

CHAPTER III

RESEARCH METHOD

In this chapter, The researcher presented the study design, the population sample and the research sampling, the research component, the research instrument, the Validation and reliability test, homogeneity measures, the data collection method and the data analysis.

A. Research Design

The investigator used a quantitative analysis method to perform this study. Quantitative analysis was the technique used by the statistical program to analyze phenomena by gathering numerical data in the field and then analyzing it. According to Perry (2005: 75) Quantitative emerged largely from the field of psychology and scientifically stressed the generalization of surveys of populations.

The researcher used study design, Pre-Experimental Design, to investigate Efficacy of mnemonic acrostic methodology in teaching student text Vocabulary. This research design is focused on the overall structural structures used. to Perry (2005), including variables, methods, treatments, and others. Treatment was done in this study using this technique for teaching Vocabulary in recount text. In this case, the author used the Pre-Experimental design to use one class as a single treatment group and The group received the pre-test and the post-test to understand the effects of the procedure..

In addition, it complies with why pre-experimental testing was used because the researcher was not apparent to provide a random assignment to decide the research sample. Ary et al (2010: 302) The criteria of this design was stated that the pre-experimental design did not include a Assignment at random of subjects to groups or other methods for tracking foreign variables. In this study, this meant that the researcher had no authority to select the sample. This study focused on the efficacy of the acrostic mnemonics technique in teaching the Vocabulary of students in SMK Putra Harapan recount text of 10th grade students.

Mnemonic Acrostic Technique was the independent Variable and the dependent Variable was the Vocabulary of the student in the text of the account. In this case, the independent Variable affects the dependent Variable, the researcher used pre-test and post-test to assess that in order to know the outcome whether the dependent was well positively affected. The study's architecture may be summarized as follows:

Table 3.1 :The Illustration of Research Design

Pre-test	Treatment	Post-test
Y1	X	Y2
(DV)	(IV)	(DV)

Adapted from Ary et al (2010)

X : Mnemonics Acrostic Technique (Independent Variable)

Y1 : Students' Until teaching, recount text Vocabulary using the Mnemonics Acrostic Technique (dependent Variable)

Y2 : Students' Vocabulary in recount text after Mnemonics Acrostic Technique has been Learned. (dependent Variable).

1. Pre-Test

The students have been issued with the pre-test. Before being taught using Mnemonic Acrostic, the goal was to test the mastery of Vocabulary of students in recount text.

2. Treatment

The researcher gave the therapy to the students after conducting the pre-test.

- a. The first treatment was conducted on 13th November 2020. The researcher introduction to all students (recount text). Then, The investigator shared the account text content and the implementation of Mnemonic Acrostic Technique. After their opinion is opened, the researcher gave them a exercises.
- b. The researcher then asked the students in zoom application to memorize the many vocabularies. Are all the students can mention that Vocabulary or not? And how many Vocabulary can mention of all students?
- c. Then the teacher checked the Vocabulary and acrostic form true or false based on they had write. In this activity, it gave them the chance to use their in making acrostic form with Limitation of someone's name. After checked, the researcher can give a feedback so that the student know their mistakes.

3. Post-Test

After students were taught treatments using the Mnemonic Acrostic technique, the post-test was given. PosI-test had been done on 16th November

2020. The aim of the post-test was to assess students' Vocabulary in recount text after they had been taught using Mnemonic Acrostic Technique.

B. Population, Sample and Sampling

1. Population

The entire population was subjects where information was gathered. As cited in Dewi (2017: 39), SeItman (2015) defined the population as the whole set of real or possible observational units. In other words, all subjects where the data could be accessed were the population. In this report, all of SMK Putra Harapan's tenth grade students in the period 2020/2021, consisting of 98 students, were in the data population. They were split into three classrooms..

No	Class	Gender	
		Male	Female
1	X A	0 students	35 students
2	X B	26 students	0 students
3	X C	32 students	0 students
	Total students	93 students	

2. Sample

The population representative was a sample. Arikunto (2016, as quoted in Fifah, 2016) claimed that the sample is observed as part of a population representative. To test the demographic survey,, the researcher concentrated on one class and used purposeful sampling to consider those credentials by taking into account the number of populations that are many. According to Perry

(2005:57), the purposeful sampling technique was used to suggest that the sample was selected as suitable as possible to address the research question. The researcher considered some suggestions from some individuals who know well which sample was suitable to be selected by giving qualification by using purposeful sampling. The researcher chooses SMK Putra Harapan because of based on mission of SMK Putra Harapan is excellent to produce the quality of student's potential development. That's one of the positive parameters, then. According to the Vice Head of Curriculum Masters in SMK Putra Harapan recommended tenth 'A' to be the sample of population. In addition, English teacher who handled tenth "A" suggested taking that class too as subject of sample to be researched by some reasons:

1. This class was taught by Text Recount.
2. The class was sufficiently cooperative.
3. In Vocabulary, the features of the students were called homogeneous, meaning not too good and not too bad.

