



**THE EFFECT OF SEMANTIC MAPPING TECHNIQUE ON  
VOCABULARY MASTERY AT GRADE VII STUDENTS OF  
SMPN 3 PADANGSIDIMPUAN**

**A THESIS**

*Submitted to the State Institute for Islamic Studies Padangsidempuan as a Partial  
Fulfillment of the Requirement for the Graduate Degree of Education Scholar  
(S.Pd) in English Program*

**Written by:**

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**ENGLISH EDUCATION DEPARTMENT  
TARBIYAH AND TEACHER TRAINING FACULTY  
STATE INSTITUTE FOR ISLAMIC STUDIES  
PADANGSIDIMPUAN  
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## LETTER OF AGREEMENT

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Item : 7 (seven) exemplars

Padangsidempuan, July 2019  
To:  
Dean Tarbiyah and  
Teacher Training Faculty  
In-  
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Assalamu'alaikum Wr.Wb.

After reading, studying and giving advice for necessary revision on thesis belongs to **Zulpadli Ardiansah**, entitled "*The Effect of Semantic Mapping Technique on Vocabulary Mastery at Grade VII Students of SMPN 3 Padangsidempuan*", we approved that the thesis has been acceptable to complete the requirement to fulfill for the degree of Graduate of Education (S.Pd.) in English.

Therefore, we hope that the thesis will soon be examined in front of the Thesis Examiner Team of E. Dept. of Tarbiyah and Teacher Training Faculty IAIN Padangsidempuan. Thank you.

Wassalamu'alaikum Wr.Wb.

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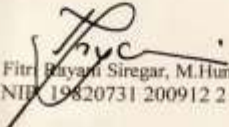
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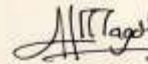
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Predicate : Very Good



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## ACKNOWLEDGEMENT

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

Firstly, the researcher would like to convey her grateful to Allah SWT. The most Creator and Merciful who has given her the health, time and chance for finishing this thesis: “ **THE EFFECT OF SEMANTIC MAPPING TECHNIQUE ON VOCABULARY MASTERY AT GRADE VII STUDENTS OF SMPN 3 PADANGSIDIMPUAN** ”. This thesis is written in order to fulfill one of the requirements for English Education Department of State Institute for Islamic Studies (IAIN) Padangsidimpuan. Hence, this thesis paper has been undertaken.

In writing this thesis, the researcher is assisted by some people and institutions. Therefore, in this opportunity the researcher would like to express her gratitude to the following people:

1. Thanks to Dr. H. Fitriadi Lubis, M.Pd, and Fitri Rayani Siregar, M.Hum, as advisor I and II who has guided the writer to complete this research.
2. Thanks to Dr. H. Ibrahim Siregar, MCL, as the Rector of State Institute for Islamic Studies (IAIN) Padangsidimpuan and Vice Rector I, II, III.
3. Thanks to Dr. Lelya Hilda, M. Si., as the Dean of Tarbiyah and Teacher Training Faculty.
4. Thanks to Fitri Rayani Siregar, M.Hum, as the Chief of English Department.

5. Thanks to all lectures that have taught, guided and also encouraged her during studying in IAIN Padangsidimpuan.
6. Thanks to Headmaster (Elli Farida), English teacher (Nurmala sari Sinaga) and also students of SMP Negeri 3 Padangsidimpuan who helped me to completed my research.
7. Thanks to my parents (Alm. Manaon Lubis and Khadijah) who taught me how to be patient to face this life, who always give me pray, motivation, and moral encouragement to finish my study, my beloved to my brother and sister (Husna, Husni, Aisyah, Nurliani, Saiful martaon, Nur lailan Sa'adah).
8. Thanks to my best friends Abdul Aziz Nasution, Helly Novrita, Ummu Habibah, Umni kalsum, Zainuddin, Lolly sinta, Patimah Situmeang, Muhammad Sahron, Mora tua rangkuti, Sastra winata, Haris Munandar, Rosmaini Lubis, Abdul Aziz Siregar, Azzam Henna art, and all my friends in TBI 2 that I can't mention who was patience and care to support me. All the people who have helped me to finish my study that I can't mention one by one. May Allah, the almighty bless them all, Amin.

This thesis is still so far from being perfect based on the weakness of the research. Therefore, the researcher aspects the constructive criticisms and suggestions from the readers in order to improve this thesis.

Padangsidempuan, July 2019

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### **ABSTRACT**

This research discusses about the effect of semantic mapping technique on vocabulary mastery at grade VII students of SMPN 3 Padangsidimpuan. The problems of this research are most of the students get low achievement in vocabulary mastery, and most of them lack of motivation in learning vocabulary, and also most of them do not have good technique on learning vocabulary. So, the students' vocabulary does not fulfill expectation. The aim of this research is to find out the effect of semantic mapping technique on vocabulary mastery at grade VII students of SMPN 3 Padangsidimpuan.

This research employed experimental research. The population of this research was the eleventh grade of SMPN 3 Padangsidimpuan. The total of population were eleventh classes. Then, the sample of the research is 2 classes, experiment class (VII-3) and control class VII-4). It was taken after conducting normality and homogeneity test. To collect the data, researcher used test for measuring students' vocabulary mastery. To analysis the data, the researcher used t-test.

Based on the result of the research, researcher showed the description of the data was found that the result of experimental class was higher than control class, and result of Pre test the score of  $t_{count}$  was smaller than  $t_{table}$  ( $1.59 < 2000$ ), and result of post test the score of  $t_{count}$  was bigger than  $t_{table}$  ( $8.42 > 2.000$ ). It means that the hypothesis alternative ( $H_a$ ) was accepted. It was concluded that there was the effect of semantic mapping technique on vocabulary mastery at grade VII students of smpn 3 Padangsidimpuan.

***Keywords: Semantic Mapping Technique, Students Vocabulary mastery***

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# CHAPTER I

## INTRODUCTION

### **A. Background of the Research**

Vocabulary is all the words in a language. Vocabulary has role as the foundation of language competence, because if there is no vocabulary, there is no language. Learning a new language is basically a matter of learning the vocabulary of that language. Moreover, the first lesson of human language is words. It can be proven from the children in their first language acquisition. When a baby speak firstly, the first thing that he say is one word utterances, followed by two and three word utterances, then his ability to construct sentences as the end of this process. It is also occur for second or foreign language acquisition such as English. The first step to master English is by learning and memorizing vocabulary as much as possible. So, without vocabulary, language production and language competence of human will not be good.

Vocabulary is central of language. Vocabulary is an activity to transfer the knowledge from the text to mind. It is impossible to gain information from many sources without proportional amount of vocabulary, anyone will get trouble in listening, speaking, reading and writing a foreign text without knowing the vocabulary inside the text. Vocabulary has a lot of significances to four skills; first, vocabulary is important in listening, it is important for the students to know the vocabulary that they listen. It will be impossible to comprehend what they

listen if they do not know the vocabulary. It will also make them difficult in communicating to the other people.

Second, in speaking, it will be necessary for the students to have enough knowledge about vocabulary because they will need it for speaking. If they do not have vocabulary, they will not be able to build sentences and it will make them lazy to start speaking.

Third, Vocabulary is very important in reading comprehension because vocabulary helps learners in comprehending the text. Vocabulary not only aids us in understanding other people but also essential in comprehending the books and articles we read.

Fourth, vocabulary is important in writing comprehension because it helps them to expand their ideas based on the topic sentence that they want. Writing is the process of giving information by texts that involved in generating the letters, words and sentences.

Based on the illustration above, Vocabulary is the most important for everyone. However, vocabulary is still a problem in school, especially in SMPN 3 Padangsidimpuan. It can be seen by the illustration below.

First, based on evidence from a list of students' grades and interview with the teachers. Students' vocabulary mastery achievement is unsatisfactory. passing grade of English in SMPN 3 Padangsidimpuan is 80 for all subjects and skills. But, the data found in SMP N 3 Padangsidimpuan asserts the average of students'

vocabulary mastery achievement of grade VII is about 67-78.<sup>1</sup> Therefore students' vocabulary achievement does not fulfill the expectation.

Second, many students are lack motivation and attention about the important of vocabulary. It makes them bad in understanding or comprehending English spoken and difficult to speak in good English. They are also bad in understanding English passage and difficult to write their thought in written form. The students' also have some problems in vocabulary mastery, such as bad pronunciation, difficult to understand new words, The problems are caused by several reasons such as students' educational background, their less practice, interesting and motivation, their bad mindset about English, their less strategies to learn vocabulary, and the teacher's less strategies in teaching.

Finally, most of them are lazy in learning English. They do not have a trick or technique to make it easier. as well as teachers, they teach vocabulary by simply opening the dictionary in seeking out new vocabulary. The researcher thinks that it is a big problem.

To resolve the problem in the vocabulary, There are many technique that can be applied in teaching vocabulary. Some of them are are TPR (Total Physical Response), interactive word wall technique, Semantic Mapping technique and other. Those various technique are suitable and good for enjoyable teaching and learning process in vocabulary classes.

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<sup>1</sup> Buku Kumpulan Nilai SMP Negeri 3 Padangsidempuan, *Private Document*, (SMP Negeri 3 Padangsidempuan: March 28<sup>th</sup>, 2018 at 10.15 a.m).

TPR (Total Physical Response) is involves the giving of commands to which the students react; Interactive word wall technique is a technique that is used to make the students be more active in finding, writing, chanting, and discussing the features of words posted on the word wall; Semantic mapping technique is the technique use to make students' can find the relationship of words that they know the one with the others.

From the three alternative methods above, the researcher chose to employ Semantic Mapping and it gave some reason about this strategy. First, Kholi & Sharifafar 2013, Semantic mapping build on students prior knowledge while it draws a components and shows the relationship among the components.

Second, Semantic Mapping can help students understand the relationship and establish the concept of a broad topic from one main idea.

Finally, through Semantic mapping students' are able to understand what they learn, expand their ideas expand vocabulary simply by looking at the main idea. so that students can easily remember and develop their vocabulary.

Based on the background above, to solve the problems the researcher interested to conduct a experimental research through the title **“THE EFFECT OF SEMANTIC MAPPING TECHNIQUE ON VOCABULARY MASTERY AT GRADE VII STUDENTS OF SMPN 3 PADANGSIDIMPUAN”**

## **B. Identification of the problem**

Based on the background above, there are some problems in vocabulary mastery at grade VII SMPN 3 Padangsidempuan as following are: 1) Students low achievement in vocabulary mastery, 2) Students have lack motivation in learning vocabulary, 3) The students seldom practice the new vocabularies. 4) The students are easy to feel bored in learning vocabulary

## **C. Limitation of the Problem**

Based on the identification above, there are some factors that influence students' vocabulary mastery, such as the application of technique and the using of media. The identification of the problem will be limited in the technique that is used to teach vocabulary. There are many techniques that can be applied in teaching vocabulary. Some of them are are TPR (Total Physical Response), Interactive word wall technique, Semantic Mapping technique and other.

The researcher used Semantic Mapping technique to solve students problem vocabulary mastery at grade VII students of SMPN 3 Padangsidempuan. It is about things in the house.

## **D. The Formulation of the Problem**

The formulation of the problem of this research as follow: “ is there a significant effect of semantic mapping technique on vocabulary mastery at grade VII students of SMPN 3 Padangsidempuan ?”

### **E. Aim of the research**

Based on formulation above the aim of the research is to know whether there is the significant effect of Semantic Mapping Technique on vocabulary mastery or not at grade VII students of SMPN 3 Padangsidimpuan.

### **F. Significances of the Research**

The significances of this research are:

1. The result of this research is expected to be useful for the students to help them in remembering the vocabularies, enjoy in the class and do not feel bored during the learning process.
2. The result of this research is expected to be useful for the English teachers in SMP Negeri 3 Padangsidimpuan as their information or their source in teaching vocabulary. This research is also expected to be able to become a motivation for the teacher to always make an interesting and fun strategy in teaching vocabulary.
3. The result of this research is expected to be the information for the others researchers to make the further research.

### **G. The Systematic of the Thesis**

This research is organized into five chapters. Every chapter is subdivided into subtopics to elaborate the given issue. First chapter, it consists of background of the problem, identification of the problem, formulation of the problem, limitation of the problem, aim of research, significances of the research, definition of operational variables, and the systematic of the thesis.

Second chapter, it consists of the theoretical description. It is divided into subchapters which consist of description of ice breaking games and description of vocabulary. Second chapter also consists of related findings, conceptual framework and hypothesis.

Third chapter, it consists of research methodology which is divided into sub chapter; time and place of the research, research methodology, population and sample, instrument of research, techniques of data collection, techniques of data analysis and outline of the thesis.

Fourth chapter, it consists of data description, hypothesis testing, discussion and the threats of research.

Fifth chapter, it consists of conclusion about the result of this research and suggestions that are given by the researcher.



## CHAPTER II

### LITERATURE REVIEW

#### A. Theoretical Description

##### 1. Vocabulary

###### a. The Definition of Vocabulary

Vocabulary is one aspect should be owned by every student to make them understand and master English language. It is a part of language that so important to all aspect in life. Howard Jackson said “Vocabulary is a representative collection of the words that exist in English language”.<sup>1</sup> Then, Hornby says “Vocabulary is all the words that a person knows or use, the words that people use when they are telling about particular subject”.<sup>2</sup> Penny Ur also defines vocabulary as the words we teach in foreign language”.<sup>3</sup> Next, Caroline said “vocabulary is the collection of words that an individual known”.<sup>4</sup> According to Elfrieda H. Hiebert and Michael L. Kamil, “vocabulary is the knowledge of meaning of words”.<sup>5</sup> According to the definitions above it can be concluded that vocabulary is a stock of word in a language, written or spoken, with

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<sup>1</sup> Howard Jackson, *Words, Meaning and Vocabulary* (London: Casell, 2000) p. 118.

<sup>2</sup> A. S. Hornby, *Op., Cit.* p.1506.

<sup>3</sup> Penny Ur, *A Course in Language Teaching* (United Kingdom: University Press, 2000) p. 60.

<sup>4</sup> Caroline T. Linse, *Practical English Language Teaching: Young Learners.*(New York: McGraw-Hill,2005),p.121.

<sup>5</sup> Elfrieda H. Hiebert, and Michael L. Kamil, *Teaching and Learning Vocabulary: Bringing Research to Practice* (Jew Jersie: Lawrence Erlbaum Associates, 2005), p. 3.

meaning that considered as cultural meaning used by group or individual community.

According to Jack C. Richard and Willy A Renandya said “Vocabulary is a core component of language proficiency and provides much of the basis for how well learners speak, listen, read and write”.<sup>6</sup> It means words can be noun, verbs, adjectives, adverbs, preposition, and conjunction to use language. Then language has some words or vocabulary for speaking, writing, reading and listening.

So, it could be concluded that vocabulary as all words that people know or use and also as the core component of words that is list in the alphabetical order.

#### **b. Purpose of Vocabulary**

Understanding the vocabulary in general regarded as an important part of the process of learning a language or the development of a person ability in a language that has been occupied. Often taught school students new vocabulary as part of this particular subject and many are adults who regards the formation of the vocabulary as an activity that interesting educative. Mastery of the vocabulary is the most fundamental that must be taken over by someone in learning english which is a foreign language for all students and indonesians. How can one expressing a language when he

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<sup>6</sup>Jack C. Richard & Williy A. Renandya, *Methodology in Language Teaching and Anthology of Current Practice*,(USA: Cambridge University Press, 2000), p. 255.

did not understand the vocabulary of that language. Especially if that is learned it was a foreign language, so that a mastery of the vocabulary that language is something which is owned by language learners. Absolute When a student has vocabulary adequate english then automatically be more support to the four kompetens.

**c. Kinds of Vocabulary**

According to Thornbury in Harmer, there are two kinds of vocabulary, as follows: Receptive vocabulary or Passive vocabulary and Productive vocabulary or Active vocabulary.<sup>7</sup> The further explanation is:

1) Receptive Vocabulary or Passive Vocabulary

Receptive vocabulary can be understood only through listening and reading. Someone doesn't need to know much about the receptive vocabulary because someone rarely uses the receptive vocabulary and it is impossible for someone to memorize all the vocabularies of a certain language but someone can understand the ideas of the utterance contextually not word by word.

2) Productive Vocabulary or Active Vocabulary

Productive vocabulary involves of knowing how to pronounce the word, how to write and spell it, how to use it in correct grammatical patterns along with the words that usually collocate with.<sup>8</sup>

Based on the quotation above, the researcher take a conclusion about receptive or passive vocabulary will be easy understand by using listening and reading to remember words or vocabularies, while

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<sup>7</sup> Jeremy Harmer, *The Practical of English Language Teaching*, (New York: Longman, 2000),p. 158.

<sup>8</sup>Jeremy Harmer, *The Practical of English Language Teaching* (New York: Longman, 2000), p. 158-159.

productive or active vocabulary will be easy understand by using concentration patterns and grammatical word to get vocabulary.

According to Haycraft, vocabulary can be classified into two kinds. They are:

- 1) Active vocabulary  
Active vocabulary is the words which the student understands, can pronounce correctly and use constructively in speaking and writing.
- 2) Passive vocabulary  
Passive vocabulary is the words which the student recognizes and understands when they occur in a context, but which he cannot produce correctly himself.<sup>9</sup>

Based on the quotation above, the researcher takes a conclusion about kinds of vocabulary. Active vocabulary refers to the words the students should use in speaking and writing, while passive vocabulary means words they needs only to comprehend especially in reading and listening. Vocabulary is very useful for anyone who is studying a foreign language.

So, vocabulary must be introduced in many methods, because if the students have many words, they can make the sparkling communication with others.

#### **d. Advantages of Vocabulary**

In language, vocabulary is very important to convey the idea, express desire and feelings; and to communicate with others. Vocabulary is one of

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<sup>9</sup> Jhon Haycraft, *An Introduction to English Language Teaching* (London: Group Ltd, 1986) p.44.

the components which supports the speakers in communication, whenever we want to communicate with other people using a language.

Tarigan points out the importances of vocabulary in language is essential for successful language use, because without an extensive someone will be unable to use structure and function that has learned for comprehensible communication. Someone uses vocabulary to listen, speak, read, and write effectively.<sup>10</sup> So, the students must have much vocabularies for successful in language use.

Students learn vocabulary indirectly and directly. They can express their ideas and comprehend other people idea if they have good vocabulary mastery.

**e. Material of Vocabulary**

In this research, to know the students' vocabulary mastery, the researcher uses noun as the topics of vocabulary. The researcher used multiple choices to know the students' vocabulary mastery. The topics of evaluation are:

- 1) Identify the Home
- 2) Identify the Forest
- 3) Identify the school
- 4) Identify the Sport

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<sup>10</sup> H. G. Tarigan, *Pengajaran Kosakata* (Bandung: Aksara, 1985), p. 2.

## 5) Identify the Transportation<sup>11</sup>

### 2. Semantic Mapping Technique

#### a. Definition of semantic mapping

According to Heimlich and Pittelman 1986 Semantic mapping is a teacherdirected study of a word or concept in relation to other related words and ideas. The teacher begins a Semantic Mapping activity by providing a word or concept about to be studied and students brainstorm characteristics, attributes, related words and ideas, and specific examples of the word. The map is a graphic representation of this thinking and discussion.

Discussion is a significant aspect of a Semantic Mapping activity (Stahl and Clark 1987). In addition, there is a significant line of research that supports the positive impact of Semantic Mapping in terms of students' memory of the targeted word and recognition of that word in a variety of contexts (Johnson, Toms Bronowski, and Pittelman 1982).<sup>12</sup> Semantic mapping is a strategy that can be used in all disciplines to demonstrate the relationship between ideas. It is an activity that helps bring into consciousness relationship among word in a text and help deepen understanding by creating associative networks for words.<sup>13</sup>

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<sup>11</sup>

<sup>12</sup> Allen Janet, *Inside Words: Tools for Teaching Academic Vocabulary Grades 4-12*,(Stenhouse publishers Portland, Maine 2007) p.97

<sup>13</sup> Marianne Celce Murcia, *Teaching English as a second or Foreign Language Teaching* (USA :Heinle & Heinle Thomson Learning, 2001), p. 288.

From the definitions above, the authors conclude semantic mapping as a graph or diagram that represents ideas verbally. These ideas consists of the main ideas is a subject that will be discussed and sub-sub ideas that describe the subject. Sub-sub ideas can take the form of words or phrases that are interconnected. Usually, the main idea is placed in the middle while the sub-sub ideas emitted from the main idea with the fingers. These ideas can be placed in a circle, square, or triangle. Semantic mapping can also be shaped tree trunk while the idea is basically as sub-sub ideas that are in the branch.

