

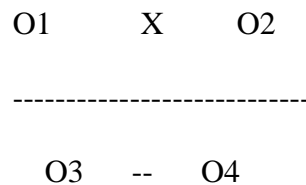
CHAPTER III

METHODOLOGY

This chapter discusses (1) research design, (2) research study, (3) operational definitions, (4) subject of the study, (5) data collection, (6) research instrument analysis, and (7) data analysis.

3.1. Research Design

In this study, I used the quasi-experimental research method. Levy and Ellis (2011) state that quasi-experiment was also known as 'field-experiment' or 'in-situ experiment', it is a type of experimental design in which the researcher has limited leverage and control over the selection of study participants. There are two groups in this study; experimental group and control group. The basic scheme of this design is described below:



Where:

O1: pretest of the experimental group

O2: posttest of the experimental group

O3: pretest of the control group

O4: posttest of the control group

X: treatment for the experimental group by using Schema Activation strategy.

--: no treatment

A Pretest was given to the students in the control group and the experimental group at the first meeting. The treatment was only given to the experimental group by using Schema Activation as the strategy. The experimental group was given treatment by using a Schema Activation strategy for 10 meetings. In the end, both of the groups were given posttest to obtain the final data and to see whether there was significant improvement between the pretest and posttest results in the experimental group and significant difference between control group and the experimental group. In applying this method, the research was conducted for 12 meetings, including 2 meetings for pretest and posttest.

3.2. Research Variables

A variable is a measurable characteristic that varies. The dependent variable is an attribute or characteristic that is dependent on or influenced by the independent variable. An independent variable is an attribute or characteristic that influences or affects an outcome or dependent variable. Therefore, the independent variable in this study is Schema Activation Strategy and the dependent variable is the students' reading comprehension achievement.

3.3. Operational Definitions

The title of this study is "Improving Reading Comprehension Achievement of the Eight Grade Students at SMP Karya Ibu Palembang by using Schema Activation Strategy". In order to avoid misunderstanding about the terms used in this study, it is necessary for me to define them. They are:

a. Reading Comprehension

Reading comprehension means that process in constructing meaning to understand the written language. The process of reading comprehension is also complex and it takes time for a reader to acquire the meaning of reading material. To find out students' comprehension reading texts, a test on reading was used.

b. Schema Activation Strategy

Schema Activation Strategy is a strategy to encourage students to comprehend reading text such as in brainstorming, familiar with the reading text, content, summary, generic structure texts.

3.4.The Subject of the Study

3.4.1. Population

A Population is a large group of samples. The population of this study is the eighth grade students of SMP Karya Ibu Palembang consisting of eight classes. The total of the students is 265 students.

Table 1: Distribution of the Population

NO	CLASS	NUMBER OF STUDENTS
1.	VIII.1	31
2.	VIII.2	34
3.	VIII.3	35
4.	VIII.4	35
5.	VIII.5	34
6.	VIII.6	31
7.	VIII.7	33

8.	VIII.8	34
TOTAL		268

(Source: The English Teacher in SMP Karya Ibu Palembang 2018/2019)

3.4.2. Sample

The sample is the group of individuals who actually participate in the study, to get the sample of this study, purposive sampling was used. The reason why this sampling method was applied because, after an interview and discussion with one of the English teachers in SMP Karya Ibu Palembang, I asked to use two classes were available as the sample for the experimental group and the control group. Class VIII.2 and class VIII.5 were recommended since (1) they had the same capability and level comprehension (2) they had the same total of students in the class. And then, the sample was taken for the experimental and control group. The following table shows the distributions of the sample.

Table 2: Distribution of Sample

NO	GROUP CLASS	MALE	FEMALE	TOTAL
1	VIII. 2 (Experimental Group)	15	19	34
2	VIII. 5 (Control Group)	16	18	34
TOTAL				68

(Source: The English Teacher in SMP Karya Ibu Palembang 2018/2019)

3.5. Data Collection

3.5.1. Tests

In this research, a test on reading was used in collecting the data. The purpose of the test is to measure students' reading comprehension achievement before and after the treatments in the experimental group. The sources of the test were taken from some sources, such as *Interlanguage* (2008) by Joko Priyana, Arnys Irjayanti and Virga Renitasari, *Scaffolding* (2008) by Joko Priyana, Arnys Irjayanti, Virga Renitasari, *Detik detik UN Nasional books* (2015) by Bachtiar Bima, Cicik Kurniawati, and Yuniarti Dwi Arini and internet scripts.