Table 3.3 Sample Research

Sample of X A		Total participant
Male	Female	
0 students	35 students	35 student

3. Sampling

The technique in taking sample was called sampling (Sugiyono, 2006 : 90). The investigator used purposeful sampling as the sampling method in this report. Ary et al (2010: 156) Suggested that the population chooses purposeful

sampling – often The survey items considered to be normal or representative are referred to as decision sampling. The investigator used expert judgment in purposeful sampling to take certain members or traditional cases from the population.

In order to ensure that the components would have such features that are important to the analysis, purposeful sampling was a form Sampling of non-probability where the analyst deliberately chooses subjects to be applied to the sample. The purposeful sampling was a sample taken because the researcher assumed that enough information could be provided by X. The investigator used the class's purposeful sampling of different school experiences and English skills. Some of them have enrolled in English, others have graduated from excellent and ordinary classes. In addition, the English teacher suggested this class. Thus, the researcher believed that X A class of SMK Putra Harapan could be given sufficient information because of it was heterogeneous class.

C. Research Variable

Variable was the characteristics of something that researched. There were two variables in this research:

- a. Independent Variable (x): Mnemonic Acrostic Technique
- b. Dependent Variable (y): Students' Vocabulary in Recount Text

D. Research Instrument

The research instrument refers to a data collection tool or instrument. The researcher's instrument was evaluating Vocabulary. Check used in the recount

text to determine the students' Vocabulary before and after the use of the Mnemonic Acrostic method. Two kinds of tests were offered to students. The first test was a pre-test that was distributed on 12 November 2020 and the second test was a post-test that was distributed on 16 November 2020. The Total number of test items in the form of filling in the blanks was 10. In doing the exam, the core competence and also the basic competence of the program must be taken into account. It was about recounting text that is acceptable to the ten-grade level of students. the researcher's used the scoring rubric guide. According to Afandi (2013:69), the scoring rubric as follows:

$$\text{Score} = \frac{\text{Number of correct item}}{10} \times 100$$

(number of questions)

Table 3.4 the criteria of students' score from Luis Villalobos

([https://www.slideshare.net>IaviIIalobos](https://www.slideshare.net/IaviIIalobos))

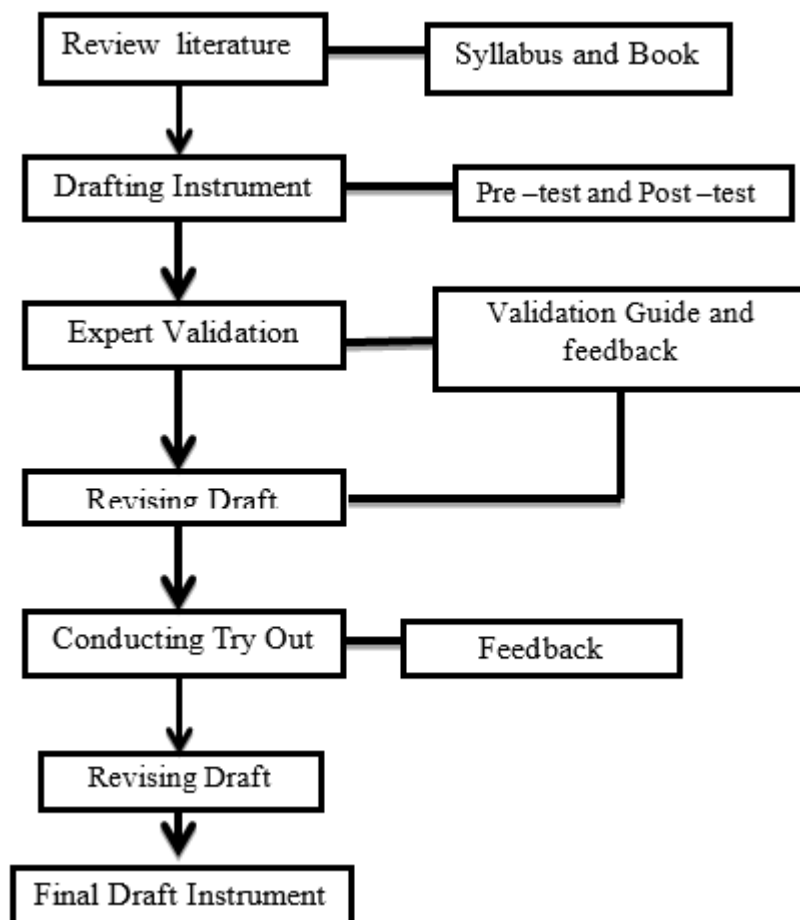
No	Criteria	Range store
1	Excellent	90-100
2	Very good	80-89
3	Good	70-79
4	Fair	60-69
5	Fall	≤59