#### **b. Kind of semantic mapping**

Semantic mapping is one of strategy can be use to teach vocabulary. Semantic mapping is strategy which can make teaching strategy more simply and interesting, and it make students' enjoyable because there are four kind of semantic mapping that cannot make students' boring. They are : network tree, star, cycle concept map and spider concept map:

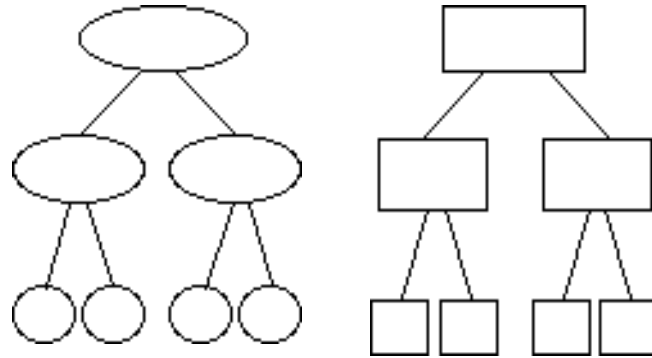
##### 1) Network Tree

Network tree is one of the kind of the research,the way for making network tree is so easy. Keyword and idea of topic is making in rectangle, and another word is writing in line connection, this line is showing that concept has related one word with other word.<sup>14</sup>

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<sup>14</sup>“Schoarly research journal”<http://www.enchantedlearning.com/graphicorganizers/5ws/> on Juny 22th, 2014 at 21:00p.m.

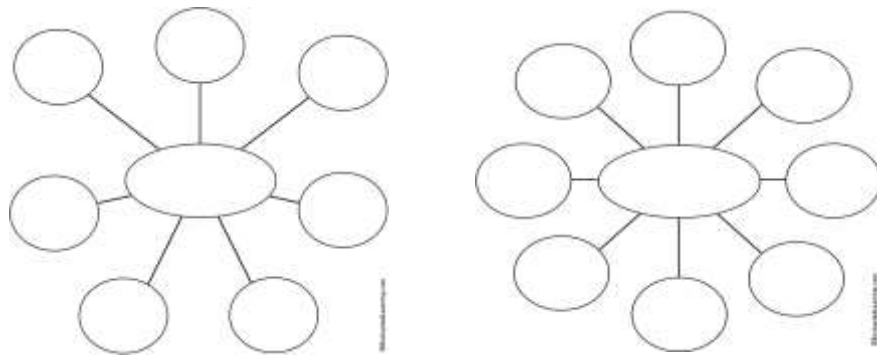
Appropriate with name of graphic, network tree is like as tree.



Picture 1. Network Tree

## 2) Star Map

The second kind of semantic mapping is called star map. This kind also easy for making . star diagrams are useful for basic brainstorming about a topic or simply listing all the major traits related to a theme.<sup>15</sup>



Picture 2. Star Map

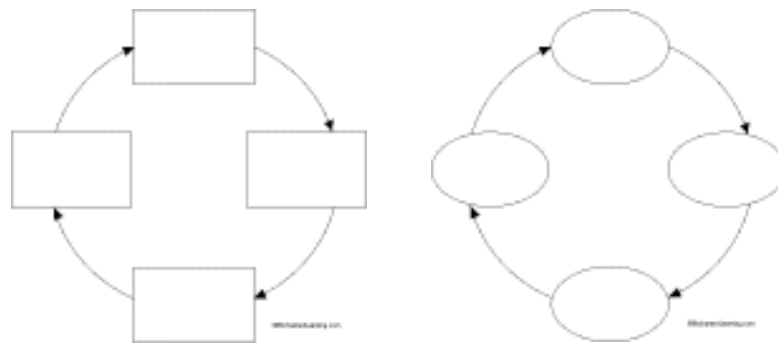
## 3) Cycle Map

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<sup>15</sup> *Ibid*



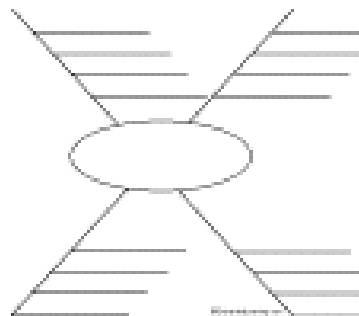
Cycle concept is kind of semantic mapping that can be use in teaching ,especially in teaching vocabulary. Cycle concept is use to relate how oneconnection structure is connecting . for this one , the graphic made like as cycle.



Picture 3. Cycle map

#### 4) Spider Map

Spider map is the last kind of semantic mapping strategy. The spider Map always used to effuse opinion.<sup>16</sup> This graphic is made like as spider map



Picture 4. Spider map

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<sup>16</sup> *Ibid*

The kind of semantic mapping above can be used to teach vocabulary ; it can be done appropriate that vocabulary with vocabulary that will be learned. With some kind of semantic mapping above, the teacher can make class more innovative, so that, teaching vocabulary with semantic mapping strategy is not monotonous, and here, researcher choose star map concept to teach students because more easy to understand it.

#### **c. The purpose of semantic mapping**

The major purpose of the semantic map is to allow students to organize their prior knowledge into these formal relations and thus to provide themselves a basis for understanding what they are re about to read and study. Comprehension can be thought of as the elaboration and refinement of prior knowledge. What the semantic map provides is a graphic structure of that knowledge to be used as the basis for organizing new ideas as they are understood.<sup>17</sup> The students will associate new word meaning with prior knowledge through the use of a semantic map.<sup>18</sup>

#### **d. The Advantages of Semantic mapping**

The semantic mapping strategy or Structured Overview, as it is sometimes called is a schematic diagram of the major concepts in a portion

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<sup>17</sup> <http://yoga4rifwijaya.blogspot.co.id/2012/03/semantics-mapping.html> (online) taken 18 july 2016

<sup>18</sup> *Ibid*

of text. According to Fisher (1995) states that there are some advantages of semantic mapping technique. They are :

- 1) It clearly defines the central idea, by positioning it in the center of the page.
- 2) It allows students to indicate clearly the relative importance of each idea.
- 3) It allows students to figure out the links the key ideas more easily. This is particularly important for creative work such as essay writing.
- 4) It allows students to see all their basic information on one page.
- 5) It allows students to add in new information without messy scratching out or sequencing it.
- 6) It makes it easier for students to see information in different way because it does not lock it into specific position.<sup>19</sup>

#### **e. Teaching vocabulary by using semantic mapping**

Teaching Vocabulary by using Semantic Mapping include three Phases, They are : Pre teaching is the teaching of the language learners need before an activity, then while teaching, is the process of teacher activities when giving lesson to students, and the last, post teaching is teacher activities to make summaries and conclusions about what has been learned to close the learning process.

In the teaching learning process there must be interaction, interaction teaching and learning is engagement reciprocal between teacher and students who have to show the connection that is educate. The function of interaction not only as the exchange of information and the message, but as the individual and the exchange of data, fact and ideas. For more detail see table below :

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<sup>19</sup> <http://jurnal.unimed.ac.id/2012/index.php/jelt/article/download/372/179>. online access 24th Juny 2019

**Table I**  
**Teaching Vocabulary By Using Semantic Mapping**

	Teacher activities	Procedure of Semantic Mapping	Students activities
<b>1. Pre Teaching</b>	- Teacher Give Salam (Greeting)		- Students answer Salam
	- Teacher ask student to Pray		- Students responding to the teacher
	- Teacher Reading Present list		- Students Pray
	- Teacher give Motivation		- Students answer present and not present
	- Teacher give illustration about topic		- Students Listening to Teacher
<b>2. While Teaching</b>	- Teacher give some keyword about topic	- Select a word central to the topic.	- Students choose one topic
	- Teacher display the topic (Noun)	- Display the target word	- Students pay attention to the teacher
	- Teacher ask the students to search for as many word as possible with noun	- invite students to generate as many words as possible that relate to the target word	- Students brainstorm, record the word on a chart or on the chalkboard
	- Teacher ask the students to write the generated words in categories	- Have the students write the generated words in categories	- Students discuss How the information could be placed into categories
	- Teacher ask students label categories	- Have the students label categories	- Students label and add extra information to each category
	- Teacher ask students to construct a map	- From this list, construct a map	- Students construct a map

	- Teacher lead the class in discussion	- Lead the class in a Discussion	- Students focuses on identifying meaning and uses of word clarifying ideas, highlighting major conclusion, identifying key elements and expanding ideas
<b>3. Post Teaching</b>	- Teacher make a learning summary and conclusion		- Students repeat, write and remember the learning
	- Praying at the end of learning		- Students Praying to end of learning

Based on table above, there are some procedures of applying to teaching semantic mapping in the classroom. It can be looked from the procedures that semantic map is also to make teacher and student active and have interaction in teaching learning process in the classroom, especially in learning vocabulary.

### **B. Review of Related Findings**

There are some related findings related to this research. The first is Ahmadin Azhar “The Effect of Using Media Video Dora the Explorer to Students’ Vocabulary Mastery at SD Negeri 200201/4 Padangsidimpun”. He concluded that there is the effect of using media video Dore The Explorer, where the mean score is 93.26 and control class is 83.04, with  $t_0$  is higher than

$t_t$  (12.77 > 1.68). So, the implication of media video Dora the Explorer is better than conventional strategy.<sup>20</sup>

The second is Ahmad Nurul Furqon “Using Direct method in Teaching Vocabulary at First Grade of Private Junior High School Muhammadiyah 44 Pamulang.”<sup>21</sup> He concluded that there is no the effect of direct method, with  $t_0$  is smaller than  $t_t$  ( 1,882 > 87) . So, the null hypothesis is accepted and the alternative hypothesis is rejected, or it can be said that there is no significant influence of using direct method in teaching vocabulary.

The Third is Siti Juhaeriyah “The Influence of Using Direct Method in Teaching Vocabulary at the First Grade of SMP YPI Bintaro”. She concluded that there is the effect of direct method, with  $t_0$  is higher than  $t_t$  (5.758 > 2.65). So, the implication of direct method in teaching vocabulary is better than conventional strategy.<sup>22</sup>

The Fourth is Putri Ziko Mamura’s “The Use of Semantic Mapping to Improve Vocabulary Mastery of The Fourth Grade Students of SD Muhammadiyah Ngijon 1 in The Academic Year of 2009/2010”. She concluded that the different result of students’ vocabulary mastery. It is because the students’ average scores of the post test after giving treatment

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<sup>20</sup>Ahmadin Azhari, “*The Effect of Using Media Video DoraThe Explorer to students’ vocabulary Mastery at SD Negeri 200201/4 Padangsidempuan 2011/2012 Academic Year* ” (A Thesis, STAIN Padangsidempuan, 2012), p. 74.

<sup>21</sup> Ahmad Nurul Furqon “*Using Direct Method in Teaching Vocabulary at First Grade of Private Junior High School Muhammadiyah 44 Pamulang*, (A Skripsi, English Department Faculty of Tarbiyah and Teacher Training Syarif Hidayatullah State Islamic University, 2007), p.

<sup>22</sup> Siti Juhaeriyah, *Op.,Cit.* p. 70.

increase 1,0517 from the students' average scores of the pre-test before giving the treatment.<sup>23</sup>

The Fifth is from Nida jumaliana "The influence of using of Semantic Mapping on the students understanding in Reading Ability at the Eight Grade Students of SMP N 1 Kadipaten Majalengka". The result of comparison between the students' understanding in reading ability before and after using of Semantic mapping is using pre-tet and post-test, the score are 69.3 and 75.2. So there is significant influence of using of Semantic mapping on the students understanding in reading ability at the eighth grade students of SMP N 1 Kadipaten Majalengka.<sup>24</sup>

In summary, from the description above, the researcher concludes that strategy or methods can increase the students' vocabulary mastery. So, the researcher hopes that Semantic Mapping can increase the students' vocabulary mastery and this research will complete and contribute previous findings. Moreover, the researcher wants to research about "The Effect of Semantic Mapping Technique On Vocabulary Mastery at Grade VII Students' of SMP N 3 Padangsidimpuan.

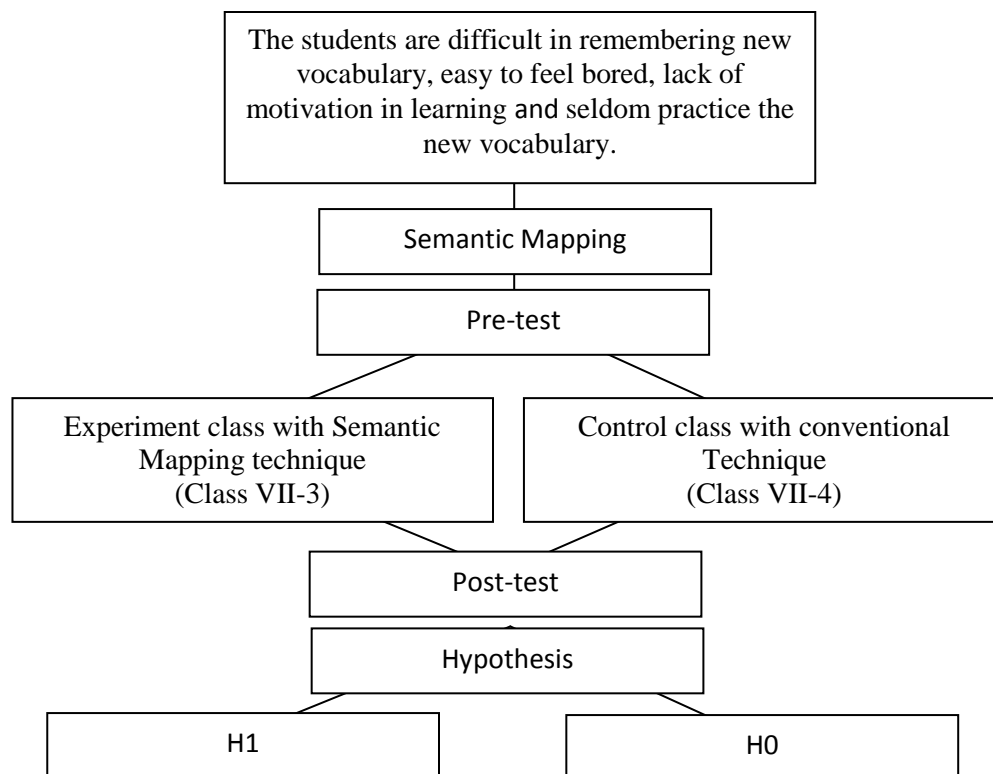
### C. Conceptual Frame Work

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<sup>23</sup> Putri Ziko Mamura, "The Use of Semantic Mapping to Improve Vocabulary Mastery of The Fourth Grade Students' of SD Muhammdiyah Ngijon 1 in The Academic Year 2009/2010"(Unpuplish Thesis) (English Education Program Faculty of Language and Arts State University of Yogyakarta, 2011), (online), ([Http://eprints.uny.ac.id/18568/1/Putri%20Ziko%20Mamura%20\(Thesis\).pdf](http://eprints.uny.ac.id/18568/1/Putri%20Ziko%20Mamura%20(Thesis).pdf)), retrieved on April 18<sup>th</sup> 2019 at 09:00 p.m.

<sup>24</sup> Nida Jumaliana, "The Influence of Using Of Semantic Mapping on the Students Understanding in Reading Ability at the Eight Grade Students of Smp N 1 Kadipaten Majalengka" ( Unpublished Thesis), (Cirebon: Syekh Nurjati State Institute For Islamic Studies), p. 58

Technique in teaching vocabulary is the important thing that must be considered by the teacher to succeed the learning vocabulary. The teacher must choose the suitable technique for the students so they are not easy to feel bored when following the vocabulary lesson. For junior high school's students, the teacher can choose the technique which does not only ask them to learn but also they can play. By mixing learning and playing, the students will be more enthusiasm in learning vocabulary and it will make them easier in remembering the vocabulary. The conceptual framework that will be done is as below :



Picture 5. Conceptual Framework



#### **D. Hypothesis**

Hypothesis is the provisional result of the research. The hypotheses of this research are:

- a. Students' vocabulary mastery by using Semantic Mapping is better than conventional strategy (H1).  $\mu_1 > \mu_2$
- b. Students' vocabulary mastery by using Semantic Mapping is not better than conventional strategy (H0).  $\mu_1 = \mu_2$

## CHAPTER III

### RESEARCH METHODOLOGY

#### A. Place and Schedule of the Research

This research was done at SMP Negeri 3 Padangsidempuan. It is located on Ahmad Dahlan Street, No. 39 Padangsidempuan.

The subject of this research was seventh grade of students in SMP Negeri 3 Padangsidempuan. The schedule of this research was from October up to June 2019.

#### B. Research Design

The kind of this research is experimental research. Experimental research is a research with a purpose to find the effect of one or more variables to the other variable. Gay and Airasian stated that experimental research is the only type of research that can test hypotheses to establish cause and effect relationship.<sup>1</sup> Besides, Burhan stated that experimental research is a research to manipulate and control the variables to find the relationship, effect, or the differences among the variables to the other variable.<sup>2</sup>

In this research, the researcher have chosen two classes as experiment class and control class. The classes are VII-3 as experimental class and VII-4 as control class. For VII-3 class as experiment class, they will be taught by using semantic

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<sup>1</sup>L.R. Gay and Peter Airasian, *Educational Research: Competences for Analysis and Application*, Sixth Edition, (USA: Prentice Hall, Inc., 2000), p. 367.

<sup>2</sup>Burhan Bungin, *Metodologi Penelitian Kuantitatif*, (Jakarta: Kencana, 2005), p. 49.

mapping technique and VII-4 class as control class will be taught by using conventional Technique. The research design of this research can be seen in the following table:

**Table I**  
**Pre-test and Post-test Group Design**

Class	Pre-test	Treatment	Post-test
Experimental Class (VII3)	O <sub>1</sub>	Teaching vocabulary about Home, Forest, Scool, Sort, Transportation by using Semantic Mapping Technique	O <sub>2</sub>
Control Class (VII4)	O <sub>1</sub>	Teaching vocabulary about Home, Forest, Scool, Sort, Transportation by using Conventional Technique	O <sub>2</sub>

### C. Population and Sample

#### 1. Population

Gay and Airasian stated that population is the group of interest to the researcher, the group to which she or he would like the results of the study to be generalizable.<sup>3</sup> Besides, Burhan stated that population is all of the objects that become the target of the research.<sup>4</sup> It means that the population of this research is all of the VII class of SMP Negeri 3 Padangsidimpuan. It consists of 11 classes with 355 students. It can be seen in the following table:

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<sup>3</sup>L.R. Gay and Peter Airasian, *Educational Research* ....., p. 122.

<sup>4</sup>Burhan Bungin, *Metodologi Penelitian* ..., p. 99.

**Table II**  
**The Population of the Grade VII Students of SMPN 3**  
**Padangsidimpuan**

No	Class	Total of Students
1	VII-1	35
2	VII-2	34
3	VII-3	25
4	VII-4	28
5	VII-5	33
6	VII-6	33
7	VII-7	34
8	VII-8	33
9	VII-9	32
10	VII-10	33
11	VII-11	35
TOTAL		355

## 2. Sample

Sample is two or more classes that represent the population to be given the treatment or test. According to Gay and Airasian, sample comprises the individuals, items or events selected from a larger group referred to as a population.<sup>5</sup>

In this research, the researcher chooses two classes as a sample. They will be divided into experiment class and control class. The researcher will use random sampling to take the sample. Random sampling is the process of selecting a sample in such a way that all individuals in the defined population have an equal and independent chance of being selected for the sample.<sup>6</sup>

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<sup>5</sup>L.R. Gay and Peter Airasian, *Educational Research* ....., p. 121.

<sup>6</sup>*Ibid.*, p. 123

Two classes will be chose as a sample. They are VII-3 and VII-4. VII-3 class consists of 25 students and VII-4 class consists of 28 students. They are chose because they are almost equal in English. Before using random sampling, first, the researcher must use homogeneity and normality test.<sup>7</sup>

#### a. Normality test

The function of normality test is to know whether the data of research is normal or not. The research is normal or not. The researcher uses normality test with using *Chi-Quadrate* formula, as follow:<sup>8</sup>

$$x^2 = \sum \left( \frac{f_o - f_h}{f_h} \right)$$

Where:

$x^2$  =Chi-Quadrate

$f_o$  =Frequency is gotten from the sample/result of observation (questioner).

$f_h$  = Frequency is gotten from the sample as image from frequency is hoped from the population

To calculate the result of Chi-Quadrate, it is used significant level 5% (0,05) and degree of freedom as big as total of frequency is lessened 3 (dk=k-3). If result  $x^2_{count} < x^2_{table}$ . So, it can be concluded that data is distributed normal.

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<sup>7</sup>Mardalis, *Metode Penelitian: Suatu Pendekatan Proposal* (Jakarta: Bumi Aksara, 2003), p. 85

<sup>8</sup>Anas Sudijono, *Pengantar Statistik Pendidikan*. (Jakarta: PT. Raja Grafindo Persada. 2005), p. 298.

