Partner Reading

Strategy. In the end after the treatment, the researcher will administer the same questions of post-test to both of the groups.

B. Research Variable

A variable can be considered as an operationalized construct or a particular property in which the researcher is interested. Variable refers to a property whereby the members of a group being studied are different from each or one another. The primary focus of the operationalization process is the creation of variables and the subsequent development of a measurement instrument to assess those variables. Inadequate operationalizing of the dependent variable is a threat to external validity in experimental research (Oyebanji, 2017).

Variable is a constructor character to studied there are two kinds of variables in common, they are independent variable and dependent variable. (Universitas et al., 2018) stated that an independent variable is the input variable, which causes, in part in total, a particular outcome. It is a stimulus that influences a response, an antecedent or a factor which may be modified (e.g. under experimental or other conditions) to affect an outcome. On the other hand, a dependent variable is the outcome variable, which is caused, in total or in part, by the input, antecedent variable. This is a major assumption among researchers and statisticians.

In this research, the independent variable was Partner Reading Strategy. While the dependent variable was Student's Reading Comprehension.

C. Research Population, Sampling Technique, Sample

1. Population

A research population is generally a large collection of individuals or objects that is the main focus of scientific query. It is for the benefit of the population that researcher chose. However, due to the large sizes of populations, researchers often cannot test every individual in the population because it is too expensive and time-consuming. This is the reason why researchers rely on sampling technique (Banerjee & Chaudhury, 2010).

2. Sampling Technique

The population took from all of classes from eight grade at Junior High School 1 Sekampung Udik.

As referred to explanation from (MULİSA, 2022), sampling method or sampling technique is the process of studying the population by gathering information and analyzing that data. It is the basis of the data where the sample space is enormous. There are several different sampling techniques available, and they can be subdivided into two groups. Researchers usually rely on sampling to estimate the characteristics of the population by studying sample characteristics (Walter, 2021). When researchers select a sample for a study, their primary goal is to understand the features of the entire population from which the sample was drawn, rather than the sample itself.

This research utilized cluster random sampling. According to (Simkus, 2023), cluster sampling is a method of probability sampling where researchers divide a large population up into smaller groups known as clusters, and then select randomly among the clusters to form a sample.

The population will be taken from all of classes from eight grade at Junior High School 1 Sekampung Udik. There are 3 classes, 28 students in A class , 28 students in B class and 28 students in C class. Total the population of this research is 84 students.

a. The researcher will write the class numbers, namely 8.A, 8.B, and 8.C on a piece of paper.

b. The paper rolled after which positioned into the glass.

c. The glass shaken till getting the rolling of paper out.

d. The first released paper was be 8.B.

e. Then put the paper back into the jar and shake again until a roll of paper comes out. A second paper came out, namely 8.A. In this case, the two roles are equally likely to be an experimental class and a control class.

f. Shuffle the two rolls of paper again to determine the experimental and control classes. First comes 8.B, which will be an experimental class.

g. The second roll of paper that comes up was 8.A, which is the control class.

3. **Sample**

The sample of The sample of this research was taken by using the cluster random sampling technique (Erika Sinambela; Theoria, Sinaga; Agustinus, 2020). A representative sample is a sample that truly reflects the population. Then, determining the sample in research is crucial in research. In this research, the researcher obtained the 8.B class is an experimental class and the 8.A class

is a control class using the Cluster Random Sampling method. 8.B consisted of 36 students as an experimental class and 8.A consisted of 36 students as a control class.

D. Research Instrument

According to Taherdoost (2018), research instruments are something that is most important and strategically positioned in the overall activity study. The existence of research instruments is an important part of very integral and included in the component of the research methodology because the instrument research is a tool used to collect, examine, investigate a problem under investigation. It can be concluded that the instrument is a tool to collect data in research. In this research, the researcher used a test as the instrument to collect data. The researcher arranged the instrument in multiple choice questions because the test was used to know students reading comprehension of descriptive text. There were 30 questions given to the students with 40 minutes maximum to finish. After the students complete the task, the researcher corrected and graded their work based on the reading assessment rubric, there are three categories namely high, average, and low, with the range low being 10-64. Average 65-79, and high 80-100.

Based on Browns' theory, especially reading there are some criteria commonly used in measuring students reading comprehension. Among them are main idea, inference (implied detail), reference, detail (scanning for a specifically stated detail), excluding facts not written (unstated detail), supporting the idea, vocabulary in context, and expression/idiom/phrases in context. The researcher prepared the instrument in the form of multiple-choice questions.

E. Research Validity and Reliability

1. Validity

Validity refers to extent to which the test measures what it is intended to measure (Sugiyono, 2018). To measure the validity of the test, researchers analyzed the content validity test form. Content validity checks to see if the test properly represents the material under test. Therefore, the subject of the test should represent the material discussed. Regarding the validity of the content, the specified material is compatible with the material from the evaluation

Expert assessment is conducted to the test validity of an instrument by theorical consepts and contextual instruments that used. There are two experts

which gives evaluation, namely (Saifudin Latif Darmawan). The experts was the viewer in the process that is used in developing the test as well the test itself and make judgement concerning how well items represent the intended the content. The set of equipment which is used to measure the criteria of validation are (1) failed, (2) poor, (3) fair, (4) good and (5) excellent.