3.5.1. Pre-test

The Pretest was done before treatments in both groups, experimental and control group. The Pretest was done to know students' reading comprehension achievement before the treatment. In this study, the pre-test was done before giving the treatment in both groups, the experimental and control group. It measured the students' reading comprehension before treatment. The purpose of giving a pretest to the students was to know the students' ability in learning reading before implementing Schema Activation strategy.

3.5.1.1. Post-test

This test was given to the students when all the treatments were given and it also was given to both sample, control and experimental group. The purpose of this test is to know the student's reading comprehension average score after the treatments were given.

3.6. Research Instrument Analysis

3.6.1. The validity of the Test

Validity test is useful to know the instruments for pre-test and post-test activities valid or not. Based on the statement above, there are three kinds of validity, those are:

3.6.1.1. Content Validity

Content validity refers to the content and format the instrument, how an appropriate is the content, how comprehensive does it logically get at the intended variable content validity is very important since it is an accurate measure of what it is supposed to measure. In order to judge the test whether or not a test has content validity, I checked the syllabus from school and then matched them into test specification.

Then, the result of the analysis in constructing the content validity was presented in the test specification table including, objectives of the test, text materials, test indicators, total of the test, types of test, and answer key.

Table 3: The Table of Specification Instrument test

Objectives	Text Materials	Indicator	Number of Items	Types of test	Answer Key
The students are able to understand the meanings in short sample essays in the term of recount text to interact with the surrounding environment	Recount Text	The students are able:			
		1. Identify the main idea	1,11,12,21,41, 51		C,A,D,C, A,A
		2. Identify cause/ effect	7,14, 39		C, B, A
	Descriptive Text	3. Identify inferences	3, 15, 26, 29, 45, 53		A, B, D, C, B, D
		4. Identify vocabulary	4, 5, 6, 19, 20, 24, 34, 35, 50, 52, 59, 60	Multiple Choice	A, C, A, C, B, C, C, B, B,C, C, A
		5. Identify detail information	2, 9, 16, 17, 18, 22, 23, 25, 27, 28, 30, 31, 32, 33, 36, 37, 38, 42, 43, 44, 46, 48, 49, 54, 55, 56, 57, 58		C,D, D, B, C, B, D, C, D, D, B, B, A, D, B, D, B, B, A, A, D, A, D, B, C, B, C
	5. Identify goals communication/finding concluding Sentence	8, 10, 13, 40, 47		C, A, B, A, D	

3.6.1.2. Construct Validity

Construct validity of the instrument was consulted with some experts to evaluate whether the components of the instrument were valid or not to be applied in research activities. In this part, the construct validity of the research instruments involves two types. They are questioning items for pretest and posttest activities, and lesson plans for the experimental group.

Three lecturers in UIN Raden Fatah Palembang asked as validators. There are some characteristics for expert judgments or validators, such as: (1) They have an English educational background, (2) They are English lecturers, and (3) They have scored at least 550; and (4) Their teaching more than 5 years. They measure, including such thing as the clarity of orienting, size of type, adequacy of a workspace (if needed), appropriateness the language, clarity of directions, and so on regardless of the adequacy of the question in an instrument what must be measured by giving test or tryout to students later on.

3.6.1.3. The validity of Each Question Item

A validity test of each question item was used to indicate whether the test item of the instruments in each question is valid or not. To find out the validity of each question items, the tryout was conducted. The instruments of the test were tested to 31 of non-sample students (VIII 6) of the eighth grade students of SMP Karya Ibu Palembang with 60 multiple-choice items. To result of the test was analyzed using Person Correlation Formula. Priyatno (2010) argues that “if the result of the test shows that r_{count} is higher than r_{tabel} (0,355), it means that the item is valid” (p. 91). Then, the result of the test was analyzed by using *the SPSS*

Statistics Program Version 21. If the data is valid, it used for the pre-test. If the data did not valid, it used to pre-test.

The result of the analysis of the validity of each question item using Person Correlation on in SPSS 21 was found that there was 35 question considered invalid. There is question item number 4, 6, 8, 10, 12, 14, 15, 16, 17, 18, 20, 27, 28, 29, 30, 32, 34, 45, 38, 40, 41, 42, 43, 45, 46, 47, 48, 49, 50, 51, 53, 55, 59, 60 since the score of significance is lower than 0.355, Then, 26 questions item was considered valid. They are questions item number 1, 2, 3, 5, 7, 9, 11, 13, 19, 21, 22, 23, 24, 25, 26, 31, 33, 35, 36, 37, 39, 44, 54, 56, 57, 58 since the score of significance are higher than 0, 355. Since there were 26 questions valid the writer just took 25 valid question item. The further result analysis of validity in each question item can be seen in *appendix L*.