## b. Homogeneity test

Homogeneity test is used to know whether control class and experimental class have the same variant or not. If both of classes are same, it is can be called homogeneous. Homogeneity is the similarity of variance of the group will be compared. So, the function of homogeneity test is to find out whether the data homogeny or not. It use Harley test, as follow:<sup>9</sup>

$$F = \frac{\text{The biggest variant}}{\text{The smallest variant}}$$

Hypotheses is accepted if  $F_{(count)} \leq F_{(table)}$

Hypotheses is rejected if  $F_{(count)} \geq F_{(table)}$

Hypothesis is rejected if  $F \leq F_{\frac{1}{2}} \alpha(n_1, 1) (1 = n_2 - 1)$ , while if  $F_{count} > F_{table}$

hypothesis is accepted. It determined with significant level 5% (0, 05) and dk numerator was  $(n_1 - 1)$ , while dk detominators is  $(n_2 - 1)$ .

Based on explanation above, the population is the eleven classes of the second year students, two classes are selected randomly in order to be an experimental or control class. In this research, the experimental class is VII-3 and control class is VII-4. The researcher chooses VII-3 consists of 25 students and VII-4 consists of 28 students. Therefore, total samples are 53 students. The researcher chooses these classes because they have similar competence in English based on their report book and result appropriated with the information that researcher get from the teacher.

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<sup>9</sup> Agus Irianto. *Statistik Konsep Dasar dan Aplikasinya*. (Padang: P2LPTK Departemen Pendidikan Nasional. 2003), p. 276.

**Table III:**  
Sample of the Research

The First Experimental Class	The Second Control class	Total
VII-3 = 25 Students	VII-4= 28 Students	53 Students

#### **D. Definition of the Operational Variables**

1. Semantic mapping technique is a visual Technique for vocabulary expansion and extension of knowledge by displaying in categories words related to one another. Semantic mapping is an adaptation of concept definition mapping but builds on students prior knowledge or schema.
2. Students' vocabulary mastery is students' knowledge about the meaning of word that use to identify Identify the home, Identify the Forest, Identify the school, Identify the Sport, Identify the Transportation.

#### **E. Instrument of Collecting Data**

Good instruments certify the validity of the data. The researcher uses instrument of validity and reliability for the taking the valid data. The research uses test as instrumentation. Test is some of question or view or other tool used for measure skill, knowledge, intelligence and ability.

The researcher will collect by giving multiple choice question. In this research, the test consist of 50 questions, where 25 for pre-test, and 25 for post-test. This test gives to both group, experiment and control class. To find out the

scores of the students' answer, the researcher gives 5 score for each item. Thus, the maximum score of test is 100.

**Table IV:  
Indicators of Vocabulary mastery Pre-Test**

No	Aspects	Indicators	Items	Number of Items	Score	Total Score
1.	Identify Home	Students' are able to remembering the meaning of the word.	5	7, 8, 9, 12, 22,	5	20
2.	Identify Forest		5	1, 2, 5, 10, 17	5	20
3.	Identify school		5	4, 13, 18, 23,24	5	20
4.	Identify Sport		5	14,16,20, 21, 25	5	20
5	Identify transportation		5	3, 6, 11, 15, 19	5	20
TOTAL			25			100

**Table V:  
Indicator of vocabulary mastery Post-Test**

No	Aspects	Indicators	Items	Number of Items	Score	Total Score
1.	Identify Home	Students' are able to remembering the meaning of the word.	5	9, 10, 14, 17, 21	5	20
2.	Identify Forest		5	1, 2, 3, 13, 20	5	20
3.	Identify school		5	6, 8, 12, 19, 24	5	20
4	Identify Sport		5	4, 5, 7, 15, 18	5	20
5	Identify transportation		5	11,16,22, 23, 25,	5	20
TOTAL			25			100



## F. Validity and Reliability Instrument

### 1. Validity

Anas Sudijono stated that Validity is a characteristic of the good test. To get the validity of an achievement test can be used two ways:<sup>10</sup>

- a. Totality of the test validity
- b. Item validity

In this research, the researcher uses item validity to get the validity of instrumentation. Item validity is a part of the test as a totality to measure the test by items. Where, the test consists of 50 multiple choice test tests that will be divided in to two groups. They are 25 for pre-test and 25 for post-test.

To know the validity of the each question will be refer to list  $r$  biserial with  $r_t$  in 5% significant: 0, 361 and 1% significant: 0, 463. So, if  $r_{account} > r_{table}$  the test is classified valid.

So, to get the validity of the test, the formula of  $r_{pointbiserial}$  can be used as follow:

$$r_{pbi} = \frac{M_p - M_t}{SD_t} \sqrt{\frac{p}{q}}$$

Where:

$r_{pbi}$  : coefficient item validity

$M_p$  : mean score of the total sore

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<sup>10</sup>Anas Sudijono. *Pengantar Evaluasi Pendidikan* (Jakarta: PT Raja Grafindo Persada, 1996), p. 163.

- $SD_t$  : Standard Deviation of the total score
- $p$  : presentation of the right answer of the item tested validity.
- $q$  : presentation of the wrong answer of the item tested validity.

## 2. Reliability of The Test

An instrument of the research must be reliable. A reliable test is consistent and dependable.<sup>11</sup> To get the reliability of the test, Suharsimi Arikunto said that to obtain the reliability of the test, the researcher uses formula K-R 20.<sup>12</sup>

The formula:

$$R_{11} = \left( \frac{n}{n-1} \right) \left( \frac{S_t^2 - \sum pq}{S_t^2} \right)$$

Where:

$R_{11}$  : Reliability of the Instrument

$N$  : Total of Question

$St^2$  : Variants Total

$P$  : Proporsi Subject who is right Answer(1)  
N

$Q$  : Proporsi Subject who is Wrong Answer (0)  
N

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<sup>11</sup>H. Douglas Brown. *Language Assessment Practical and language Practice*, (San Francisco: Longman, 2003), p. 21.

<sup>12</sup>Suharsimi Arikunto, *Op. Cit.*, p. 188.

Reliability is a good character of the test that refers to the consistency of the measurement. The test is reliable  $r_{\text{count}} > r_{\text{table}}$  by using formulation KR-20 with  $r_{\text{table}} 0.70$ .

Criteria of test reliability is as follows:<sup>13</sup>

$r_{11} = 0,70$  high correlation (reliable)

$r_{11} > 0,70$  high correlation (reliable)

$r_{11} < 0,70$  low correlation (un- reliable)

## G. Technique of Collecting Data

In collecting data, the research conducts twice of test for these classes. They are pre-test and post-test like in the table below:

**Table VI**  
**Table of the Design of Collecting Data**

Class	Pre-test	Treatment	Post-test
Experimental Class	✓	✓	✓
Control Class	✓	✗	✓

The process of data collection as follow:

### a. Pre test

The pre-test is conducted to find out the homogeneity of the sample.

The function of the pre-test is to find the mean scores of the Semantic Mapping group and conventional group before the researcher give treatment

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<sup>13</sup> Anas Sudijono. *Op.Cit.*, p. 209

to the experimental group. In this case, the researcher uses some steps. They are:

- 1) The researcher prepares the test 25 items.
- 2) The researcher distributes the paper of the test to students of experimental class and control class.
- 3) The researcher explains what students to do.
- 4) Giving time.
- 5) The students answer the question.
- 6) Collecting their paper test to researcher.
- 7) The researcher checks the answer of students and fined the mean score of control and experimental class.

b. Post-test

After giving treatment, the researcher conducts a post-test which the different test with the pre-test, and has not been conducted in the previous of the research. This post-test is the final test in the research, especially measuring the treatment, whether is an effect or not. After conducting the post-test, the researcher analyzes the data, and then, the researcher finds out the effect of using Semantic Mapping in the experimental class. The researcher has some procedure. There are:

- 1) The researcher prepares the test 25 item

- 2) The researcher distributes the paper of the test to students of experimental class and control class.
- 3) The researcher explains what students do.
- 4) Giving time.
- 5) The students answer the question.
- 6) Collecting their paper test to researcher.
- 7) The researcher checks the answer of students and finds the mean score of control and experimental class.

## H. Technique of Analyzing Data

In this research, the researcher uses the technique of data analysis as follow:

### Requirement Test

- a. Normality test by using *Chi – Quadrat* formula, as follow:

$$x^2 = \sum \left( \frac{f_o - f_h}{f_h} \right)$$

Where:

$x^2$  =Chi-Quadrate

$f_o$  =Frequency is gotten from the sample/result of observation (questioner).

$f_h$  = Frequency is gotten from the sample as image from frequency is hoped from the population

b. Homogeneity test

To test the data whether homogeneity or not, the researcher uses Harley rest, as follow:<sup>14</sup>

$$F = \frac{\text{The biggest variant}}{\text{The smallest variant}}$$

Hypotheses is accepted if  $F_{(count)} \leq F_{(table)}$

Hypotheses is rejected if  $F_{(count)} \geq F_{(table)}$

### I. Hypothesis test

Based on the hypothesis, the analysis of the data will be done to find out the ability of two groups that have been divided into experiment class and control class. From the hypothesis is to answer the result of the research. So, the data will be analyzed by using the following *t-test* formula:<sup>15</sup>

$$H_a: \mu_1 > \mu_2$$

$$H_0: \mu_1 \leq \mu_2$$

If  $H_a: \mu_1 > \mu_2$ , it means the result of students' vocabulary mastery by using Semantic Mapping at grade VII SMPN 3 Padangsidimpuan is better than conventional Technique. But, if the  $H_0: \mu_1 \leq \mu_2$ , it means the result of students' vocabulary mastery by using Semantic Mapping at grade VII SMPN 3

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<sup>14</sup> Agus Irianto, *Op.Cit.*, p. 276.

<sup>15</sup> Suharsimi Arikunto, *Op. Cit.*, p. 311.

Padangsidimpuan was not better than conventional Technique. To test the hypothesis, researcher uses the formula as follow:<sup>16</sup>

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{1}{n_1} + \frac{1}{n_2}}}$$

Where:

$\bar{x}_1$  = Mean of experimental class sample

$\bar{x}_2$  = Mean of control class sample

$n_1$  = Total of experimental class sample

$n_2$  = Total of control class sample

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<sup>16</sup> Sugiyono. *Statistika untuk Penelitian*. (Bandung: Alfabeta, 2011), p. 138-139.

## CHAPTER IV

### DATA ANALYSIS

This chapter presents research result. It would be presented the result of research after giving the instrument to the respondent about vocabulary mastery to the Seventh students class of SMP Negeri 3 Padangsidempuan. The researcher has calculated the data using pre test and post test. Applying quantitative research, the research used the formulation of T-test. Next, researcher has describe the result based on the data that has been researched as follow:

#### A. Description of Data

##### 1. Description of Data Before Semantic Mapping Technique Score of Pre-Test Experimental Class I

In pre-test experimental class, the researcher calculated the result that got by the students in answering the question (test). The scores pre-test experimental class could be seen in the following table.

**Tabel VII**  
**The score of Experimental Class I in Pre-Test**

Total	1520
Highest score	75
Lowest score	45
Mean	72.55
Median	71.55
Modus	67.75
Range	30
Interval	5
Standart deviation	8.7
Varians	79.48

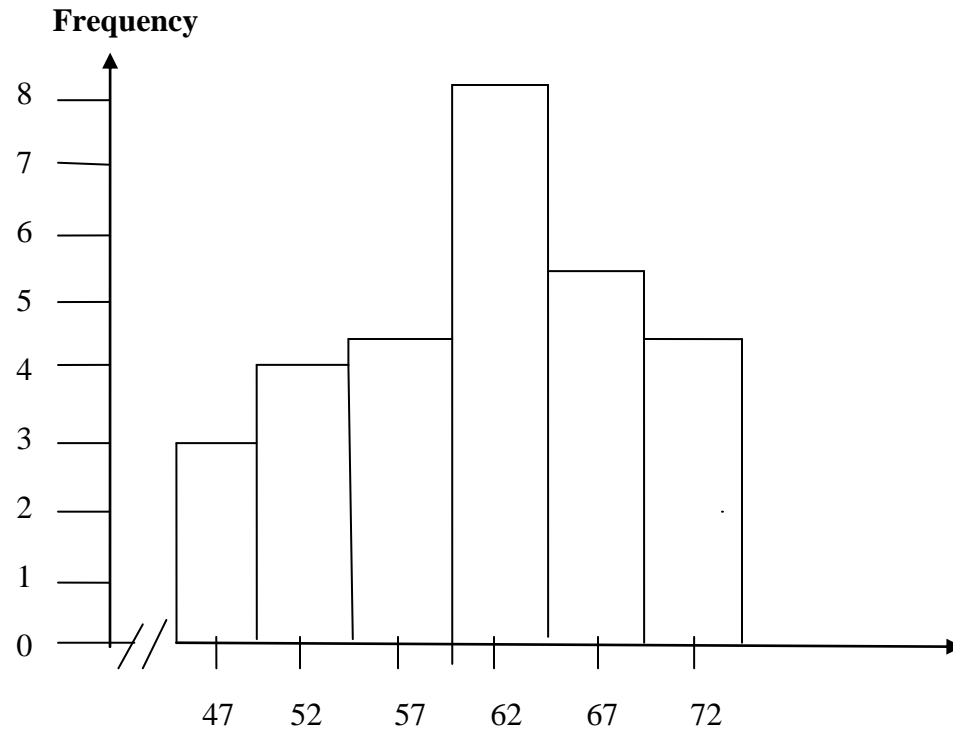


Based on the table above the total score of experiment class in pre-test was 1520, mean was 72.55, standart deviation was 8.7, varians was 79.48, median was 71.55, range was 30,modus was 65.75, interval was 5. The researcher got the highest score was 75 and the lowest score was 45. It can be seen on appendix 11. Then, the computed of the frequency distribution of the students' score of experiment class could be applied into table frequency distribution as follow:

**Table VIII**  
**Frequency Distribution of Students' Score**

No	Interval	Mid Point	Frequency	Percentages
1	45 – 49	47	3	11.11%
2	50 – 54	52	4	14.81%
3	55 – 59	57	4	14.81%
4	60 – 64	62	5	18.51%
5	65 – 69	67	6	22.22%
6	70 – 74	72	3	11.11%
7	75 – 79	77	2	7.40%
$i = 5$			27	100%

In order to get description of the data clearly and completely, the researcher presents them in histogram on the following figure:



Picture 6 : Pre Test of Experimental Class I

**a. Score of Pre Test Control Class**

In pre-test experimental class II, the researcher calculated the result that got by the students in answering the question (test). The scores pre test in experimental class II could be seen in the following table:

**Tabel IX**  
**The Score of Control Class in Pre Test**

Total	1745
Highest score	75
Lowest score	45
Mean	67,95
Median	71.15
Modus	67.5
Range	30
Interval	5
Standart deviation	8.9

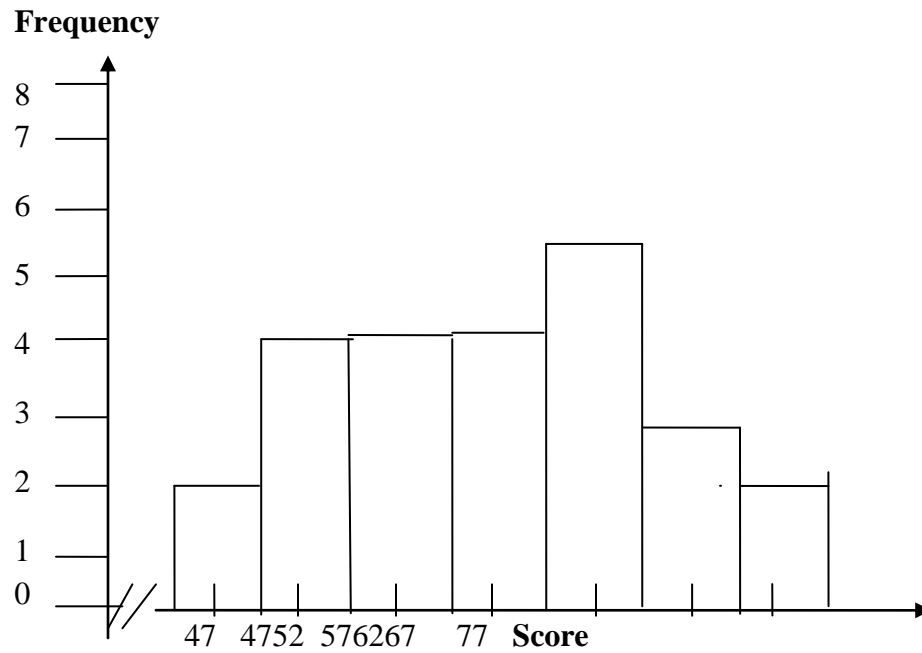
Varians	79,30
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Based on the table above the total score of control class in pre-test was 1745, mean was 70.3, median was 72.4, modus was 67.5, range was 30, interval was 5, standart deviation was 8.8, varians was 94.94. The researcher got the highest score was 75, and the lowest score was 45. It can be seen on appendix 11. Then, the computed of the frequency distribution of the students' score of experiment class could be applied into table frequency distribution as follow:

**Table X**  
**Frequency Distribution of Students' Score**

No	Interval Class	Mid Point	F	Percentages
1	45 – 49	47	2	7.40%
2	50 – 54	52	3	11.11%
3	55 – 59	57	4	14.81%
4	60 – 64	62	4	14.81%
5	65 – 69	67	4	22.22%
6	70 – 74	72	5	18.51%
7	75 – 79	77	3	11.11%
$i = 5$			25	100%

In order to get a description of the data clearly and completely, the researcher presents them in histogram on the following figure:



Picture 7 : Score Pre-Test of Experiment Class II

## 2. Description of Data After Semantic Mapping Technique

**Tabel XI**  
Score of Experimental Class in Post-Test

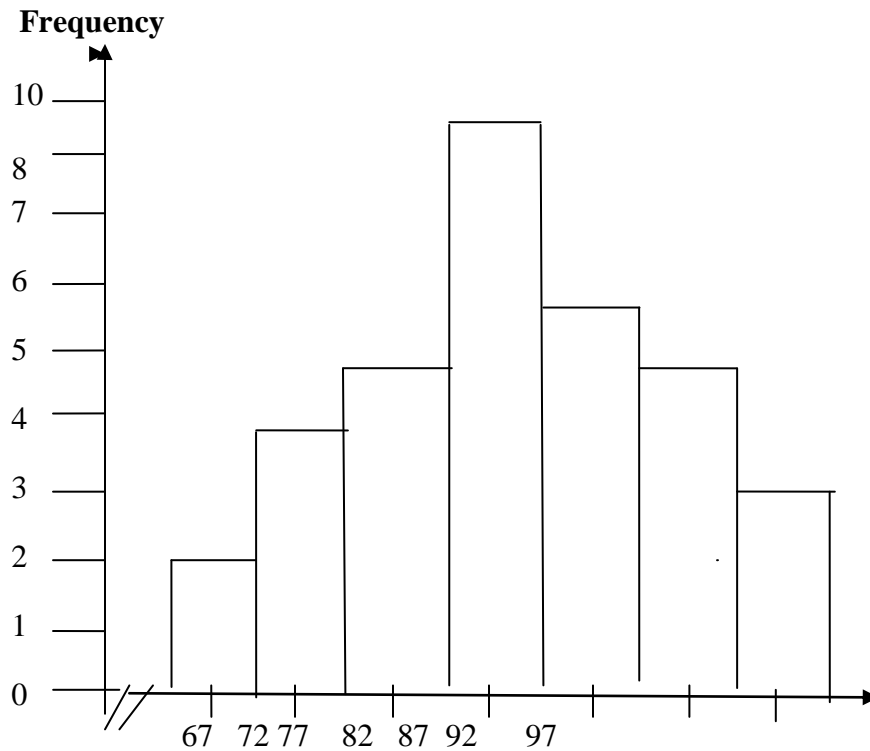
Total	2025
Highest score	95
Lowest score	65
Mean	70.55
Median	88.55
Modus	85.2
Range	30
Interval	5
Standart deviation	8
Varians	66.95

Based on the table above the total score of experiment class in post-test was 2025, mean was 70.55, median was 88.55, modus was 85.2, range was 30, interval was 5, standart deviation was 8, varians was 66.95. The researcher got the highest score was 95 and the lowest score was 65. The calculation can be seen on the appendix 13. Then, the computed of the frequency distribution of the students' score of experiment class could be applied into table frequency distribution as follow:

**Table XII**  
**The Frequency Distribution of Students' Score**

No	Interval Class	Mid Point	F	Percentages
1	65 – 69	67	2	7.40%
2	70 – 74	72	2	7.40%
3	75 – 79	77	3	11.11%
4	80 – 84	82	7	25.92%
5	85 – 89	87	9	29.62%
6	90 – 94	92	2	7.40%
7	95 – 99	97	3	11.11%
<i>i</i> = 5			28	100%

Based on the table above, it can be drawn at histogram as follow:



Picture 8 : Score Post test Experimental Class I

### 3. Description of Data using Semantic Mapping Technique

**Tabel XIII**  
**The Score of Control Class in Post-Test**

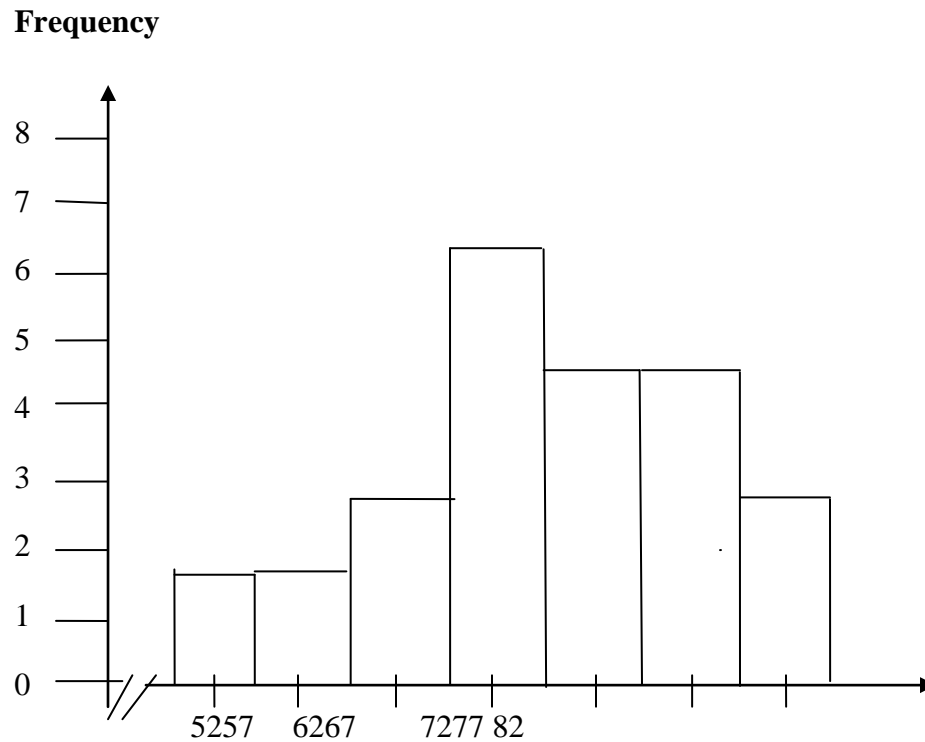
Total	1885
Highest score	80
Lowest score	50
Mean	65
Median	72
Modus	66.35
Range	30
Interval	5
Standart deviation	8.4
Varians	73.57

Based on the table above the total score of control class in post-test was 1885 ,mean was 65, standart deviation was 8.4, varians was 73.57, median was 72, modus was 66.35, range was 30, interval was 5. The researcher got the highest score was 80 and the lowest 50 score was. The calculation can be seen in the appendix 14. Then, the computed of the frequency distribution of the students' score of control class could be applied into table frequency distribution as follow:

**Table XIV**  
**Frequency Distribution of Students' Score**

No	Interval Class	Mid Point	F	Percentages
1	50 – 54	52	2	7.40%
2	55 – 59	57	2	7.40%
3	60 – 64	62	3	11.11%
4	65 – 69	67	8	25.92%
5	70 – 74	72	5	18.51%
6	75 – 79	77	5	18.51%
7	80 – 84	82	3	11.11%
<i>i</i> = 5			28	100%

Based on the table above, it can be drawn at histogram as follow:



Picture 9 : Score Post test Control Class II

## B. Technique of Data Analysis

### a. Normality and Homogeneity Pre-Test

#### 1) Normality of Experimental Class and Control Class in Pre-Test

**Tabel XIV**  
**Normality and Homogeneity in Pre-Test**

Class	Normality Test		Homogeneity Test	
	$t_{count}$	$t_{table}$	$t_{count}$	$t_{table}$
Experiment Class	3.56	5.991	1.16 < 2.042	
Control Class	1.91	5.991		



Based on the table above researcher calculation, the score of experiment class  $Lo=-3.56 < Lt=5.991$  with  $n = 25$  and control class  $Lo=1.91 < Lt=5.991$  with  $n = 28$ , and real level  $\alpha 0.05$ . Cause  $Lo < Lt$  in the both class. So,  $H_a$  was accepted. It mean that experiment class and control class were distributed normal. It can be seen in appendix 11 and 12.

## 2) Homogeneity of Experimental Class and Control Class in Pre-test

The coefficient of  $F_{count} = 1.16$  was compared with F table. Where F table was determined at real  $\alpha = 0.05$ , and the different numerator  $dk=N-1= 25-1=24$  and denominator  $dk N-1= 28-1= 27$  So, by using the list of critical value at F distribution is got  $F_{0.05} = 2.042$  and  $2.052$ . It showed that  $F_{count} (1.16) < F_{table} (2.042 \& 2.052)$ . So, the researcher concluded that the variant from the data of the Seventh students class on vocabulary mastery of SMP Negeri 3 Padangsidempuan by experimental and control class was homogen. The calculation can be seen on the appendix 12.

## b. Normality and Homogeneity Post Test

### 1) Normality of experimental class and control class in Post-test

**Tabel XVI**  
**Normality and homogeneity in post-test**

Class	Normality Test		Homogeneity Test	
	$t_{count}$	$t_{table}$	$t_{count}$	$t_{table}$
Experiment Class	1.8	5.991		

Control Class	3.11	5.991	1.09 < 2.052
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Based on the table above, the score of eksperimental class  $L_o=1.8 < L_t=5.991$  with  $n =25$  and control class  $L_o=3.11 < L_t=5.991$  with  $n=28$ , real level  $\alpha$  was 0.05, Cause  $L_o < L_t$  in the both class. So,  $H_a$  was accepted, it mean that experiment class and control class were distributed normal. It can be seen on appendix 13 and 15.

## 2) Homogeneity of Experimental Class and Control Class in Post-Test

The coefficient of  $F_{count} = 1.09$  was compared with F table. Where F table was determined at real  $\alpha = 0.05$ , and the different numerator  $dk=N-1= 25-1=24$  and denominator  $dk N-1= 28-1=27$  So, by using the list of critical value at F distribution was got  $F_{0.05}=2.042$  and 2.052. It show that  $F_{count} (1.09) < F_{table} (2.042 \& 2052)$ . So, the researcher concluded that the variant from the data of the students' vocabulary mastery of SMP Negeri 3 Padangsidimpuan by exsperimental and control class was homogeny. The calculation can be seen on the appendix 15.

### c. Hypothesis Test

The data would be analyzed to prove hypothesis by using formula of T-test. Hypothesis alternative ( $H_a$ ) of research was "There was a effect of using semantic mapping technique on vocabulary mastery." The calculation can be seen on the appendix 17.

**Table XVII**  
**Result of T-test from the Both Averages**

Pre-test		Post-test	
$t_{\text{count}}$	$t_{\text{table}}$	$t_{\text{count}}$	$t_{\text{table}}$
1.59	2.000	8.42	2.000

$$H_a: \mu_1 > \mu_2$$

Where:

$$H_a: \mu_1 > \mu_2 \text{ “RTS Students’ Mastery in writing recount text.”}$$

Based on researcher calculation, researcher found that  $t_{\text{count}} 8.42$ . while  $t_{\text{table}} 2.000$ . With opportunity  $(1 - \alpha) = 1 - 5\% = 95\%$  and  $dt = (n_1 + n_2 - 2) = (25 + 28 - 2) = 51$ , cause  $t_{\text{count}} > t_{\text{table}}$  ( $8.42 > 2.000$ ). It means that hypothesis ( $H_a$ ) was accepted. So, there was difference between students’ on vocabulary mastery by semantic mapping technique. In this case, the mean score of experiment class by using RTS was 70.55, and mean score of control class was 65. The calculation can be seen on the appendix 16 and 17.

### C. Discussion

There are some related findings related to this research. The first is Ahmadin Azhar “The Effect of Using Media Video Dora the Explorer to Students’ Vocabulary Mastery at SD Negeri 200201/4 Padangsidempuan”. He concluded that there is the effect of using media video Dore The Explorer, where the mean score

is 93.26 and control class is 83.04, with  $t_0$  is higher than  $t_t$  ( $12.77 > 1.68$ ). So, the implication of media video Dora the Explorer is better than conventional strategy.<sup>1</sup>

The second is Ahmad Nurul Furqon “Using Direct method in Teaching Vocabulary at First Grade of Private Junior High School Muhammadiyah 44 Pamulang.”<sup>2</sup> He concluded that there is no the effect of direct method, with  $t_0$  is smaller than  $t_t$  ( $1,882 > 87$ ) . So, the null hypothesis is accepted and the alternative hypothesis is rejected, or it can be said that there is no significant influence of using direct method in teaching vocabulary.

The Third is Siti Juhaeriyah “The Influence of Using Direct Method in Teaching Vocabulary at the First Grade of SMP YPI Bintaro”. She concluded that there is the effect of direct method, with  $t_0$  is higher than  $t_t$  ( $5.758 > 2.65$ ). So, the implication of direct method in teaching vocabulary is better than conventional strategy.<sup>3</sup>

The Fourth is Putri Ziko Mamura’s “The Use of Semantic Mapping to Improve Vocabulary Mastery of The Fourth Grade Students of SD Muhammadiyah Ngijon 1 in The Academic Year of 2009/2010”. She concluded that the different result of students’ vocabulary mastery. It is because the students’

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<sup>1</sup>Ahmadin Azhari, “*The Effect of Using Media Video DoraThe Explorer to students’ vocabulary Mastery at SD Negeri 200201/4 Padangsidempuan 2011/2012 Academic Year* ” (A Thesis, STAIN Padangsidempuan, 2012), p. 74.

<sup>2</sup> Ahmad Nurul Furqon “*Using Direct Method in Teaching Vocabulary at First Grade of Private Junior High School Muhammadiyah 44 Pamulang*, (A Skripsi, English Department Faculty of Tarbiyah and Teacher Training Syarif Hidayatullah State Islamic University, 2007), p.

<sup>3</sup> Siti Juhaeriyah, *Op.,Cit.* p. 70.

average scores of the post test after giving treatment increase 1,0517 from the students' average scores of the pre-test before giving the treatment.<sup>4</sup>

The Fifth is from Nida jumaliana “The influence of using of Semantic Mapping on the students understanding in Reading Ability at the Eight Grade Students of SMP N 1 Kadipaten Majalengka”. The result of comparison between the students' understanding in reading ability before and after using of Semantic mapping is using pre-tet and post-test, the score are 69.3 and 75.2. So there is significant influence of using of Semantic mapping on the students understanding in reading ability at the eighth grade students of SMP N 1 Kadipaten Majalengka.<sup>5</sup>

#### **D. Threats of the Research**

The researcher found the threats of this research as follows:

1. The result of learning could not be considered as the result of treatment at all because the variations of students' learning activity outside of school. For example there were some students who followed English course, diligent to study at home, or some of them learnt at school only. So that, there was possibility for bias in the result of research.

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<sup>4</sup> Putri Ziko Mamura, “*The Use of Semantic Mapping to Improve Vocabulary Mastery of The Fourth Grade Students' of SD Muhammdiyah Ngijon 1 in The Academic Year 2009/2010*”(Unpuplish Thesis) (English Education Program Faculty of Language and Arts State University of Yogyakarta, 2011), (online), ([Http://eprints.uny.ac.id/18568/1/Putri%20Ziko%20Mamura%20\(Thesis\).pdf](http://eprints.uny.ac.id/18568/1/Putri%20Ziko%20Mamura%20(Thesis).pdf)), retrieved on April 18<sup>th</sup> 2019 at 09:00 p.m.

<sup>5</sup> Nida Jumaliana, “*The Influence of Using Of Semantic Mapping on the Students Understanding in Reading Ability at the Eight Grade Students of Smp N 1 Kadipaten Majalengka*” ( *Unpublished Thesis*), (Cirebon: Syekh Nurjati State Institute For Islamic Studies), p. 58

2. There were some students that were lack of serious to answer the test in pre-test and post-test. It would be possible threat the research. So that, there was possibility the researcher cannot reach the validity of trustworthiness of data.
3. Students' attitude could be change to be better or worse when the teacher who teaches them changes. So that it would be possible give the influence to the result of the research.

## CHAPTER V

### CONCLUSION AND SUGGESTION

#### A. Conclusions

Based on the result of data analysis, the researcher take some concluded as follow:

1. The students' mastery vocabulary in semantic mapping technique at the seventh class of SMP Negeri 3 Padangsidimpuan showed that the mean score is 71.16. The pre-test result was categorized "Good".
2. The students' mastery vocabulary in semantic mapping technique at the seventh class of SMP Negeri 3 Padangsidimpuan showed that the mean score is 82.63. The post-test result was categorized "Very Good".
3. The calculation of  $t_{test}$  formula is higher than score of  $t_{table}$ . It was found the score of the  $t_{test}$  is 10.85 meanwhile, the score of  $t_{table}$  is 2.05 at 5% significant level with degrees of freedom (df) 28 ( $t_{test} 10.85 > t_{table} 2.05$ ). It means that there is a significant effect of using The students' mastery vocabulary in semantic mapping technique at the seventh class of SMP Negeri 3 Padangsidimpuan. Hypothesis is accepted.

## **B. Suggestions**

After finishing this research, the researcher got much information in English teaching and Learning Process. Therefore, the researcher has suggestion to:

1. For the teacher, especially teachers of SMP Negeri 3 Padangsidempuan to always used the semantic mapping technique the teaching process especially in vocabulary mastery.
2. To the headmaster, especially the headmaster of SMP Negeri 3 Padangsidempuan can be given the espionage to the educator that there are many technique can be used in teaching and learning process. And the semantic mapping technique is suitable technique in vocabulary mastery.
3. The students' mastery of using semantic mapping technique is necessary to be developed, it was useful toward students' vocabulary mastery.
4. The writer hoped that this research was continued by other writer by taking one of the variables of this research to develop knowledge.



## REFERENCES

- Allen Janet, *Inside Words: Tools for Teaching Academic Vocabulary Grades 4-12*, Stenhouse publishers Portland, Maine 2007.
- Ahmadin Azhari, “The Effect of Using Media Video DoraThe Explorer to students’ vocabulary Mastery at SD Negeri 200201/4 Padangsidimpuan 2011/2012 Academic Year ”, A Thesis, STAIN Padangsidimpuan, 2012.
- Ahmad Nurul Furqon “Using Direct Method in Teaching Vocabulary at First Grade of Private Junior High School Muhammadiyah 44 Pamulang, A Skripsi, English Department Faculty of Tarbiyah and Teacher Training Syarif Hidayatullah State Islamic University, 2007.
- Anas Sudijono, *Pengantar Statistik Pendidikan*, Jakarta: PT. Raja Grafindo Persada. 2005.
- Anas Sudijono. *Pengantar Evaluasi Pendidikan*, Jakarta: PT Raja GrafindoPersada, 1996.
- Buku Kumpulan Nilai SMP Negeri 3 Padangsidimpuan, *Private Document*, (SMP Negeri 3 Padangsidimpuan: March 28<sup>th</sup>, 2018 at 10.15 a.m).
- Agus Irianto. *Statistik Konsep Dasar dan Aplikasinya*, Padang: P2LPTK Departemen Pendidikan Nasional. 2003.
- “alamsetiadiblogs”<https://alamsetiadi08.wordpress.com/upaya-peningkatan-vocabulary-siswa-dengan-media-wordwall/>
- Elfrieda H. Hiebert, and Michael L. Kamil, *Teaching and Learning Vocabulary: Bringing Research to Practice* Jew Jersie: Lawrence Erlbaum Associates, 2005
- Burhan Bungin, *Metodologi Penelitian Kuantitatif*, Jakarta: Kencana, 2005.
- Caroline T. Linse, *Practical English Language Teaching: Young Learners*, New York: McGraw-Hill, 2005
- H. Douglas Brown. *Language Assessment Practical and language Practice*, San Francisco: Longman, 2003.
- Howard Jackson, *Words, Meaning and Vocabulary*, London: Casell, 2000.

<http://yoga4rifwijaya.blogspot.co.id/2012/03/semantics-mapping.html> (online) taken 18 July 2016

<http://www.enchantedlearning.com/graphicorganizers/5ws/>

<http://www.fatima.k12.nf.ca/semmap.html>

<http://jurnal.unimed.ac.id/2012/index.php/jelt/article/download/372/179>.

<http://www.readingrockets.org/article/connecting-word-meanings-through-semantic-mapping> online access 25th Juny 2019

Harmer Jeremy, *The Practical of English Language Teaching*, New York: Longman, 2000

Jack C. Richard & Williy A. Renandya, *Methodology in Language Teaching and Anthology of Current Practice*, USA: Cambridge University Press, 2000.

L.R. Gay and Peter Airasian, *Educational Research: Competences for Analysis and Application*, Sixth Edition, USA: Prentice Hall, Inc., 2000.

Marianne Celce Murcia, *Teaching English as a second or Foreign Language Teaching*, USA :Heinle & Heinle Thomson Learning, 2001.

Mardalis, *Metode Penelitian: Suatu Pendekatan Proposal*, Jakarta: Bumi Aksara, 2003.

Nida Jumaliana, "The Influence of Using Of Semantic Mapping on the Students Understanding in Reading Ability at the Eight Grade Students of Smp N 1 Kadipaten Majalengka" ( Unpublished Thesis), Cirebon: Syekh Nurjati State Institute For Islamic Studies.

Putri Ziko Mamura, "The Use of Semantic Mapping to Improve Vocabulary Mastery of The Fourth Grade Students' of SD Muhammdiyah Ngijon 1 in The Academic Year 2009/2010"(Unpuplish Thesis) (English Education Program Faculty of Language and Arts State University of Yogyakarta, 2011), (online), ([Http://eprints.uny.ac.id/18568/1/Putri%20Ziko%20Mamura%20\(Thesis\).pdf](Http://eprints.uny.ac.id/18568/1/Putri%20Ziko%20Mamura%20(Thesis).pdf)), retrieved on April 18<sup>th</sup> 2019 at 09:00 p.m.

Penny Ur, *A Course in Language Teaching*, United Kingdom: University Press, 2000.

Sugiyono. *Statistika untuk Penelitian*, Bandung: Alfabeta, 2011.

**Appendix 1**  
**Experimental Class by Using Semantic Mapping**

**RENCANA PELAKSANAAN PEMBELAJARAN (RPP)**

Nama sekolah	: SMP Negeri 3 Padangsidempuan
Mata Pelajaran	: Bahasa Inggris
Kelas/Semester	: VII <sup>3</sup> (Tujuh)/ II (Genap)
Tema	: <i>Noun (Home, Forest, School, Sport, Transportation)</i>
Alokasi Waktu	: 4 x 40 menit

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**Standar Kompetensi :**

- Menemukan new vocabulary / kosakata yg berhubungan dengan keyword atau kata kunci yg telah diberikan guru.

**Kompetensi Dasar :**

- siswa mampu menemukan new vocabulary yaitu dalam bentuk noun/kata benda baru yg berhubungan dengan keyword/kata kunci yg diberikan oleh guru

**Indikator :**

- Mengidentifikasi noun (*Home, Forest, Sport, School, Transportation*) yang diberikan oleh guru.
- Menyebutkan noun (*Home, Forest, Sport, School, Transportation*) yang guru tunjuk dengan benar.
- Menuliskan nama noun (*Home, Forest, Sport, School, Transportation*) tersebut dengan ejaan yang benar.