E. Validity and Reliability

In experimental research, the researcher had to check Validity and reliability of the instrument. The method used in this study was a test provided by mnemonic acrostic technique before and after teaching. The Validity and

reliability of the instrument could develop through the following steps (seen figure 3.1).

Figure 3.1 Method for the manufacture of accurate and reliable instruments adapted from David Wilkinson and Peter Birmingham (2003)



The instrumentation measures were:

1. Review literature

The first actions to get a true and accurate test is the analysis of the recount document literature. As a result, the researcher examined some of the syllabus

literature and books used in tenth grade students at SMK Putra Harapanto to collect some relevant knowledge as a basis for writing resources related to the pokok bahasan aIs.

2. Drafting Instrument

The researcher began to draft the required instrument with the pokok bahasan aIs after collecting some details from the reviewing literature.

3. Expert Validating

The method should be checked by a professional such as an English teacher or lecturer after completion of the drafting instrument. The purpose of the expert Validation was to understand how genuine the instrument was either relative to the Validity building, Validity of the face or Validity of the pokok bahasan aI. In these measures, the investigator obtained input and a Validation guide.

4. Revising Draft

The investigator used feedback received from the expert Validation in the revision of the draft process.

5. Conducting Try- Out

Following the assessment of the draft instrument, the writer attempted to provide feedback for students in various classes as a study guide. In class X C, which consisted of 32 students, 32 males and 0 females, the researcher conducted the attempt.

6. Revising

After conducting try out, then revising After receiving input or feedback from the experiment, the researcher obtained a final draft to assess class X A as a

population sample of this study on the basis of that definition. So, in order to make the questions suitable or not simple or too straightforward, complicated or too basic, the researcher revamped the method.

7. Final Draft Instrument

The final stage was the final draft instrument, which meant that the instrument was acceptable, Instrument was of decent or best quality. The researcher defined both Validity and reliability as below, in order to get more information:

1. Validity

Validity of instrument was measured what was supposed to be measure. Brown (2000:37) stated “The extent to which the test genuinely tests what is to be tested is the Validity of the test.. An instrument was considered valid if it was possible for the instrument to measure what was measured. There are three forms of Validation, according to Brown (2000:38): *pokok bahasan* of Validity, face Validity, and Validity of the construct. The investigator used *pokok bahasan* of Validity and construct Validity in this analysis.

a. Content Validity

Validity of content is the correspondence between the goals of the program and the objectives to be evaluated. (O'Malley & Pierce, 1996:25). The instrument type was tested. It may be possible to achieve the *pokok bahasan* of Validity of the test by contrasting the test content and the information that could be Learned. Author carried out a test on the basis of standard skills and basic syllabus skills, before doing a test, the researcher made test specification, particularly Vocabulary testing. The researcher, after understanding the standard

competency, made the test predictor dependent on the standard competency in the syllabus. As the school implements the K13 curriculum, the instrument of this research was built on the basis of normal and fundamental competence in K13. In this review, the contents of the question in the testing of recount text that was sufficient to be mastered at senior high school for 10th grade students.

b. Construct Validity

The create Validity of the test which, in conjunction with a theory of Language action and Learning, was able to quantify those basic features. According to Iatief (2017: 28), the construct defined could lead to what tasks the instrument requires students to do. The correct definition of construct could lead to the correct selection of the task, which result in correct data, which has strong Validity. It meant that the task should be matched between the purposed of the assessment. In this case, the researcher used construct Validity in the administration of the Vocabulary test, based on the form of filling in blanks, with the goal of assessing the student's Vocabulary on recount text and was therefore correct in terms of construct Validity..

c. Face Validity

Through consulting with the advisor, the researcher used face Validity and English teacher to make sure that the test measured what must be measured. In this case, the test had measured Vocabulary in recount text.