3.6.2. Reliability Test

Reliability test is the consistency of the scores obtained- how consistent they are each, individual from one administration of an instrument to another and from one set of items to another. Reliability test measures whether or not research instrument was used for activities of pretest and posttest activities reliable or not.

3.6.2.1. Internal Consistency

Internal consistency is a method of reliability in which we judge how well the items on a test that are proposed to measure the same construct produce a similar result. In order to estimate the reliability of the test, I used the *Split-half Method*. Split-half involves scoring two halves (usually odd items versus even items) of a test separately for each person and then calculating a correlation coefficient for the two sets scores. The test scores considered reliable if the score of significant was at least or preferably higher than 0.70.

To know the test was used reliable or not, I have given try out firstly with the students and then the score of reliability test was calculated by SPSS 21 software (Statistical Package for the Social Sciences) using a split-half method with spearman-brown formula in internal consistency because this method was suitable for multiple choice.

To measure the reliability test using the split-half method, it was found that the p-output of Guttman split-half coefficient is 0,753 from the score, it can be stated that the reliability of reading test items is reliable since the p-output is higher than 0,70 with the sample (N) is 31 students. The resulting analysis of the reliability test was described in Table 5.

**Table 4: The Result of Reliability Analysis
Using Spearman-Brown Prophecy Formula**

Case Processing Summary			
		N	%
Cases	Valid	30	96.8
	Excluded ^a	1	3.2
	Total	31	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Part 1	Value	.720
		N of Items	13 ^a
	Part 2	Value	.517
		N of Items	12 ^b
		Total N of Items	25
Correlation Between Forms			.610
Spearman-Brown	Equal Length		.757
Coefficient	Unequal Length		.758
Guttman Split-Half Coefficient			.753

a. The items are: item1, item2, item3, item4, item5, item6, item7, item8, item9, item10, item11, item12, item13.

b. The items are: item13, item14, item15, item16, item17, item18, item19, item20, item21, item22, item23, item24, item25, total.

3.6.3. Readability Test

Readability test was done to know the appropriate level of reading texts for students' level in comprehending the reading texts. The name of the application is the Readability Formula. Readability formula test can be measured by using an online readability test which can be accessed from <http://www.readabilityformula.com>.

There are some categories of flesh reading ease score and Flesch reading grade level. For more detail, the category can be seen in the following table 4 and the results of the readability test for research, the instrument can be seen in the following table below.

Table 5: Reading Ease Score and Flesch Reading Grade Level

Reading ease score	Style Description	Estimated Reading Grade
0-30	Very difficult	College Graduate
30-50	Difficult	13 th -16 th grade
50-60	Fairly difficult	10 th -12 th grade
60-70	Standard	8 th -9 th grade
70-80	Fairly easy	7 th grade
80-90	Easy	6 th grade
90-100	Very easy	5 th grade

(Source: Dubay, W. H. The principles of readability 2004)

3.6.3.1. Readability of Instruments Tests

The texts were found from some sources. The sources were submitted to readability on (1) Scaffolding: English for Junior High School Students Published by Pusat Perpustakaan Departement Pendidikan Nasional and the author are Joko Priyana, Arnys Irjayanti, and Virga Renitasari, (2) The second is entitled Interlanguage and the author are Joko Priyana, Arnys Irjayanti, and Virga Renitasari. (3) Detik Detik UN Bahasa Inggris, by Bachtiar Bima, Cicik Kurniawati, and Yuniarti Dwi Arini and internet script. The result can be seen in the following table:

Table 6: The result of Readability for the Research Instrument

No	Text title	Flesh reading ease score	Text category
1..	Diving on Bunaken island	65.46	Standard
2.	Visited the pen pal's house	64.32	Standard
3.	My grandpa's funeral in Toraja	63.86	Standard
4.	I have a cat	62.80	Standard
5.	Paris	61.51	Standard
6.	Comedian Rowan Atkinson	61.33	Standard

Table 7: The Result of the Readability Test for Research Treatments Text

No	Text title	Flesh reading ease score	Text category
1.	R.A Kartini	68.7	Standard
2.	Came late to the school	67.2	Standard
3.	Unfeeling well	66	Standard
4.	The experience unforgettable	65	Standard
5.	My vacation with my beloved people	64.4	Standard
6.	My lovely puppies	64	Standard
7.	My gorgeous idol	64	Standard
8.	My unique pet	63	Standard
9,	My best friend	62.5	Standard
10.	Suramadu bridge	62	Standard

3.6.3.2. Research Teaching Schedule

The research does the treatments to the experimental group in accordance with the schedule of the teacher for the eighth grade student academic 2017-2018.