**Tujuan pembelajaran :** Siswa mampu menemukan new vocabulary yg ada di dalam rumah, hutan, olahraga dan sekolah, serta mampu mengembangkan, memperbanyak vocabulary siswa dan memperluas wawasan siswa dalam vocabulary

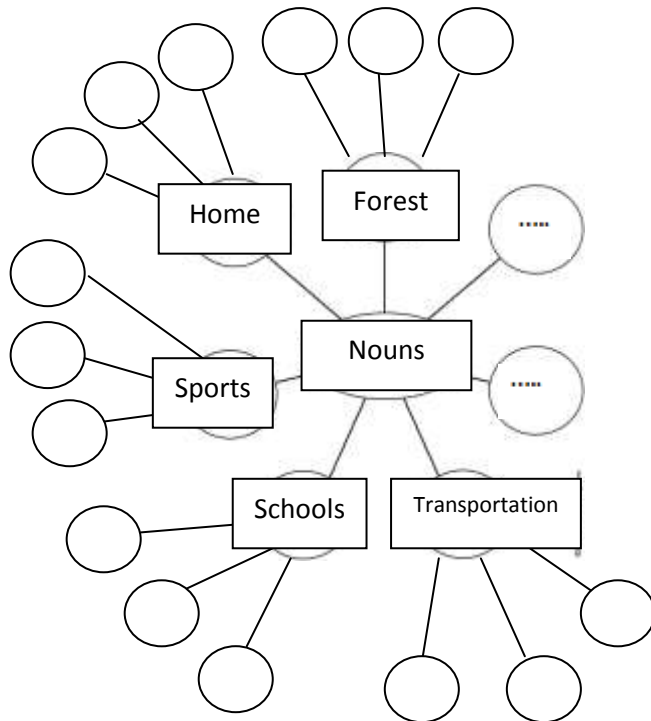
**Metode/strategi pembelajaran** : *Semantic Mapping Technique*

**Materi Pembelajaran** : *Noun (Home, Forest, Sport, School, Transportation)*

**Kegiatan Pengajaran**

	<b>Teacher activities</b>	<b>Procedure of Semantic Mapping</b>	<b>Students activities</b>
<b>1. Pre Teaching</b>	- Teacher Give Salam (Greeting)		- Students answer Salam
	- Teacher ask student to Pray		- Students responding to the teacher
	- Teacher Reading Present list		- Students Pray
	- Teacher give Motivation		- Students answer present and not present
	- Teacher give illustration about topic		- Students Listening to Teacher
<b>2. While Teaching</b>	- Teacher give some keyword about topic	- Select a word central to the topic.	- Students choose one topic
	- Teacher display the topic (Noun)	- Display the target word	- Students pay attention to the teacher
	- Teacher ask the students to search for as many word as possible with noun	- invite students to generate as many words as possible that relate to the target word	- Students brainstorm, record the word on a chart or on the chalkboard
	- Teacher ask the students to write the generated words in categories	- Have the students write the generated words in categories	- Students discuss How the information could be placed into categories

	- Teacher ask students label categories	- Have the students label categories	- Students label and add extra information to each category
	- Teacher ask students to construct a map	- From this list, construct a map	- Students construct a map
	- Teacher lead the class in discussion	- Lead the class in a Discussion	- Students focuses on identifying meaning and uses of word clarifying ideas, highlighting major conclusion, identifying key elements and expanding ideas
<b>3. Post Teaching</b>	- Teacher make a learning summary and conclusion		- Students repeat, write and remember the learning
	- Praying at the end of learning		- Students Praying to end of learning



**Media dan sumber pembelajaran :**

- a. Media Pembelajaran : Tabel *Semantic Mapping*
- b. Sumber pembelajaran : Experiencing English: English for Junior High School Students Year VII, Tim Masmedia Buana Pustaka, Jakarta: Pusat Pembukuan: Sidoarjo: PT. Masmedia Buana Pustaka, 2015.

**Rubrik Penilaian :**

Setiap nama *noun Noun (Home, Forest, Sport, School, Transportation)* dengan penulisan yang tepat dan benar diberi skor 5.

<b>Indikator pencapaian kompetensi</b>	<b>Teknik penilaian</b>	<b>Bentuk instrument</b>	<b>Instrument soal</b>
1. Mengidentifikasi the home 2. Mengidentifikasi the Forest 3. Mengidentifikasi the school 4. Mengidentifikasi the sport 5. Mengidentifikasi the transportation	Tes tulisan	Multiple choice	Memilih jawaban yang sesuai dengan petunjuk soal

Jumlah skor maksimal keseluruhan adalah 100.

Setiap jawaban yang benar diberi skor 5.

Jumlah skor keseluruhan  $5 \times 20 = 100$ .

**Padangsidempuan, Juni 2019**

**Dr. Fitriadi Lubis, M.Pd**  
**NIP. 19620917 199203 1 002**

**Zulpadli Ardiansah**  
**12 340 0082**

**Appendix 2**  
**Control Class By Using Conventional Technique**

**RENCANA PELAKSANAAN PEMBELAJARAN**  
**(RPP)**

Nama Sekolah : SMP Negeri 3 Padangsidempuan  
Mata Pelajaran : Bahasa Inggris  
Kelas/Semester : VII<sup>4</sup> (Tujuh)/II (genap)  
Alokasi Waktu : 4 x 40 menit

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**Standar Kompetensi :**

- Menemukan new vocabulary / kosakata yg berhubungan dengan keyword atau kata kunci yg telah diberikan guru.

**Kompetensi Dasar :**

- siswa mampu menemukan new vocabulary yaitu dalam bentuk noun/kata benda baru yg berhubungan dengan keyword/kata kunci yg diberikan oleh guru

**Indikator :**

- d. Mengidentifikasi noun (*Home, Forest, Sport, School, Transportation*) yang diberikan oleh guru.
- e. Menyebutkan noun (*Home, Forest, Sport, School, Transportation*) yang guru tunjuk dengan benar.
- f. Menuliskan nama noun (*Home, Forest, Sport, School, Transportation*) tersebut dengan ejaan yang benar.

**Tujuan pembelajaran :** Siswa mampu menemukan new vocabulary yg ada di dalam rumah, hutan, olahraga dan sekolah, serta mampu mengembangkan, memperbanyak vocabulary siswa dan memperluas wawasan siswa dalam vocabulary

**Metode/strategi pembelajaran** : *GTM (Grammar Translation Method)*

**Materi Pembelajaran** : *Noun (Home, Forest, Sport, School, Transportation)*

### **Kegiatan Pengajaran**

#### **1. Pendahuluan/pre teaching :**

- a. Greeting (memberi salam dan berdoa)
- b. Mengabsen siswa
- c. Menjelaskan pentingnya materi yang akan dipelajari berikut kompetensi yang harus dikuasai siswa.

#### **2. Kegiatan inti/During Teaching: :**

1. Guru memberikan teks
2. Guru menunjukkan Vocabulary yang berhubungan.
3. Guru menyuruh siswa mencari arti kosakata yang akan dipelajari di dalam kamus
4. Guru menyuruh siswa untuk menghapalkan kosakata yang telah dicari
5. Guru memberikan soal kepada murid dan Kemudian menterjemahkannya

#### **3. Penutup/post teaching :**

- a. Guru membuat kesimpulan tentang materi yang sudah dijelaskan.
- b. Guru memberikan test kepada siswa

### **Media dan sumber pembelajaran :**

- c. Media Pembelajaran : Text Book



- d. Sumber pembelajaran : Experiencing English: English for Junior High School Students Year VII, Tim Masmedia Buana Pustaka, Jakarta: Pusat Pembukuan: Sidoarjo: PT. Masmedia Buana Pustaka, 2015

**Rubrik Penilaian** :  
 Setiap nama *noun Noun (Home, Forest, Sport, School, Transportation)* dengan penulisan yang tepat dan benar diberi skor 5.

<b>Indikator pencapaian kompetensi</b>	<b>Teknik penilaian</b>	<b>Bentuk instrument</b>	<b>Instrument soal</b>
6. Mengidentifikasi the home 7. Mengidentifikasi the Forest 8. Mengidentifikasi the school 9. Mengidentifikasi the sport 10. Mengidentifikasi the transportation	Tes tulisan	Multiple choice	Memilih jawaban yang sesuai dengan petunjuk soal

Jumlah skor maksimal keseluruhan adalah 100.

Setiap jawaban yang benar diberi skor 5.

Jumlah skor keseluruhan  $5 \times 20 = 100$ .

Padangidimpuan, Juni 2019

**Validator**

**Researcher**

**Nurmala Sari Sinaga , S.Pd**  
**NIP. 19800122 200604 2 010**

**Zulpadli Ardiansah**  
**12 340 0082**

### Appendix 3

### VALIDITY INSTRUMENTS FOR PRE-TEST

Name :

Class :

*Say basmallah before doing the test!*

*Chosce the most appropriate answer!(pilihlah jawaban yg paling tepat)*

1. .... the king of the Forest  
a. Ant                      b. Elephant                      c. Crocodile                      d. Tiger
  
2. .... is Herbivore animal  
a. Rabbit                      b. Cat                      c. Dog                      d. Bear
  
3. .... is a Reptile animal  
a. Eagle                      b. Rooster                      c. Bird                      d. Snake
  
4. Andi can't play ..... because his legs hurt.  
a. Football                      b. Internet                      c. Chess                      d.  
Congklak
  
5. .... need a people and ball to do it.  
a. Marathon                      b. football                      c. Swimming                      d. Long  
jump
  
6. I go to school by (sepeda) . Sepeda means.....  
a. Motorcycle                      b. Bicycle                      c. Minibus                      d. Rocket

7. I'm ..... I study in the school except Sunday and holiday.
- a. Regent                      b. Student                      c. Police                      d. River
8. There are three ..... On the table.
- a. Soil                      b. Pencils                      c. Powder                      d. Sand
9. He goes to Singapore by (Air Plane) . Air plane means.....
- a. Bus                      b. Becak                      c. Ambulan                      d. Pesawat
10. I'm in the school, if I'm hungry I'll go to the .....
- a. Home                      b. library                      c. Canteen                      d. Classroom
11. Below is the *herbivorous* animals, except.....
- a. Panda                      b. Cow                      c. Goat                      d. Lion
12. KAKA is the player of .....?
- a. Volleyball                      b. Singer                      c. Film                      d. Football
13. Water Transportasi is.....
- a. Transportasi udara                      c. Transportasi darat  
b. ;Transportasi Air                      d. Transportasi Umum
14. Grandfather read the newspaper in the living room by using .....
- a. Bag                      b. Hijab                      c. Plate                      d. Glasses



## Appendix 4

### VALIDITY INSTRUMENTS FOR POST-TEST

Name :

Class :

*Say basmallah before doing the test!*

*Chosce the most appropriate answer! (pilihlah jawaban yg paling tepat)*

1. Cat, Zebra, Horse, Goat and Monkey are included in .....  
a. Mammalia                      b. Reptile                      c. Carnivore                      d.  
Bird
2. Ronaldo is a player of .....  
a. Kungfu                      b. Football                      c. Dance                      d.  
Singer
3. We always do the school exams in the .....  
a. Highway                      b. sky                      c. Classroom                      d.  
River
4. .... is the food of tiger ?  
a. Fruits                      b. Vegetable                      c. Rice                      d.  
Meat
5. Father drink ..... coffee in every morning.

- a. A seed                      b. A dozen                      c. One meter                      d.  
A Cup

6. This is example of bird, except...?

- a. Frog                      b. Parrot                      c. Ostrich                      d.  
Eagle

7. Dito make sweet tea with two spoon of .....

- a. Powder                      b. Dust                      c. Stone                      d.  
Sugar

8. I want to borrow the book, I will go to the ..... School

- a. Canteen                      b. Library                      c. Home                      d.  
Toilet

9. I always playing Badminton in the afternoon, that is my favourite .....?

- a. Singer                      b. Actor                      c. Sport                      d.  
Film

10. We travel around the world by (kapal pesiar)

- a. Helicopter                      b. Cruise ship                      c. Ambulance                      d.  
Bicycle

11. The Sport that uses ball is.....

- a. Running                      b. Swimming                      c. Javelin                      d.  
Basket

12. Tiger live in the .....?

- a. Forest                      b. Water                      c. Sky                      d.  
Grass

13. The ..... of Macth is very funny when teaching in our class.

- a. Teacher                      b. Headmaster                      c. Friend                      d.  
Security

14. Rino : What Transportation is it ?

Dino : it is ..... (Kapal selam)

- a. Plane                      b. Canoe                      c. Submarine                      d.  
Taxi

15. .... is one of sport not difficult to do and doesn't spent much money

- a. Running                      b. Javelin                      c. Swimming                      d.  
Long jump

16. Rudi is watching Upin & Ipin on ..... ?

- a. Water                      b. Book                      c. Television                      d.  
Fabric

17. I will go to Jakarta by.....

- a. Flying Carpet                      b. Bag                      c. BUS                      d.  
Internet

18. A : Have you ever gone to Malaysia?

B : Yes , I have

A : Is there any Pedicab in Malaysia?

B : Yes , There is.

The underline word mean.....

- a. Becak                      b. Delman                      c. Kuda                      d.  
Balon udara

19. Teacher is writing on a white board with .....

- a. Pen                      b. Chalk                      c. Paint                      d.  
Marker

20. There are five ..... on the table.

- a. Bananas                      b. Soil                      c. Oil                      d.  
Syrup



## Appendix 5

### Keyword Pre-test

1. A	6. C	11. A	16. C
2. B	7. D	12. D	17. D
3. B	8. C	13. A	18. C
4. C	9. D	14. A	19. D
5. D	10. A	15. B	20. C

### Keyword post-test

1. D	6. D	11. D	16. C
2. A	7. D	12. D	17. C
3. A	8. D	13. C	18. D
4. B	9. B	14. C	19. A
5. B	10. D	15. A	20. A

## APPENDIX 6

Table Validity of the Test

No. Item	Mp	Mt	SDt	P	Q	$r_{pbi} = \frac{Mp - Mt}{SD_t} \sqrt{\frac{p}{q}}$	Rt on 5 % Significant	Interpretation
1	15,53	11,42	6,11	0,5	0,5	0,513	0,334	Valid
2	14,52	11,42	6,11	0,63	0,36	0,371	0,334	Valid
3	15	11,42	6,11	0,5	0,5	0,391	0,334	Valid
4	14,87	11,42	6,11	0,53	0,46	0,388	0,334	Valid
5	14,82	11,42	6,11	0,56	0,43	0,399	0,334	Valid
6	15,53	11,42	6,11	0,5	0,5	0,513	0,334	Valid
7	13,73	11,42	6,11	0,63	0,36	0,130	0,334	Invalid
8	15,92	11,42	6,11	0,43	0,56	0,528	0,334	Valid
9	15,69	11,42	6,11	0,43	0,56	0,481	0,334	Valid
10	13,65	11,42	6,11	0,66	0,33	0,114	0,334	Invalid
11	15,05	11,42	6,11	0,6	0,4	0,493	0,334	Valid
12	15	11,42	6,11	0,6	0,4	0,478	0,334	Valid
13	15	11,42	6,11	0,5	0,5	0,391	0,334	Valid
14	13,16	11,42	6,11	0,6	0,4	-0,039	0,334	Invalid
15	15,38	11,42	6,11	0,43	0,56	0,419	0,334	Valid
16	15,57	11,42	6,11	0,46	0,53	0,486	0,334	Valid
17	15	11,42	6,11	0,53	0,46	0,419	0,334	Valid

18	15	11,42	6,11	0,56	0,43	0,446	0,334	Valid
19	11,43	11,42	6,11	0,5	0,5	-0,430	0,334	Invalid
20	16,07	11,42	6,11	0,46	0,53	0,594	0,334	Valid
21	15,65	11,42	6,11	0,53	0,46	0,580	0,334	Valid
22	13,06	11,42	6,11	0,53	0,46	-0,059	0,334	Invalid
23	14,57	11,42	6,11	0,63	0,36	0,386	0,334	Valid
24	15	11,42	6,11	0,56	0,43	0,446	0,334	Valid
25	16,07	11,42	6,11	0,43	0,56	0,594	0,334	Valid

Table Validity Of The Test

No	NO ITEMS																				Xt	xt-2
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		
1	0	1	1	0	0	0	1	1	0	0	1	0	1	1	1	0	0	1	0	0	9	81
2	1	1	0	1	1	1	0	0	0	1	0	1	1	1	0	0	1	1	0	1	12	144
3	0	1	0	0	1	1	1	0	1	1	1	0	1	1	0	1	0	1	1	0	12	144
4	1	0	1	1	0	0	1	1	1	0	1	1	0	1	1	0	1	0	0	1	12	144
5	0	1	1	0	1	1	0	0	0	1	1	0	1	1	0	1	0	1	0	0	10	100
6	1	1	0	0	0	1	1	1	1	0	1	1	0	1	1	1	1	0	1	1	14	196
7	1	0	1	1	1	0	1	0	0	1	0	1	1	0	0	1	1	0	1	0	11	121
8	0	1	1	0	1	1	0	0	1	0	1	0	1	0	1	0	1	1	1	1	12	144
9	0	0	0	1	1	0	1	1	0	1	1	1	1	0	0	1	0	1	0	0	10	100
10	1	1	0	1	1	1	1	0	1	1	0	1	0	1	1	0	1	1	1	0	14	196
11	0	0	0	1	1	0	1	0	1	0	1	1	0	0	0	0	0	0	1	1	8	64
12	1	1	1	1	0	1	1	1	0	1	1	0	1	0	1	1	1	1	0	0	14	196
13	1	1	1	1	1	1	0	1	1	1	1	1	0	1	0	1	0	1	1	1	16	256
14	0	1	1	1	1	0	1	0	1	1	1	1	1	0	1	1	1	1	0	0	14	196
15	1	0	1	1	1	1	0	1	1	1	1	1	1	1	1	0	1	0	1	0	15	225
16	1	1	0	0	0	1	0	1	1	0	0	0	0	1	0	0	0	1	1	1	9	81
17	0	0	0	0	0	0	1	0	0	0	0	1	0	1	0	1	0	0	0	0	4	16
18	1	1	1	1	1	1	1	1	0	1	1	1	1	0	1	1	1	0	1	1	17	289
19	0	0	1	0	0	0	1	0	0	1	0	0	0	1	0	0	0	0	1	0	5	25
20	1	1	0	1	1	1	1	0	1	1	1	0	0	1	0	1	1	1	1	1	15	225

21	0	1	1	0	1	0	1	1	0	1	1	1	1	0	1	1	1	1	0	1	14	196
22	0	1	0	0	0	0	0	0	0	1	0	1	0	1	1	0	0	0	1	0	6	36
23	1	0	1	1	1	1	1	1	1	1	0	0	1	0	0	1	0	1	0	1	13	169
24	1	0	0	1	0	0	0	0	0	1	0	0	1	1	0	0	1	0	1	0	7	49
25	0	0	0	0	0	1	1	0	1	1	0	1	0	1	0	0	1	0	0	0	7	49
n = 25	15	19	15	16	17	15	19	13	13	20	18	18	15	18	13	14	15	17	15	14	319	3777
P	0,5	0,63	0,5	0,53	0,56	0,5	0,63	0,43	0,43	0,66	0,6	0,6	0,5	0,6	0,43	0,46	0,5	0,56	0,5	0,46		
q	0,5	0,36	0,5	0,46	0,43	0,5	0,36	0,56	0,56	0,33	0,4	0,4	0,5	0,4	0,56	0,53	0,5	0,43	0,5	0,53		

## APPENDIX 7

### Reliability of The Test

To obtain the reliability of the test, the researcher uses formula K-R. 20

$$r_{11} = \left( \frac{n}{n-1} \right) \left( \frac{S_t^2 - \sum pq}{S_t^2} \right)$$

For obtain  $S_t$  is :

$$S_t = \frac{1}{N} \sqrt{(N \cdot \sum X^2) - (\sum X)^2}$$

$$= \frac{1}{35} \sqrt{(35 \cdot 5872) - (400)^2}$$

$$= \frac{1}{35} \sqrt{205,520 - 160.000}$$

$$= \frac{1}{35} \sqrt{45,52}$$

$$= 0,02 (6,746)$$

$$= 0,134$$

$$\sum pq = 4,79$$

$$r_{11} = \left( \frac{n}{n-1} \right) \left( \frac{S_t^2 - \sum pq}{S_t^2} \right)$$

$$= \frac{35}{35-1} \left( \frac{(3,81)^2 - 4,79}{(3,81)^2} \right)$$

$$= \frac{35}{34} \left( \frac{14,516 - 4,79}{14,516} \right)$$

$$= (1,029) \left( \frac{9,76}{14,516} \right)$$

$$= (1,029)(0,670)$$

= 0,689

The Result of the reliability ( $r_{11}$ ), Consulted with the r product moment with standard 5% significance. And result show  $0,689 > 0,334 r_{tabel}$  so items test who tired out reliable.