2. Reliability

The reliability test in the instrument aims to determine the extent to which it can be trusted as a measuring instrument. The degree of consistency of an instrument is reliability (Segal & Coolidge, 2018). Reality with regard to the question, whether an instrument can be believed in accordance with the criteria that have been set. If an instrument is retested in a different time with the same group will produce the same test results. The reliability test calculated using SPSS version 25. The researcher used Spearman Brown calculation by the basis of decision making as follows:

Table 3 Reliability Test

Reliability Index	Criteria
0.81 – 1.00	Very Good
0.61 – 0.80	Good
0.41 – 0.60	Quite
0.21 – 0.40	Poor
0.00 – 0.20	Very Poor

(Sutrisno, 2016, p. 166)

F. Data Collecting Technique

According to Supriati as cited in Paradis et al. (2016), the method of data collection is an important thing in research, because this method is a management strategy or method used by researchers to collect data needed in their research. Some of the techniques that will be used in this research are as follows:

1. Pre-Test

The pre-test gave at the first meeting during the research in order to find out the initial score of the students' reading comprehension before given treatment. Thus, pre-test carried out prior to treatment. The researcher distributed 30 questions of multiple choices related to descriptive text to both of experimental

class and control class. The researcher set 40 minutes for the participants to complete the test in order for them to finish it thoroughly.

2. Treatment

After giving the pre-test, the researcher conducted treatment in class on the students. The treatment utilized Partner Reading Strategy. The following is the procedure that the researcher followed while implementing the strategy in the experimental class:

Step 1: Before reading

   a. The teacher asked the students some questions to activate their background knowledge
   b. The teacher gave out copies text to be read.
   c. The teacher asked students to find their partner.
   d. Teacher asked the students to find the difficult words and gets the meaning of the text.

Step 2: During reading

   a. Read the text with partner
   b. Read the text with partner to look for clues

Step 3: After reading

   a. Discuss the information with partner and teacher
   b. The teacher and the students discussed about the text with others example.

3. Post-test

The post-test gave to students after the treatment carried out using the Partner Reading Strategy (PRS) of the students' reading ability. Similar to the pre-test, the researcher provided 30 questions of multiple choice related to descriptive text. The results of this post test compared with the results of the pre-test that has been carried out so that it was be known how far the effects or effects of the teaching have been carried out, as well as at the same time it could be seen which parts of the teaching materials are still not understood by most of the participants.

G. Data Analysis Technique

After the researcher collect pre-test and post-test data. The researcher compared the score results from pre-test and post-test. Then, the data analyzed and determined by statistical calculation of t-test formula by 5% significance level and get the score. The T test in this study will be used to test the results of the

average score difference between experimental and control classes, whether there was significant differences or not. In addition, the score obtained was the difference between the pre-test and post-test scores of each experimental and control group class. Gained scores used to determine the increase or decrease in score and to determine the effectiveness of the strategy used. However, before the hypothesis test it is necessary to analyzed the prerequisite test first, namely the distribution of normality tests and homogeneity tests.

1. **Normality Test**

A normality test is employed to assess whether the data collected from a sample originates from a population that follows a normal distribution. In this research, the researchers used SPSS to test normality. According to (Anwar, 2009) To determine normality, the Sig score can be used which is in the results of the Shapiro-Wilk calculation. The criteria for normality test according to Nurgiyantoro et al., (2015, p. 124) as follows:

    a. If the Significant value (Sig) $\geq$ 0.05, the data distribution is normal.

    b. If the Significant value (Sig) < 0.05, the data distribution is not normal.

2. **Homogeneity Test**

Homogeneity test is a type of statistical test used to test whether the variance or distribution of two or more groups or sample data is homogeneous or similar (Widodo et al., 2017). In this research, the researcher used Levene Statistic with SPSS calculations (Anggara & Anwar, 2017, p. 98) by two criteria as follows:

    a. When the significance value is $\geq$ 0, 05 it means homogeneous.

    b. When the significance value is < 0, 05 it means not homogeneous.

3. **T-Test**

The t-test is the process of analyzing data to determine the significant difference between students strategies that are integrated with the use of Paired Reading Strategy and students' Reading Skill without using the paired reading strategy. The t-test to be used in this study is the Independent Sample T test with a two-party significance test using IBM SPSS Statistic Version 25. If the Sig. (2-tail)> sig α 0.05 (5%), then the null hypothesis is rejected. But, if Sig. (2- tail) < sig α 0.05 (5%), then the alternative hypothesis is accepted. The following is the formula used to calculate T-test:

$$t = \frac{\bar{x} - \mu}{\frac{\sigma}{\sqrt{n}}}$$

Note   :   "x" bar : mean of the sample

μ   : assumed mean

σ   : Standard Deviation

n   : number of observations