This study was conducted in 10 meetings. There were two meetings for a pretest and posttest. So the total meetings were 12 meetings.

Table 8: Research Teaching Schedule

No	Text's title	Kind of Text	Meeting	Time Allocation
PRE-TEST				
1.	R.A Kartini		1 st	2 x 40 Minutes
2.	Came late to school		2 nd	2 x 40 Minutes
3.	Unfeeling well		3 th	2 x 40 Minutes
4.	Experience unforgettable	RECOUNT TEXT	4 th	2 x 40 Minutes
5.	My vacation with my beloved people		5 th	2 x 40 Minutes
6.	My lovely puppies	And	6 th	2 x 40 Minutes
7.	My gorgeous idol		7 th	2 x 40 Minutes
8.	My unique pet	DESCRIPTIVE TEXT	8 th	2 x 40 Minutes
9.	My best friend		9 th	2 x 40 Minutes
10.	Suramadu bridge		10 th	2 x 40 Minutes
POST-TEST				

3.7. Data Analysis

In analyzing the data, data obtained from quasi-experimental design was calculated by means of SPSS 20.0 software (Statistical Package for the Social Sciences). Moreover, I used and described some techniques, as follows:

3.7.1. Scoring

Scoring is a result, usually expressed numerically a test or examination.

$$GRADE = \frac{\textit{Total correct items}}{\textit{Total number of items}} \times 100\%$$

The classification of students' score was described in the table, the highest score 85-100 and the lowest score is 0-55 if students answer all question correctly is 100 points. Then, the score was categorized, as follows:

Table 9: The Classification of Student's score

The Range of Score	Qualitative Score	
85-100	Excellent	A
75-84	Good	B
56-74	Fair	C
< 55	Poor	D

(Source: *The English Teacher in SMP Karya Ibu Palembang 2018/2019*)

3.7.2. Data Description

In the data description, there is two analysis to be done. They are; (1) distribution of frequency data and (2) descriptive statistic:

3.7.2.1 Distributions of Frequency Data

In distributions of frequency data, the students' score, frequency, the percentage was achieved. The distributions of frequency data were obtained from students' pretest-posttest scores in the control and experiment group. Then, the distribution of frequency data was displayed in table analysis.

3.7.2.2. Descriptive Statistics

In descriptive statistics, the number of samples, the score of minimal, maximal, mean, standard deviation and standard error of the mean were analyzed. Descriptive statistics were obtained from students' pretest and posttest scores in control and experiment groups.

3.7.3. Prerequisite Analysis

Before analyzing the data, the pre-requisite analysis was done to see whether the data obtained was normal and homogeny. The procedures in pre-requisite analysis as follow:

3.7.3.1. Normality Test

Normality test was conducted to know whether the data obtain was normal or not. To test the normality, I used Kolmogorov Smirnov in the SPSS 21 version. The data was considered as normal when the p-output is higher than 0, 05 level. If the data not normal, I used non-parametric tests. If the data normal, I used parametric tests. The normality test was used to measure students' pretest and posttest scores in both groups (experimental and control group).

3.7.3.2. Homogeneity Test

Homogeneity test was used to measure the scores obtained whether it was homogenous or not. The homogeneity tests aim at determining whether the two sets of data samples have a homogenous variant or not. The homogeneity test was used to measure students' pretest and posttest scores in both groups (experimental and control). In measuring the homogeneity test, I used *Levene Statistics* in SPSS

version 21. The score was categorized homogeny when the p-output was higher than 0.05 levels.

3.7.4. Hypotheses Testing

Hypothesis testing is a procedure for making decisions about the result by comparing an observed value of a sample with a population value to determine if no difference or relationship exists between the values. In measuring the significant difference in students' reading comprehension text taught by using the Schema Activation Strategy. I analyzed the differences using paired sample t-test and independent sample t-test in SPSS 21 software application. The explanations as follows:

1. In measuring, a significant improvement Paired Sample t-test was used for testing the students' pretest to posttest scores by using Schema Activation Strategy in experimental groups. A significant improvement was found whenever the p-output was lower than 0,05 and t-obtained was higher than t-table.
2. In measuring a significant difference Independent Sample, t-test used for testing students' posttest scores in control and experimental groups. A significant difference was found whenever the p-output was lower than 0,05 and t-obtained was higher than t-table.