## APPENDIX 8

### Calculation of Validity the Test

#### A. Means score from score total (Mt)

$$M_t = \frac{\sum x_t}{N}$$
$$M_t = \frac{319}{25} = 11,42$$

#### B. Standard Deviation (SDt)

$$SD_t = \sqrt{\frac{\sum X_t^2}{N} - \left(\frac{\sum X_t}{N}\right)^2}$$
$$SD_t = \sqrt{\frac{3777}{25} - \left(\frac{319}{25}\right)^2}$$
$$SD_t = \sqrt{167,77 - (11,42)^2}$$
$$SD_t = \sqrt{167,77 - 130,41}$$
$$SD_t = \sqrt{37,36}$$
$$SD_t = 6,11$$

#### 1. Means Score (Mp)

$$\text{Item 1 } M_{p1} = \frac{\text{the total of students score that true item answer}}{n1}$$
$$M_{p1} = \frac{15 + 16 + 19 + 11 + 17 + 16 + 20 + 16 + 12 + 21 + 17 + 17 + 7 + 17 + 9}{15}$$
$$M_{p1} = \frac{230}{15} = 15,33$$

$$\text{Item 2 } M_{p2} = \frac{\text{the total of students score that true item answer}}{n2}$$
$$M_{p2} = \frac{13 + 15 + 16 + 11 + 19 + 16 + 17 + 16 + 20 + 15 + 12 + 21 + 17 + 18 + 7 + 17 + 9 + 9 + 8}{19}$$
$$M_{p2} = \frac{276}{19} = 14,52$$

$$\text{Item 3 } M_{p3} = \frac{\text{the total of students score that true item answer}}{n3}$$



$$M_{p3} = \frac{13 + 16 + 11 + 11 + 16 + 16 + 20 + 15 + 16 + 21 + 7 + 18 + 17 + 17 + 7}{15}$$

$$M_{p3} = \frac{240}{15} = 15$$

$$\text{Item 4 } M_{p4} = \frac{\text{the total of students score that true item answer}}{n4}$$

$$M_{p4} = \frac{15 + 16 + 11 + 13 + 17 + 12 + 16 + 20 + 15 + 16 + 21 + 17 + 17 + 7 + 17 + 8}{16}$$

$$M_{p4} = \frac{238}{16} = 14,87$$

$$\text{Item 5 } M_{p5} = \frac{\text{the total of students score that true item answer}}{n5}$$

$$M_{p5} = \frac{15 + 16 + 11 + 11 + 16 + 13 + 17 + 12 + 20 + 15 + 16 + 21 + 17 + 18 + 17 + 9 + 8}{17}$$

$$M_{p5} = \frac{252}{17} = 14,82$$

$$\text{Item 6 } M_{p6} = \frac{\text{the total of students score that true item answer}}{n6}$$

$$M_{p6} = \frac{15 + 16 + 11 + 19 + 16 + 17 + 16 + 20 + 16 + 12 + 21 + 17 + 17 + 11 + 9}{15}$$

$$M_{p6} = \frac{233}{15} = 15,53$$

$$\text{Item 7 } M_{p7} = \frac{\text{the total of students score that true item answer}}{n7}$$

$$M_{p7} = \frac{13 + 16 + 16 + 19 + 11 + 13 + 17 + 12 + 16 + 15 + 7 + 21 + 7 + 17 + 18 + 17 + 11 + 8 + 7}{19}$$

$$M_{p7} = \frac{261}{19} = 13,73$$

$$\text{Item 8 } M_{p8} = \frac{\text{the total of students score that true item answer}}{n8}$$

$$M_{p8} = \frac{13 + 16 + 19 + 13 + 16 + 20 + 16 + 12 + 21 + 18 + 17 + 17 + 9}{13}$$

$$M_{p8} = \frac{207}{13} = 15,92$$

$$\text{Item 9 } M_{p9} = \frac{\text{the total of students score that true item answer}}{n9}$$

$$M_{p_9} = \frac{16 + 16 + 19 + 16 + 17 + 12 + 20 + 15 + 16 + 12 + 17 + 17 + 11}{13}$$

$$M_{p_9} = \frac{204}{13} = 15,69$$

$$\text{Item 10 } M_{p_{10}} = \frac{\text{the total of students score that true item answer}}{n_{10}}$$

$$M_{p_{10}} = \frac{15 + 16 + 11 + 11 + 13 + 17 + 16 + 20 + 15 + 16 + 21 + 7 + 17 + 18 + 7 + 17 + 7 + 11 + 9 + 9}{20}$$

$$M_{p_{10}} = \frac{273}{20} = 13,65$$

$$\text{Item 11 } M_{p_{11}} = \frac{\text{the total of students score that true item answer}}{n_{11}}$$

$$M_{p_{11}} = \frac{13 + 16 + 16 + 11 + 19 + 16 + 13 + 12 + 16 + 20 + 15 + 16 + 21 + 17 + 18 + 17 + 8 + 7}{18}$$

$$M_{p_{11}} = \frac{271}{18} = 15,05$$

$$\text{Item 12 } M_{p_{12}} = \frac{\text{the total of students score that true item answer}}{n_{12}}$$

$$M_{p_{12}} = \frac{15 + 16 + 19 + 11 + 13 + 17 + 12 + 20 + 15 + 16 + 7 + 21 + 18 + 7 + 11 + 7 + 19 + 7}{18}$$

$$M_{p_{12}} = \frac{270}{18} = 15$$

$$\text{Item 13 } M_{p_{13}} = \frac{\text{the total of students score that true item answer}}{n_{13}}$$

$$M_{p_{13}} = \frac{13 + 15 + 16 + 11 + 11 + 16 + 13 + 16 + 15 + 16 + 21 + 18 + 17 + 7 + 17}{15}$$

$$M_{p_{13}} = \frac{240}{15} = 15$$

$$\text{Item 14 } M_{p_{14}} = \frac{\text{the total of students score that true item answer}}{n_{14}}$$

$$M_{p_{14}} = \frac{13 + 15 + 16 + 16 + 11 + 19 + 17 + 20 + 16 + 12 + 7 + 7 + 17 + 7 + 7 + 11 + 17 + 9}{18}$$

$$M_{p_{14}} = \frac{237}{18} = 13,16$$

$$\text{Item 15 } M_{p_{15}} = \frac{\text{the total of students score that true item answer}}{n_{15}}$$

$$M_{p_{15}} = \frac{13 + 16 + 19 + 16 + 17 + 16 + 15 + 16 + 21 + 18 + 7 + 17 + 9}{13}$$

$$M_{p_{15}} = \frac{200}{13} = 15,38$$

$$\text{Item 16 } M_p 16 = \frac{\text{the total of students score that true item answer}}{n 16}$$

$$M_p 16 = \frac{16 + 11 + 19 + 11 + 13 + 16 + 20 + 15 + 7 + 21 + 17 + 18 + 17 + 17}{14}$$

$$M_p 16 = \frac{218}{14} = 15,57$$

$$\text{Item 17 } M_p 17 = \frac{\text{the total of students score that true item answer}}{n 17}$$

$$M_p 17 = \frac{15 + 16 + 19 + 11 + 16 + 17 + 16 + 15 + 16 + 21 + 17 + 18 + 7 + 11 + +9 + 9}{16}$$

$$M_p 17 = \frac{240}{16} = 15$$

$$\text{Item 18 } M_p 18 = \frac{\text{the total of students score that true item answer}}{n 18}$$

$$M_p 18 = \frac{13 + 15 + 16 + 11 + 16 + 13 + 17 + 16 + 20 + 15 + 12 + 17 + 18 + 17 + 17 + 7}{16}$$

$$M_p 18 = \frac{240}{16} = 15$$

$$\text{Item 19 } M_p 19 = \frac{\text{the total of students score that true item answer}}{n 19}$$

$$M_p 19 = \frac{16 + 19 + 11 + 16 + 17 + 12 + 20 + 16 + 12 + 21 + 7 + 17 + 7 + 7 + 9 + 8}{16}$$

$$M_p 19 = \frac{215}{16} = 11,43$$

$$\text{Item 20 } M_p 20 = \frac{\text{the total of students score that true item answer}}{n 20}$$

$$M_p 20 = \frac{15 + 16 + 19 + 16 + 12 + 20 + 12 + 21 + 17 + 18 + 17 + 17 + 9}{13}$$

$$M_p 20 = \frac{209}{13} = 16,07$$

$$\text{Item 21 } M_p 21 = \frac{\text{the total of students score that true item answer}}{n 21}$$

$$M_p 21 = \frac{13 + 16 + 11 + 19 + 13 + 17 + 12 + 20 + 15 + 12 + 21 + 17 + 18 + 17 + 11 + 17}{16}$$

$$M_p 21 = \frac{249}{16} = 15,65$$

$$\text{Item 22 } M_p 22 = \frac{\text{the total of students score that true item answer}}{n 22}$$

$$M_p 22 = \frac{13 + 16 + 16 + 19 + 16 + 13 + 16 + 20 + 16 + 7 + 7 + 7 + 11 + 17 + 8 + 7}{16}$$

$$M_p 22 = \frac{209}{16} = 13,06$$

$$\text{Item 23 } M_p = \frac{\text{the total of students score that true item answer}}{n} = \frac{277}{19} = 14,57$$

$$\text{Item 24 } M_p = \frac{\text{the total of students score that true item answer}}{n} = \frac{255}{17} = 15$$

$$\text{Item 25 } M_p = \frac{\text{the total of students score that true item answer}}{n} = \frac{209}{13} = 16,07$$

2. Calculation of the Formulation  $r_{pbi} = \frac{Mp - Mt}{SD_t} \sqrt{\frac{p}{q}}$

$$\begin{aligned} \text{Item 1 } r_{pbi} &= \frac{Mp - Mt}{SD_t} \sqrt{\frac{p}{q}} \\ r_{pbi} &= \frac{15,53 - 13,3}{4,34} \sqrt{\frac{0,5}{0,5}} \\ r &= \frac{2,23}{4,34} \sqrt{1} \\ r &= 0,513 \times 1 \\ r &= 0,513 \end{aligned}$$

$$\begin{aligned} \text{Item 2 } r_{pbi} &= \frac{Mp - Mt}{SD_t} \sqrt{\frac{p}{q}} \\ r_{pbi} &= \frac{14,52 - 13,3}{4,34} \sqrt{\frac{0,63}{0,36}} \\ r &= \frac{1,22}{4,34} \sqrt{1,75} \\ r &= 0,281 \times 1,322 \\ r &= 0,371 \end{aligned}$$

$$\text{Item 3 } r_{pbi} = \frac{Mp-Mt}{SD_t} \sqrt{\frac{p}{q}}$$

$$r_{pbi} = \frac{15 - 13,3}{4,34} \sqrt{\frac{0,5}{0,5}}$$

$$r = \frac{1,7}{4,34} \sqrt{1}$$

$$r = 0,391 \times 1$$

$$r = 0,391$$

$$\text{Item 4 } r_{pbi} = \frac{Mp-Mt}{SD_t} \sqrt{\frac{p}{q}}$$

$$r_{pbi} = \frac{14,87 - 13,3}{4,34} \sqrt{\frac{0,53}{0,46}}$$

$$r = \frac{1,57}{4,34} \sqrt{1,152}$$

$$r = 0,361 \times 1,073$$

$$r = 0,388$$

$$\text{Item 5 } r_{pbi} = \frac{Mp-Mt}{SD_t} \sqrt{\frac{p}{q}}$$

$$r_{pbi} = \frac{14,82 - 13,3}{4,34} \sqrt{\frac{0,56}{0,43}}$$

$$r = \frac{1,52}{4,34} \sqrt{1,30}$$

$$r = 0,350 \times 1,140$$

$$r = 0,399$$

$$\text{Item 6 } r_{pbi} = \frac{Mp-Mt}{SD_t} \sqrt{\frac{p}{q}}$$

$$r_{pbi} = \frac{15,53 - 13,3}{4,34} \sqrt{\frac{0,5}{0,5}}$$

$$r = \frac{2,23}{4,34} \sqrt{1}$$

$$r = 0,513 \times 1$$

$$r = 0,513$$

$$\text{Item 7 } r_{pbi} = \frac{Mp-Mt}{SD_t} \sqrt{\frac{p}{q}}$$
$$r_{pbi} = \frac{13,73 - 13,3}{4,34} \sqrt{\frac{0,63}{0,36}}$$

$$r = \frac{0,43}{4,34} \sqrt{1,75}$$

$$r = 0,099 \times 1,322$$

$$r = 0,130$$

$$\text{Item 8 } r_{pbi} = \frac{Mp-Mt}{SD_t} \sqrt{\frac{p}{q}}$$
$$r_{pbi} = \frac{15,92 - 13,3}{4,34} \sqrt{\frac{0,43}{0,56}}$$

$$r = \frac{2,62}{4,34} \sqrt{0,767}$$

$$r = 0,603 \times 0,875$$

$$r = 0,528$$

$$\text{Item 9 } r_{pbi} = \frac{Mp-Mt}{SD_t} \sqrt{\frac{p}{q}}$$
$$r_{pbi} = \frac{15,69 - 13,3}{4,34} \sqrt{\frac{0,43}{0,56}}$$

$$r = \frac{2,39}{4,34} \sqrt{0,767}$$

$$r = 0,550 \times 0,875$$

$$r = 0,481$$

$$\text{Item 10 } r_{pbi} = \frac{Mp-Mt}{SD_t} \sqrt{\frac{p}{q}}$$
$$r_{pbi} = \frac{13,65 - 13,3}{4,34} \sqrt{\frac{0,66}{0,33}}$$

$$r = \frac{0,35}{4,34} \sqrt{2}$$

$$r = 0,080 \times 1,414$$

$$r = 0,114$$

$$\text{Item 11 } r_{pbi} = \frac{Mp-Mt}{SD_t} \sqrt{\frac{p}{q}}$$

$$r_{pbi} = \frac{15,05 - 13,3}{4,34} \sqrt{\frac{0,6}{0,4}}$$

$$r = \frac{1,75}{4,34} \sqrt{1,5}$$

$$r = 0,403 \times 1,224$$

$$r = 0,493$$

$$\text{Item 12 } r_{pbi} = \frac{Mp-Mt}{SD_t} \sqrt{\frac{p}{q}}$$

$$r_{pbi} = \frac{15 - 13,3}{4,34} \sqrt{\frac{0,6}{0,4}}$$

$$r = \frac{1,7}{4,34} \sqrt{1,5}$$

$$r = 0,391 \times 1,224$$

$$r = 0,478$$

$$\text{Item 13 } r_{pbi} = \frac{Mp-Mt}{SD_t} \sqrt{\frac{p}{q}}$$

$$r_{pbi} = \frac{15 - 13,3}{4,34} \sqrt{\frac{0,5}{0,5}}$$

$$r = \frac{1,7}{4,34} \sqrt{1}$$

$$r = 0,391 \times 1$$

$$r = 0,391$$

$$\text{Item 14 } r_{pbi} = \frac{Mp-Mt}{SD_t} \sqrt{\frac{p}{q}}$$

$$r_{pbi} = \frac{13,16 - 13,3}{4,34} \sqrt{\frac{0,6}{0,4}}$$

$$r = \frac{-0,14}{4,334} \sqrt{1,5}$$

$$r = -0,032 \times 1,224$$

$$r = -0,039$$

$$\text{Item 15 } r_{pbi} = \frac{Mp - Mt}{SD_t} \sqrt{\frac{p}{q}}$$

$$r_{pbi} = \frac{15,38 - 13,3}{4,34} \sqrt{\frac{0,43}{0,56}}$$

$$r = \frac{2,08}{4,34} \sqrt{0,767}$$

$$r = 0,479 \times 0,875$$

$$r = 0,419$$

$$\text{Item 16 } r_{pbi} = \frac{Mp - Mt}{SD_t} \sqrt{\frac{p}{q}}$$

$$r_{pbi} = \frac{15,57 - 13,3}{4,34} \sqrt{\frac{0,46}{0,53}}$$

$$r = \frac{2,27}{4,34} \sqrt{0,867}$$

$$r = 0,523 \times 0,931$$

$$r = 0,486$$

$$\text{Item 17 } r_{pbi} = \frac{Mp - Mt}{SD_t} \sqrt{\frac{p}{q}}$$

$$r_{pbi} = \frac{15 - 13,3}{4,34} \sqrt{\frac{0,53}{0,46}}$$

$$r = \frac{1,7}{4,34} \sqrt{1,15}$$

$$r = 0,391 \times 1,072$$

$$r = 0,419$$



$$\text{Item 18 } r_{pbi} = \frac{Mp-Mt}{SD_t} \sqrt{\frac{p}{q}}$$

$$r_{pbi} = \frac{15 - 13,3}{4,34} \sqrt{\frac{0,56}{0,43}}$$

$$r = \frac{1,7}{4,34} \sqrt{1,30}$$

$$r = 0,391 \times 1,140$$

$$r = 0,446$$

$$\text{Item 19 } r_{pbi} = \frac{Mp-Mt}{SD_t} \sqrt{\frac{p}{q}}$$

$$r_{pbi} = \frac{11,43 - 13,3}{4,34} \sqrt{\frac{0,5}{0,5}}$$

$$r = \frac{-1,87}{4,34} \sqrt{1}$$

$$r = -0,430 \times 1$$

$$r = -0,430$$

$$\text{Item 20 } r_{pbi} = \frac{Mp-Mt}{SD_t} \sqrt{\frac{p}{q}}$$

$$r_{pbi} = \frac{16,07 - 13,3}{4,34} \sqrt{\frac{0,46}{0,53}}$$

$$r = \frac{2,77}{4,34} \sqrt{0,867}$$

$$r = 0,638 \times 0,931$$

$$r = 0,594$$

$$\text{Item 21 } r_{pbi} = \frac{Mp-Mt}{SD_t} \sqrt{\frac{p}{q}}$$

$$r_{pbi} = \frac{15,65 - 13,3}{4,34} \sqrt{\frac{0,53}{0,46}}$$

$$r = \frac{2,35}{4,34} \sqrt{1,152}$$

$$r = 0,541 \times 1,073$$

$$r = 0,580$$

$$\text{Item 22 } r_{pbi} = \frac{Mp-Mt}{SD_t} \sqrt{\frac{p}{q}}$$

$$r_{pbi} = \frac{13,06 - 13,3}{4,34} \sqrt{\frac{0,53}{0,46}}$$

$$r = \frac{-0,24}{4,34} \sqrt{1,152}$$

$$r = -0,055 \times 1,073$$

$$r = -0,059$$

$$\text{Item 23 } r_{pbi} = \frac{Mp-Mt}{SD_t} \sqrt{\frac{p}{q}}$$

$$r_{pbi} = \frac{14,57 - 13,3}{4,34} \sqrt{\frac{0,63}{0,36}}$$

$$r = \frac{1,27}{4,34} \sqrt{1,75}$$

$$r = 0,292 \times 1,322$$

$$r = 0,386$$

$$\text{Item 24 } r_{pbi} = \frac{Mp-Mt}{SD_t} \sqrt{\frac{p}{q}}$$

$$r_{pbi} = \frac{15 - 13,3}{4,34} \sqrt{\frac{0,56}{0,43}}$$

$$r = \frac{1,7}{4,34} \sqrt{1,302}$$

$$r = 0,391 \times 1,141$$

$$r = 0,446$$

$$\text{Item 25 } r_{pbi} = \frac{Mp-Mt}{SD_t} \sqrt{\frac{p}{q}}$$

$$r_{pbi} = \frac{16,07 - 13,3}{4,34} \sqrt{\frac{0,46}{0,53}}$$

$$r = \frac{2,77}{4,34} \sqrt{0,867}$$

$$r = 0,638 \times 0,931$$

$$r = 0,594$$

## Appendix 9

### Score of Experimental Class and Control Class Pre Test

#### 1. Score of Experimental Class Pre Test before using Direct Method

No	The Initial Name of Students(n)	Pre-Test	No	The Initial Name of Students(n)	Pre-Test
1	Ahmad Riadi	45	19	Abdul Rohim	65
2	Nurhalizah	60	20	Sahrul	55
3	Indah Wahyuni	70	21	Husna	55
4	Dinda	50	22	Alfajri	60
5	Adi Darma	75	23	Nazwa	65
6	Fathur	75	24	Zaskya	70
7	Samuel	50	25	Haddad	45
8	Aulya Putri	55			
9	Hafizah	70			
10	Ardina	65			
11	Gusti	65			
12	Fauzi	55			
13	Reyza Kurniawan	60			
14	Asmirandah	60			
15	Nadia	45			
16	Rifki	75			
17	Wahyu	65			
18	Rifani	65			
	Total			1520	

## 2. Score of Control Class Pre Test

No	The Initial Name of Students(n)	Pre-Test	No	The Initial Name of Students(n)	Pre-Test
1	Azifa Na Zahra	75	15	Afifah	65
2	Sahraini	45	16	Imam Ahmad	70
3	Aprilia	50	17	Sakdiah	65
4	Rizky	60	18	Nur Atikah	50
5	Ardiansyah	50	19	Ihdina Ilmi	65
6	Arfiandani	55	20	Miskah Hayati	70
7	Sintia	55	21	Fitri Anggina	55
8	Ramadhan	70	22	Nur Madinah	70
9	Azzahra	55	23	Nikmah	65
10	Nabila	60	24	Sabikah	75
11	Salsabila	75	25	Rofikoh	65
12	Amira	60	26	Nur Azizah	70
13	Winda	60	27	Ropikah Adilah	45
14	Sofwatunnisa	65	28	Suci Ramadhani	70
	Total			1745	

## Appendix 10

### Score of Experimental Class and Control Class Post Test

#### 1. Score of Experimental Class Post Test after using Direct Method

No	The Initial Name of Students(n)	Pre-Test	No	The Initial Name of Students(n)	Pre-Test
1	Ahmad Riadi	85	19	Abdul Rohim	80
2	Nurhalizah	90	20	Sahrul	65
3	Indah Wahyuni	75	21	Husna	95
4	Dinda	90	22	Alfajri	90
5	Adi Darma	85	23	Nazwa	70
6	Fathur	75	24	Zaskya	80
7	Samuel	80	25	Haddad	70
8	Aulya Putri	75			
9	Hafizah	80			
10	Ardina	75			
11	Gusti	80			
12	Fauzi	75			
13	Reyza Kurniawan	80			
14	Asmirandah	85			
15	Nadia	95			
16	Rifki	85			
17	Wahyu	90			
18	Rifani	80			
	Total			2025	