2. Reliability

Reliability refers to the accuracy of the instrument's corresponding ratings. Reliability, according to Brown Ary et al (2002:20), is concerned with the

influence of certain random calculation errors on the accuracy of scores. The reliability of the test or instrument can be seen by the performance of the test instrument in various classes; X C was used by the researcher in this analysis. The researcher estimated using the Alpha Cronbach formula to assess the reliability of the score obtained from pre-test and post-test using IBM SPSS 17.0. The test scoring formula was one correct answer given one point, while zero point got an incorrect answer.

According to Ridwan (2004:18), the criteria of reliability were divided into 5 classes as follows:

1. If 0.00 to 0.20 for the Cronbach alpha score: less accurate
2. If the Cronbach alpha score is 0.21-0.40: accurate enough
3. If the Cronbach alpha score is 0.41-0.60: accurate enough
4. If the Cronbach alpha score is 0.61-0.80: correct,
5. If the Cronbach alpha score is 0.81-1.00: very successful

F. Normality and Homogeneity Testing

1. Normality Testing

Normality checking was performed to determine whether or not the data that was taken was usually transmitted. Calculation of the normality measures in this analysis using the SPSS 17.0 variant of the one-sample Kolmogorov-Smirnov formula Significance Test (α) = 0.050.0. Data normality checks were done according to the rules as follows:

- a. If $\alpha > 0.050$, This meant that the distribution of data was standard.
- b. If $\alpha < 0.050$, It said that the data distribution was not natural.

If the data distribution was normal next, the researcher analyzed the homogeneity testing.

2. Homogeneity Testing

In order to know whether or not the data that was taken had a homogeneous variation, homogeneity checking was carried out. Computation of the homogeneity test using the SPSS 17.0 variant of the one-sample Kolmogorov-Smirnov formula with a significance value (α) = 0.050. The hypothesis was the data could be homogeneous if the significant value (α) was more than 0.050 ($\alpha > 0.050$). Meanwhile, the data was not homogeneous if the significant value was more less than 0.050 ($\alpha < 0.050$).

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G. Data Collection Method

The method of data collection was the manner in which the researchers collected the necessary knowledge. The investigator obtained the data from the pre-test and post-test ratings of the pupils. The knowledge processing strategy has been explained as follows:

1. Pre-Test

The pre-test has been given to students. Until being taught the usage of Mnemonic Acrostic,, it tried to test the students' mastery of Vocabulary in recount text. The pre-test was carried out on 12 November 2020. The Total number of pre-test students was 35. Upon completion of the exam, the student pre-test score was

calculated using the score heading to assess the pre-test result before being advised using the Mnemonic Acrostic Process. Before using the mnemonic acrostic technique for mastery of Vocabulary in the recount text used in the class, this test result became a test.

2. Post-Test

After the students were taught therapies using the Mnemonic Acrostic method, the post-test was given. Post-tests were performed on 16 November 2020. The number of post-test students was 35 students overall. Upon conclusion of the test, the post-test score of the students was determined using the scoring rubric to grasp the post-test outcome after being instructed using the Mnemonic Acrostic Method.

The researchers were expected to find out from the score of this test. The utility of using this Technique to teach Vocabulary in the text of the account. The results of the score is then compared to the pre-test. In this scenario, the investigator understood how much the use it's was successful.

H. Data Analysis

The researcher used data processing to interpret the data obtained, which was taken from the pre-test and post-test score of the students. The data derived from the student test results was quantitatively analyzed. Using statistics called mathematical analyses or inferential statistics, quantitative analysis was carried out. Using mathematical computation, the quantitative data from this study was analyzed. In this analysis, the investigator used the Paired Sample T-test variant

of IBM SPSS 17.0 To test the data from IBM , see if there was a noticeable difference in the students' Vocabulary in the Count the text after and before being told to use the Mnemonic Acrostic Technique.

I. Hypothesis Testing

The criteria of hypothesis testing were as follows:

a. The alternative hypothesis (H_a) was accepted and the null hypothesis (H_0) was dismissed when the significant value $<$ significance level. This meant that before and after being instructed by using this Technique, there was a substantial gap score on the Vocabulary of the Learners.

b. The null hypothesis (H_0) was accepted and the alternative hypothesis (H_a) was dismissed when the meaningful value $>$ significant amount was set. Before and after being trained using Mnemonic Acrostic Method, there was no substantial change in the Language of the students.