## 2. Score of Control Class Post Test

No	The Initial Name of Students(n)	Pre-Test	No	The Initial Name of Students(n)	Pre-Test
1	Azifa Na Zahra	75	15	Afifah	60
2	Sahraini	60	16	Imam Ahmad	75
3	Aprilia	80	17	Sakdiah	50
4	Rizky	70	18	Nur Atikah	65
5	Ardiansyah	75	19	Ihdina Ilmi	65
6	Arfiandani	50	20	Miskah Hayati	60
7	Sintia	65	21	Fitri Anggina	80
8	Ramadhan	55	22	Nur Madinah	65
9	Azzahra	70	23	Nikmah	70
10	Nabila	65	24	Sabikah	65
11	Salsabila	75	25	Rofikoh	80
12	Amira	70	26	Nur Azizah	55
13	Winda	75	27	Ropikah Adilah	65
14	Sofwatunnisa	70	28	Suci Ramadhani	70
	Total			1885	

## Appendix 11

### RESULT OF NORMALITY TEST IN PRE TEST

#### RESULT OF THE NORMALITY TEST OF VII-3 IN PRE-TEST

1. The score of VII-3 class in pre test from low score to high score:

45	45	45	50	50	50	50
55	60	60	60	60	60	65
65	65	65	65	70	70	70
75	75	75	75			

2. High = 75

Low = 45

Range = High – Low

$$= 75 - 45$$

$$= 30$$

3. Total of Classes =  $1 + 3,3 \log (n)$

$$= 1 + 3,3 \log (35)$$

$$= 1 + 3,3 ( 1,54)$$

$$= 1 + 5.08$$

$$= 6.08$$

$$= 7$$

4. Length of Classes =  $\frac{range}{totalofclass} = \frac{30}{6} = 5$

5. Mean

Interval Class	F	X	x	fx	x <sup>2</sup>	fx <sup>2</sup>
45 – 49	3	47	4	12	16	48
50 – 54	4	52	3	12	9	36
55 – 59	1	57	2	8	4	16
60 – 64	5	62	1	5	1	5
65 – 69	5	<b>67</b>	0	0	0	0
70 – 74	3	72	-1	-6	1	6
75 – 79	4	77	-2	-10	4	20
<i>i</i> = 5	25	-	-	21	-	131



$$\begin{aligned}
M_x &= M^1 + i \frac{\sum fx^1}{N} \\
&= 67 + 5 \left( \frac{21}{25} \right) \\
&= 67 + 5 (0.6) \\
&= 67 + (3) \\
&= 70
\end{aligned}$$

$$\begin{aligned}
SD_t &= i \sqrt{\frac{\sum fx^1^2}{N} - \left[ \frac{\sum fx^1}{N} \right]^2} \\
&= 5 \sqrt{\frac{131}{25} - \left( \frac{21}{25} \right)^2} \\
&= 5 \sqrt{3.74 - (0.6)^2} \\
&= 5 \sqrt{3.74 - 0.36} \\
&= 5 \sqrt{3.38} \\
&= 5 (1.83) \\
&= 72,55
\end{aligned}$$

Table of Normality Data Test with Chi Kuadrat Formula

Interval of Score	Real Upper Limit	Z - Score	Limit of Large of the Area	Large of area	$f_h$	$f_0$	$\frac{(f_0 - f_h)}{f_h}$
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75–79	79,5	1.03	0.3485					
70 – 74	74,5	0.49	0.1879	0.16	5.6	5	-0.10	
65 – 69	69,5	-0.10	0.46017	-0.27	-9.45	6	-0.36	
60 – 64	64,5	-0.60	0.27425	0.18	6.3	8	0	
55 – 59	59,5	-1.14	0.12714	0.14	4.9	5	0.02	
50 – 54	54,5	-1.69	0.04551	0.08	2.8	4	0.42	
45 – 49	49,5	-2.24	0.01255	0.03	1.05	4	2.80	
	44,5	-2.78	0.00272	0.009	0.34	3	0.78	
							$X^2$	3.56

Based on table above, researcher found that  $x^2_{\text{count}} = 3.56$  while  $x^2_{\text{table}} = 5.991$  cause  $x^2_{\text{count}} < x^2_{\text{table}}$  ( $3.56 < 5.991$ ) with degree of freedom  $dk = 5 - 3 = 2$  and significant level  $\alpha = 5\%$ . So distribution of VII-3 class (Pre-test) is normal.

## 6. Median

No	Interval of Classes	F	Fk
1	45 – 49	3	3
2	50 - 54	4	7
3	55 - 59	4	11
4	60 - 64	5	16
5	<b>65 - 69</b>	<b>8</b>	24
6	70 - 74	6	30
7	75 - 79	5	35

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Position of Me in the interval of classes is number 5, that:

$$Bb = 64.5$$

$$F = 5$$

$$fm = 8$$

$$i = 5$$

$$n = 35$$

$$1/2n = 17.5$$

So :

$$Me = Bb + i \left( \frac{n/2 - F}{fm} \right)$$

$$= 64.5 + 5 \left( \frac{17.5 - 5}{8} \right)$$

$$= 64.5 + 5 (1.56)$$

$$= 64.5 + 7.8$$

$$= 71,55$$

7. Modus

No	Interval of Classes	F	Fk
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1	45 - 49	3	3
2	50 - 54	4	7
3	55 - 59	4	11
4	60 - 64	5	16
5	<b>65 - 69</b>	<b>8</b>	24
6	70 - 74	6	30
7	75 - 79	5	35

$$M_o = L + \frac{d_1}{d_1 + d_2} i$$

$$L = 64.5$$

$$d_1 = 3$$

$$d_2 = 2$$

$$i = 5$$

$$\begin{aligned} M_o &= 64.5 + \frac{3}{3+2} 5 \\ &= 64.5 + 0.6 (5) \\ &= 64.5 + 3 \\ &= 65,75 \end{aligned}$$

### RESULT OF NORMALITY TEST IN PRE TEST

### RESULT OF THE NORMALITY TEST OF VII-4 IN PRE-TEST

1. The score of VII-4 class in pre test from low score to high score:

45	45	50	50	50	55	55	55	55
60	60	60	60	65	65	65	70	70

70	70	70	70	75	75	75	75	75	75
----	----	----	----	----	----	----	----	----	----

2. High = 75

Low = 45

Range = High – Low

$$= 75 - 45$$

$$= 30$$

3. Total of Classes =  $1 + 3,3 \log (n)$

$$= 1 + 3,3 \log (27)$$

$$= 1 + 3,3 ( 1,43)$$

$$= 1 + 4.72$$

$$= 5.72$$

$$= 6$$

4. Length of Classes =  $\frac{\text{range}}{\text{total of class}} = \frac{30}{6} = 5$

5. Mean

Interval Class	F	X	x	fx	x <sup>2</sup>	fx <sup>2</sup>
45 – 49	2	47	4	8	16	32
50 – 54	3	52	3	9	9	27
55 – 59	4	57	2	8	4	16
60 – 64	4	62	1	4	1	4
65 – 69	6	<b>67</b>	0	0	0	0
70 – 74	5	72	-1	-5	1	5
75 – 79	3	77	-2	-6	4	12
<i>i</i> = 5	27	-	-	18	-	96

$$M_x = M^1 + i \frac{\sum fx^1}{N}$$

$$= 67 + 5 \left( \frac{18}{27} \right)$$

$$= 67 + 5 (0.66)$$

$$= 67 + (3.3)$$

$$= 70.3$$

$$\begin{aligned}
SD_t &= i \sqrt{\frac{\sum fx'^2}{N} - \left[ \frac{\sum fx'}{N} \right]^2} \\
&= \sqrt{\frac{96}{28} - \left( \frac{18}{28} \right)^2} \\
&= \sqrt{3.55 - (0.66)^2} \\
&= \sqrt{3.55 - 0.43} \\
&= \sqrt{3.12} \\
&= 5 (1.76) \\
&= 8.8
\end{aligned}$$

Table of Normality Data Test with Chi Kuadrat Formula

Interval of Score	Real Upper Limit	Z – Score	Limit of Large of the Area	Large of area	f <sub>h</sub>	f <sub>0</sub>	$\frac{(f_0-f_h)}{f_h}$
75–79	79,5	1.04	0.3508				
70 – 74	74,5	0.47	0.1808	0.17	5.95	3	-0.49
65 – 69	69,5	-0.09	0.46414	-0.28	-9.8	5	-0.48
60 – 64	64,5	-0.65	0.25785	-0.20	-7	6	-0.14
55 – 59	59,5	-1.22	0.11123	0.14	4.2	4	-0.04
50 – 54	54,5	-1.79	0.03673	0.07	2.8	4	0.64
45 – 49	49,5	-2.36	0.00914	0.02	0.7	3	0.42
	44,5	-2.93	0.00169	0.00	0	2	2.00
						X <sup>2</sup>	1.91

Based on table above, researcher found that  $\chi^2_{\text{count}} = 1.91$  while  $\chi^2_{\text{table}} = 5.991$  cause  $\chi^2_{\text{count}} < \chi^2_{\text{table}}$  ( $1.91 < 5.991$ ) with degree of freedom  $dk = 5 - 3 = 2$  and significant level  $\alpha = 5\%$ . So distribution of VII-4 class (Pre-test) is normal.

#### 6. Median

No	Interval of Classes	F	Fk
1	45 - 49	2	2
2	50 - 54	3	5
3	55 - 59	4	9
4	60 - 64	4	13
5	<b>65 - 69</b>	<b>6</b>	19
6	70 - 74	5	24
7	75 - 79	3	27

Position of Me in the interval of classes is number 5, that:

$$Bb = 64.5$$

$$F = 4$$

$$fm = 6$$

$$i = 5$$

$$n = 27$$

$$1/2n = 13.5$$

So :

$$Me = Bb + i \left( \frac{\frac{n}{2} - F}{fm} \right)$$

$$\begin{aligned}
&= 64.5 + 5 \left( \frac{13.5-4}{6} \right) \\
&= 64.5 + 5 (1.58) \\
&= 64.5 + 7.9 \\
&= 72.4
\end{aligned}$$

### 7. Modus

No	Interval of Classes	F	Fk
1	45 - 49	2	2
2	50 - 54	3	5
3	55 - 59	4	9
4	60 - 64	4	13
5	<b>65 - 69</b>	<b>6</b>	19
6	70 - 74	5	24
7	75 - 79	3	27

$$M_o = L + \frac{d_1}{d_1 + d_2} i$$

$$L = 64.5$$

$$d_1 = 2$$

$$d_2 = 1$$

$$i = 5$$

$$\begin{aligned}
M_o &= 64.5 + \frac{2}{2+1} 5 \\
&= 64.5 + 0.6 (5) \\
&= 64.5 + 3 \\
&= 67.5
\end{aligned}$$



## Appendix 12

### HOMOGENEITY TEST (PRE-TEST)

Calculation of parameter to get variant of the first class as experimental class sample by using Semantic Mapping Technique and variant of the second class as control class sample by using conventional method are used homogeneity test by using formula:

$$S^2 = \frac{n\sum xi^2 - (\sum xi)^2}{n(n-1)}$$

Hypotheses:

$$H_0 : \delta_1^2 = \delta_2^2$$

$$H_1 : \delta_1^2 \neq \delta_2^2$$

A. Variant of the VII-3 class is:

NO	Xi	Xi <sup>2</sup>
1	45	2025
2	45	2025
3	45	2025
4	50	2500
5	50	2500
6	50	2500
7	50	2500
8	55	3025
9	60	3600
10	60	3600
11	60	3600
12	60	3600
13	60	3600
14	65	4225
15	65	4225
16	65	4225
17	65	4225

18	65	4225
19	70	4900
20	70	4900
21	70	4900
22	70	4900
23	75	5625
24	75	5625
25	75	5625
	1520	138535

$$n = 25$$

$$\sum xi = 1520$$

$$\sum xi^2 = 137500$$

So:

$$S^2 = \frac{n\sum xi^2 - (\sum xi)^2}{n(n-1)}$$

$$= \frac{25(138535) - (1520)^2}{25(25-1)}$$

$$= \frac{4848725 - 4730625}{25(24)}$$

$$= \frac{118100}{1190}$$

$$= 99.24$$

B. Variant of the VII-4 class is:

NO	Xi	Xi <sup>2</sup>
1	45	2025
2	45	2025
3	50	2500
4	50	2500
5	50	2500
6	55	3025
7	55	3025
8	55	3025
9	55	3025
10	60	3600

11	60	3600
12	60	3600
13	60	3600
14	65	4225
15	65	4225
16	65	4225
17	65	4225
18	65	4225
19	65	4225
20	70	4900
21	70	4900
22	70	4900
23	70	4900
24	70	4900
25	70	4900
26	75	5625
27	75	5625
28	75	5625
	1745	106225

$$n = 28$$

$$\sum xi = 1745$$

$$\sum xi^2 = 106225$$

So:

$$S^2 = \frac{n\sum xi^2 - (\sum xi)^2}{n(n-1)}$$

$$= \frac{28(106225) - (1745)^2}{28(28-1)}$$

$$= \frac{2868075 - 2805625}{28(27)}$$

$$= \frac{62450}{702}$$

$$= 88.96$$

The Formula was used to test hypothesis was:

1. VII-3 and VII- 4 :

$$F = \frac{\textit{The Biggest Variant}}{\textit{The Smallest Variant}}$$

So:

$$F = \frac{99.24}{88.96}$$
$$= 1.16$$

After doing the calculation, researcher found that  $F_{\text{count}} = 1.16$  with  $\alpha$  5 % and dk = 25 from the distribution list F, researcher found that  $F_{\text{table}} = 2.042$ , cause  $F_{\text{count}} < F_{\text{table}}$  ( $1.16 < 2.042$ ). So, there is no difference the variant between the VII -3 class and VII-4 class. It means that the variant is homogenous.

### Appendix 13

#### RESULT OF THE NORMALITY TEST OF EXPERIMENT CLASS IN POST-TEST

1. The score of experiment class in post test from low score to high score:

65	65	70	70	75	75	75
75	80	80	80	80	80	80
80	85	85	85	85	90	
90	90	95	95	95		

2. High = 95

Low = 65

Range = High – Low

$$= 95 - 65$$

$$= 30$$

3. Total of Classes =  $1 + 3,3 \log (n)$

$$= 1 + 3,3 \log (35)$$

$$= 1 + 3,3 (1.54)$$

$$= 1 + 5.08$$

$$= 6.08$$

$$= 6$$

4. Length of Classes =  $\frac{\text{range}}{\text{total of class}} = \frac{30}{6} = 5$

5. Mean

Interval Class	F	X	x'	fx'	x' <sup>2</sup>	fx' <sup>2</sup>
65 – 69	2	67	3	6	9	18
70 – 74	4	72	2	8	4	16
75 – 79	5	77	1	5	1	5
80 – 84	10	82	0	0	0	0
85 – 89	6	87	-1	-6	1	6
90 – 94	5	92	-2	-10	4	20
95 – 99	3	97	-3	-9	9	27

$i = 5$	35	-		-6		92
---------	----	---	--	----	--	----

$$M_x = M^1 + i \frac{\sum fx^1}{N}$$

$$= 82 + 5 \left( \frac{-6}{35} \right)$$

$$= 82 + 5(-0.17)$$

$$= 82 + (-0.85)$$

$$= 70.55$$

$$SD_t = i \sqrt{\frac{\sum fx'^2}{N} - \left[ \frac{\sum fx'}{N} \right]^2}$$

$$= \sqrt[5]{\frac{85}{35} - \left( \frac{-6}{35} \right)^2}$$

$$= \sqrt[5]{2.42 - (-0.17)^2}$$

$$= \sqrt[5]{2.42 - 0.028}$$

$$= \sqrt[5]{2.392}$$

$$= 5 (1.54)$$

$$= 8$$

Table of Normality Data Test with Chi Kuadrat Formula

Interval of Score	Real Upper Limit	Z – Score	Limit of Large of the Area	Large of area	$f_h$	$f_0$	$\frac{(f_0-f_h)}{f_h}$
95–99	99.5	2.38	0.4913	0.03	1.05	3	2.00
90– 94	94.5	1.73	0.4582	0.10	3.5	4	0.14
85 – 89	89.5	1.08	0.3599	0.19	6.65	4	-0.39
80 – 84	84.5	0.43	0.1664	-0.25	-8.75	10	0.14
75 – 79	79.5	-0.21	0.41683	0.22	7.7	6	-0.22
70 – 74	74.5	-0.86	0.19489	0.12	4.2	5	0.19
65 – 69	69.5	-1.51	0.06552	0.05	1.4	2	0.42
	64.5	-2.16	0.01539				
						$X^2$	2.28

Based on table above, researcher found that  $x^2_{count} = 2.28$  while  $x^2_{table} = 5.991$  cause  $x^2_{count} < x^2_{table}$  ( $2.28 < 5.991$ ) with degree of freedom  $dk = 5 - 3 = 2$  and significant level  $\alpha = 5\%$ . So distribution of experiment class (Post Test) was normal.

## 6. Median

No	Interval of Classes	F	Fk
1	65 - 69	2	2
2	70 - 74	4	6
3	75 - 79	5	11
4	80 - 84	10	21
5	85 - 89	6	27
6	90 - 94	5	32
7	95 - 99	3	35

Position of Me in the interval of classes is number 4, that:

$$Bb = 79.5$$

$$F = 5$$

$$fm = 10$$

$$i = 5$$

$$n = 35$$

$$1/2n = 17.5$$

So :

$$Me = Bb + i \left( \frac{n/2 - F}{fm} \right)$$

$$= 79.5 + 5 \left( \frac{17.5 - 5}{10} \right)$$

$$= 79.5 + 5(1.25)$$

$$= 79.5 + 6.25$$

$$= 85.75$$

## 7. Modus



No	Interval of Classes	F	fk
1	65 - 69	2	2
2	70 - 74	4	6
3	75 - 79	5	11
4	80 - 84	10	21
5	85 - 89	6	27
6	90 - 94	5	32
7	95 - 99	3	35

$$M_o = L + \frac{d_1}{d_1 + d_2} i$$

$$L = 79.5$$

$$d_1 = 5$$

$$d_2 = 6$$

$$i = 5$$

$$\begin{aligned} M_o &= 79.5 + \frac{5}{5+6} 5 \\ &= 79.5 + 0.45(5) \\ &= 79.5 + 2.25 \\ &= 85.2 \end{aligned}$$

## Appendix 14

### RESULT OF THE NORMALITY TEST OF CONTROL CLASS IN POST TEST

1. The score of control class in post test from low score to high score:

50	50	55	55	60	60	60	65	65	
65	65	65	65	65	70	70	70	70	
70	75	75	75	75	75	80	80	80	80

2. High = 80

Low = 50

Range = High – Low  
= 80 – 50  
= 30

3. Total of Classes =  $1 + 3,3 \log (n)$   
=  $1 + 3,3 \log (27)$   
=  $1 + 3,3 ( 1.43)$   
=  $1 + 4.7$   
= 5.7  
= 6

4. Length of Classes =  $\frac{range}{total\ of\ class} = \frac{30}{6} = 5$

5. Mean

Interval Class	F	X	x'	fx'	x' <sup>2</sup>	fx' <sup>2</sup>
50 – 54	2	52	3	6	9	18
55 – 59	2	57	2	4	4	8
60 – 64	3	62	1	3	1	3
65 – 69	7	<b>67</b>	0	0	0	0
70 – 74	5	72	-1	-5	1	5
75 – 79	5	77	-2	-10	4	20
80 – 84	3	82	-3	-9	9	27
<i>i</i> = 5	27	-	-	-11	-	81

$$\begin{aligned}
M_x &= M^1 + i \frac{\sum fx^1}{N} \\
&= 67 + 5 \left( \frac{-11}{27} \right) \\
&= 67 + 5(-0.40) \\
&= 67 + (-2) \\
&= 65
\end{aligned}$$

$$\begin{aligned}
SD_t &= i \sqrt{\frac{\sum fx'^2}{N} - \left[ \frac{\sum fx'}{N} \right]^2} \\
&= 5 \sqrt{\frac{81}{27} - \left( \frac{-11}{27} \right)^2} \\
&= 5 \sqrt{3 - (-0.40)^2} \\
&= 5 \sqrt{3 - (-0.16)} \\
&= 5 \sqrt{2.84} \\
&= 5 (1.68) \\
&= 8.4
\end{aligned}$$

Table of Normality Data Test with Chi Kuadrat Formula

Interval of Score	Real Upper Limit	Z - Score	Limit of Large of the Area	Large of area	$f_h$	$f_0$	$\frac{(f_0 - f_h)}{f_h}$
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80 - 84	84.5	2.32	0.4898	0.03	0.81	3	2.70	
75 - 79	79.5	1.72	0.4573	0.09	2.43	5	1.05	
70 - 74	74.5	1.11	0.3665	0.16	4.32	5	0.15	
65 - 69	69.5	0.53	0.2019	-0.27	-7.29	7	-0.03	
60 - 64	64.5	-0.05	0.48006	0.22	5.94	3	-0.49	
55 - 59	59.5	-0.65	0.25785	0.15	4.05	2	-0.50	
50 - 54	54.5	-1.25	0.10565	0.06	1.62	2	0.23	
	50.5	-1.70	0.04457					
$\chi^2$								3.11

Based on table above, researcher found that  $\chi^2_{\text{count}} = 3.11$  while  $\chi^2_{\text{table}} = 5.991$  cause  $\chi^2_{\text{count}} < \chi^2_{\text{table}}$  ( $3.11 < 5.991$ ) with degree of freedom  $dk = 5 - 3 = 2$  and significant level  $\alpha = 5\%$ . So distribution of control class (Post-test) was normal.

#### 6. Median

No	Interval Class	F	fk
1	50 - 54	2	2
2	55 - 59	2	4
3	60 - 64	3	7
4	65 - 69	7	14
5	70 - 74	5	19
6	75 - 79	5	24
7	80 - 84	3	27

Position of Me in the interval of classes is number 2, that:

$$Bb = 64.5$$

$$F = 3$$

$$fm = 7$$

$$i = 5$$

$$n = 27$$

$$1/2n = 13.5$$

So :

$$Me = Bb + i \left( \frac{n/2 - F}{fm} \right)$$

$$= 64.5 + 5 \left( \frac{13.5 - 3}{7} \right)$$

$$= 64.5 + 5 (1.5)$$

$$= 64.5 + 7.5$$

$$= 72$$

7. Modus

No	Interval Class	F	fk
1	50 - 54	2	2
2	55 - 59	2	4
3	60 - 64	3	7
4	65 - 69	7	14
5	70 - 74	5	19
6	75 - 79	5	24
7	80 - 84	3	27

$$M_o = L + \frac{d_1}{d_1 + d_2} i$$

$$L = 64.5$$

$$d_1 = 3$$

$$d_2 = 5$$

$$i = 5$$

$$\begin{aligned} M_0 &= 64.5 + \frac{3}{3+5} 5 \\ &= 64.5 + 0.37 (5) \\ &= 64.5 + 1.85 \\ &= 66.35 \end{aligned}$$

## Appendix 15

### HOMOGENEITY TEST (POST TEST)

#### 1. EXPERIMENT CLASS

NO	$X_i$	$X_i^2$
1	85	7225
2	90	8100
3	80	6400
4	90	8100
5	85	7225
6	75	5625
7	80	6400
8	75	5625
9	80	6400
10	75	5625
11	80	6400
12	75	5625
13	80	6400
14	85	7225
15	95	9025
16	85	7225
17	90	8100
18	80	6400
19	80	6400
20	65	4225
21	95	9025
22	90	8100
23	70	4900
24	80	6400
25	70	4900
	2025	230225

$$n = 25$$
$$\sum x_i = 2025$$
$$\sum x_i^2 = 230225$$

So:

$$\begin{aligned}
S^2 &= \frac{n\sum xi^2 - (\sum xi)^2}{n(n-1)} \\
&= \frac{25(230225) - (2825)^2}{25(25-1)} \\
&= \frac{8057875 - 7980625}{24(24)} \\
&= \frac{77250}{1190} \\
&= 64.91
\end{aligned}$$

## 2. CONTROL CLASS

NO	Xi	Xi <sup>2</sup>
1	75	5625
2	60	3600
3	80	6400
4	70	4900
5	75	5625
6	50	2500
7	65	4225
8	55	3025
9	70	4900
10	65	4225
11	75	5625
12	70	4900
13	75	5625
14	70	4900
15	60	3600
16	75	5625
17	50	2500
18	65	4225
19	65	4225
20	60	3600
21	80	6400
22	65	4225
23	70	4900
24	65	3600
25	80	6400



26	55	3025
27	65	3600
28	70	4900
	1885	123250

$$n = 28$$

$$\sum xi = 1885$$

$$\sum xi^2 = 123250$$

So:

$$S^2 = \frac{n\sum xi^2 - (\sum xi)^2}{n(n-1)}$$

$$= \frac{27(123250) - (1810)^2}{28(28-1)}$$

$$= \frac{3327750 - 3276100}{28(27)}$$

$$= \frac{51650}{702}$$

$$= 73.57$$

The Formula was used to test hypothesis was:

2. VII-3 and VII-4 :

$$F = \frac{\textit{The Biggest Variant}}{\textit{The Smallest Variant}}$$

So:

$$F = \frac{73.57}{64.91}$$

$$= 1.13$$

After doing the calculation, researcher found that  $F_{\text{count}} = 1.09$  with  $\alpha$  5 % and dk = 25 & 28 from the distribution list F, researcher found that  $F_{\text{table}} = 2.042$  &  $2.052$ , cause  $F_{\text{count}} < F_{\text{table}}$  ( $1.09 < 2.042$  &  $2.052$ ). So, there is no difference the variant between the VII-3 class and VII-4 class. It means that the variant is homogenous.

## Appendix 16

### $T_{\text{test}}$ OF THE BOTH AVERAGES IN PRE-TEST

The formula was used to analyse homogeneity test of the both averages was t-test, that:

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{1}{n_1} + \frac{1}{n_2}}} \text{ with } S = \sqrt{\frac{(n_1 - 1)S_1^2 + (n_2 - 2)S_2^2}{n_1 + n_2 - 2}}$$

So:

$$\begin{aligned} S &= \sqrt{\frac{(25-1) 99.24 + (28-2)88.96}{25+28-2}} \\ &= \sqrt{\frac{24 (99.24) + 26 (88.96)}{55}} \\ &= \sqrt{\frac{3374.16 + 2224}{60}} \\ &= \sqrt{\frac{5598.16}{60}} \\ &= \sqrt{93.30} \\ &= 9.65 \end{aligned}$$

So:

$$\begin{aligned} t &= \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{1}{n_1} + \frac{1}{n_2}}} \\ t &= \frac{70.85 - 69.85}{9.65 \sqrt{\frac{1}{35} + \frac{1}{27}}} \\ &= \frac{1}{9.65 \sqrt{0.028 + 0.037}} \end{aligned}$$

$$\begin{aligned}
&= \frac{1}{9.65 (0.065)} \\
&= \frac{1}{0.627} \\
&= 1.59
\end{aligned}$$

Based on researcher calculation result of the homogeneity test of the both averages, researcher found that  $t_{\text{count}} = 1.59$  with opportunity  $(1 - \alpha) = 1 - 5\% = 95\%$  and  $dk = n_1 + n_2 - 2 = 25 + 28 - 2 = 51$ , researcher found that  $t_{\text{table}} = 2.000$ , cause  $t_{\text{count}} < t_{\text{table}} (1.59 < 2.000)$ . So,  $H_0$  is accepted, it means no difference the average between the first class as experimental class and the second class as control class in this research.

## Appendix 17

### T<sub>test</sub> OF THE BOTH AVERAGES IN POST – TEST

The formula was used to analyse homogeneity test of the both averages was t-test, that:

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{1}{n_1} + \frac{1}{n_2}}} \text{ with } S = \sqrt{\frac{(n_1 - 1)S_1^2 + (n_2 - 2)S_2^2}{n_1 + n_2 - 2}}$$

So:

$$\begin{aligned} S &= \sqrt{\frac{(35-1)64.91+(27-2)73.57}{25+28-2}} \\ &= \sqrt{\frac{35(64.91)+27(73.57)}{51}} \\ &= \sqrt{\frac{2271.85+1986.39}{51}} \\ &= \sqrt{\frac{4258.24}{51}} \\ &= \sqrt{70.97} \\ &= 8.42 \end{aligned}$$

So:

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{1}{n_1} + \frac{1}{n_2}}}$$

$$\begin{aligned}
t &= \frac{82.7 - 65}{8.42 \sqrt{\frac{1}{35} + \frac{1}{27}}} \\
&= \frac{17.7}{8.42 \sqrt{0.028 + 0.037}} \\
&= \frac{17.7}{8.42 (0.065)} \\
&= \frac{17.7}{0.547} \\
&= 32.35
\end{aligned}$$

Based on researcher calculation result of the homogeneity test of the both averages, researcher found that  $t_{\text{count}} = 32.35$  with opportunity  $(1 - \alpha) = 1 - 5\% = 95\%$  and  $dk = n_1 + n_2 - 2 = 25 + 28 - 2 = 51$ , researcher found that  $t_{\text{table}} = 2.000$ , cause  $t_{\text{count}} > t_{\text{table}} (32.35 > 2.000)$ . So,  $H_a$  was accepted, it means there was the difference average between the first class as experimental class and the second class as control class in this research.

## Appendix 18

### Chi-Square Table

dk	Significant level					
	50%	30%	20%	10%	5%	1%
1	0,455	1,074	1,642	2,706	3,841	6,635
2	1,386	2,408	3,219	4,605	5,991	9,210
3	2,366	3,665	4,642	6,251	7,815	11,341
4	3,357	4,878	5,989	7,779	9,488	13,277
5	4,351	6,064	7,289	9,236	11,070	15,086
6	5,348	7,231	8,558	10,645	12,592	16,812
7	6,346	8,383	9,803	12,017	14,067	18,475
8	7,344	9,524	11,030	13,362	15,507	20,090
9	8,343	10,656	12,242	14,684	16,919	21,666
10	9,342	11,781	13,442	15,987	18,307	23,209
11	10,341	12,899	14,631	17,275	19,675	24,725
12	11,340	14,011	15,812	18,549	21,026	26,217
13	12,340	15,119	16,985	19,812	22,362	27,688
14	13,339	16,222	18,151	21,064	23,685	29,141
15	14,339	17,222	19,311	22,307	24,996	30,578
16	15,338	18,418	20,465	23,542	26,296	32,000
17	16,338	19,511	21,615	24,769	27,587	33,409
18	17,338	20,601	22,760	25,989	28,869	34,805
19	18,338	21,689	23,900	27,204	30,144	36,191
20	19,337	22,775	25,038	28,412	31,410	37,566
21	20,337	23,858	26,171	29,615	32,671	38,932
22	21,337	24,939	27,301	30,813	33,924	40,289
23	22,337	26,018	28,429	32,007	35,172	41,638
24	23,337	27,096	29,553	33,196	35,415	42,980
25	24,337	28,172	30,675	34,382	37,652	44,314
26	25,336	29,246	31,795	35,563	38,885	45,642
27	26,336	30,319	32,912	36,741	40,113	46,963
28	27,336	31,391	34,027	37,916	41,337	48,278
29	28,336	32,461	35,139	39,087	42,557	49,588
30	29,336	33,530	36,250	40,256	43,773	50,892

## Appendix 19

### Z-Table

<b>Z</b>	<b>0.00</b>	<b>0.01</b>	<b>0.02</b>	<b>0.03</b>	<b>0.04</b>	<b>0.05</b>	<b>0.06</b>	<b>0.07</b>	<b>0.08</b>	<b>0.09</b>
<b>-3.9</b>	0.00005	0.00005	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00003	0.00003
<b>-3.8</b>	0.00007	0.00007	0.00007	0.00006	0.00006	0.00006	0.00006	0.00005	0.00005	0.00005
<b>-3.7</b>	0.00011	0.00010	0.00010	0.00010	0.00009	0.00009	0.00008	0.00008	0.00008	0.00008
<b>-3.6</b>	0.00016	0.00015	0.00015	0.00014	0.00014	0.00013	0.00013	0.00012	0.00012	0.00011
<b>-3.5</b>	0.00023	0.00022	0.00022	0.00021	0.00020	0.00019	0.00019	0.00018	0.00017	0.00017
<b>-3.4</b>	0.00034	0.00032	0.00031	0.00030	0.00029	0.00028	0.00027	0.00026	0.00025	0.00024
<b>-3.3</b>	0.00048	0.00047	0.00045	0.00043	0.00042	0.00040	0.00039	0.00038	0.00036	0.00035
<b>-3.2</b>	0.00069	0.00066	0.00064	0.00062	0.00060	0.00058	0.00056	0.00054	0.00052	0.00050
<b>-3.1</b>	0.00097	0.00094	0.00090	0.00087	0.00084	0.00082	0.00079	0.00076	0.00074	0.00071
<b>-3.0</b>	0.00135	0.00131	0.00126	0.00122	0.00118	0.00114	0.00111	0.00107	0.00104	0.00100
<b>-2.9</b>	0.00187	0.00181	0.00175	0.00169	0.00164	0.00159	0.00154	0.00149	0.00144	0.00139
<b>-2.8</b>	0.00256	0.00248	0.00240	0.00233	0.00226	0.00219	0.00212	0.00205	0.00199	0.00193
<b>-2.7</b>	0.00347	0.00336	0.00326	0.00317	0.00307	0.00298	0.00289	0.00280	0.00272	0.00264
<b>-2.6</b>	0.00466	0.00453	0.00440	0.00427	0.00415	0.00402	0.00391	0.00379	0.03680	0.00357
<b>-2.5</b>	0.00621	0.00604	0.00587	0.00570	0.00554	0.00539	0.00523	0.00508	0.00494	0.00480
<b>-2.4</b>	0.00820	0.00798	0.00776	0.00755	0.00734	0.00714	0.00695	0.00676	0.00657	0.00639
<b>-2.3</b>	0.01072	0.01044	0.01017	0.00990	0.00964	0.00939	0.00914	0.00889	0.00866	0.00842
<b>-2.2</b>	0.01390	0.01355	0.01321	0.01287	0.01255	0.01222	0.01191	0.01160	0.01130	0.01101
<b>-2.1</b>	0.01786	0.01743	0.01700	0.01659	0.01618	0.01578	0.01539	0.01500	0.01463	0.01426
<b>-2.0</b>	0.02275	0.02222	0.02169	0.02118	0.02068	0.02018	0.01970	0.01923	0.01876	0.01831
<b>-1.9</b>	0.02872	0.02807	0.02743	0.02680	0.02619	0.02559	0.02500	0.02442	0.02385	0.02330



<b>-1.8</b>	0.03593	0.03515	0.03438	0.03362	0.03288	0.03216	0.03144	0.03074	0.03005	0.02938
<b>-1.7</b>	0.04457	0.04363	0.04272	0.04182	0.04093	0.04006	0.03920	0.03836	0.03754	0.03673
<b>-1.6</b>	0.05480	0.05370	0.05262	0.05155	0.05050	0.04947	0.04846	0.04746	0.04648	0.04551
<b>-1.5</b>	0.06681	0.06552	0.06426	0.06301	0.06178	0.06057	0.05938	0.05821	0.05705	0.05592
<b>-1.4</b>	0.08076	0.07927	0.07780	0.07636	0.07493	0.07353	0.07215	0.07078	0.06944	0.06811
<b>-1.3</b>	0.09680	0.09510	0.09342	0.09176	0.09012	0.08851	0.08691	0.08534	0.08379	0.08226
<b>-1.2</b>	0.11507	0.11314	0.11123	0.10935	0.10749	0.10565	0.10383	0.10204	0.10027	0.09853
<b>-1.1</b>	0.13567	0.13350	0.13136	0.12924	0.12714	0.12507	0.12302	0.12100	0.11900	0.11702
<b>-1.0</b>	0.15866	0.15625	0.15386	0.15151	0.14917	0.14686	0.14457	0.14231	0.14007	0.13786
<b>-0.9</b>	0.18406	0.18141	0.17879	0.17619	0.17361	0.17106	0.16853	0.16602	0.16354	0.16109
<b>-0.8</b>	0.21186	0.20897	0.20611	0.20327	0.20045	0.19766	0.19489	0.19215	0.18943	0.18673
<b>-0.7</b>	0.24196	0.23885	0.23576	0.23270	0.22965	0.22663	0.22363	0.22065	0.21770	0.21476
<b>-0.6</b>	0.27425	0.27093	0.26763	0.26435	0.26109	0.25785	0.25463	0.25143	0.24825	0.24510
<b>-0.5</b>	0.30854	0.30503	0.30153	0.29806	0.29460	0.29116	0.28774	0.28434	0.28096	0.27760
<b>-0.4</b>	0.34458	0.34090	0.33724	0.33360	0.32997	0.32636	0.32276	0.31918	0.31561	0.31207
<b>-0.3</b>	0.38209	0.37828	0.37448	0.37070	0.36693	0.36317	0.35942	0.35569	0.35197	0.34827
<b>-0.2</b>	0.42074	0.41683	0.41294	0.40905	0.40517	0.40129	0.39743	0.39358	0.38974	0.38591
<b>-0.1</b>	0.46017	0.45620	0.45224	0.44828	0.44433	0.44038	0.43644	0.43251	0.42858	0.42465
<b>-0.0</b>	0.50000	0.49601	0.49202	0.48803	0.48405	0.48006	0.47608	0.47210	0.46812	0.46414

**Z-Table**

<b>z</b>	<b>0.00</b>	<b>0.01</b>	<b>0.02</b>	<b>0.03</b>	<b>0.04</b>	<b>0.05</b>	<b>0.06</b>	<b>0.07</b>	<b>0.08</b>	<b>0.09</b>
<b>0.0</b>	0.0000	0.0040	0.0080	0.0120	0.0160	0.0199	0.0239	0.0279	0.0319	0.0359
<b>0.1</b>	0.0398	0.0438	0.0478	0.0517	0.0557	0.0596	0.0636	0.0675	0.0714	0.0753
<b>0.2</b>	0.0793	0.0832	0.0871	0.0910	0.0948	0.0987	0.1026	0.1064	0.1103	0.1141
<b>0.3</b>	0.1179	0.1217	0.1255	0.1293	0.1331	0.1368	0.1406	0.1443	0.1480	0.1517
<b>0.4</b>	0.1554	0.1591	0.1628	0.1664	0.1700	0.1736	0.1772	0.1808	0.1844	0.1879
<b>0.5</b>	0.1915	0.1950	0.1985	0.2019	0.2054	0.2088	0.2123	0.2157	0.2190	0.2224
<b>0.6</b>	0.2257	0.2291	0.2324	0.2357	0.2389	0.2422	0.2454	0.2486	0.2517	0.2549
<b>0.7</b>	0.2580	0.2611	0.2642	0.2673	0.2704	0.2734	0.2764	0.2794	0.2823	0.2852
<b>0.8</b>	0.2881	0.2910	0.2939	0.2967	0.2995	0.3023	0.3051	0.3078	0.3106	0.3133
<b>0.9</b>	0.3159	0.3186	0.3212	0.3238	0.3264	0.3289	0.3315	0.3340	0.3365	0.3389
<b>1.0</b>	0.3413	0.3438	0.3461	0.3485	0.3508	0.3531	0.3554	0.3577	0.3599	0.3621
<b>1.1</b>	0.3643	0.3665	0.3686	0.3708	0.3729	0.3749	0.3770	0.3790	0.3810	0.3830
<b>1.2</b>	0.3849	0.3869	0.3888	0.3907	0.3925	0.3944	0.3962	0.3980	0.3997	0.4015
<b>1.3</b>	0.4032	0.4049	0.4066	0.4082	0.4099	0.4115	0.4131	0.4147	0.4162	0.4177
<b>1.4</b>	0.4192	0.4207	0.4222	0.4236	0.4251	0.4265	0.4279	0.4292	0.4306	0.4319
<b>1.5</b>	0.4332	0.4345	0.4357	0.4370	0.4382	0.4394	0.4406	0.4418	0.4429	0.4441
<b>1.6</b>	0.4452	0.4463	0.4474	0.4484	0.4495	0.4505	0.4515	0.4525	0.4535	0.4545
<b>1.7</b>	0.4554	0.4564	0.4573	0.4582	0.4591	0.4599	0.4608	0.4616	0.4625	0.4633
<b>1.8</b>	0.4641	0.4649	0.4656	0.4664	0.4671	0.4678	0.4686	0.4693	0.4699	0.4706
<b>1.9</b>	0.4713	0.4719	0.4726	0.4732	0.4738	0.4744	0.4750	0.4756	0.4761	0.4767
<b>2.0</b>	0.4772	0.4778	0.4783	0.4788	0.4793	0.4798	0.4803	0.4808	0.4812	0.4817
<b>2.1</b>	0.4821	0.4826	0.4830	0.4834	0.4838	0.4842	0.4846	0.4850	0.4854	0.4857
<b>2.2</b>	0.4861	0.4864	0.4868	0.4871	0.4875	0.4878	0.4881	0.4884	0.4887	0.4890
<b>2.3</b>	0.4893	0.4896	0.4898	0.4901	0.4904	0.4906	0.4909	0.4911	0.4913	0.4916
<b>2.4</b>	0.4918	0.4920	0.4922	0.4925	0.4927	0.4929	0.4931	0.4932	0.4934	0.4936
<b>2.5</b>	0.4938	0.4940	0.4941	0.4943	0.4945	0.4946	0.4948	0.4949	0.4951	0.4952



**APPENDIX 20****Percentage Points of the t Distribution**

<b>Pr df</b>	<b>0.25</b>	<b>0.10</b>	<b>0.05</b>	<b>0.025</b>	<b>0.01</b>	<b>0.005</b>	<b>0.001</b>
	<b>0.50</b>	<b>0.20</b>	<b>0.10</b>	<b>0.050</b>	<b>0.02</b>	<b>0.010</b>	<b>0.002</b>
<b>1</b>	1.00000	3.07768	6.31375	12.70620	31.82052	63.65674	318.30884
<b>2</b>	0.81650	1.88562	2.91999	4.30265	6.96456	9.92484	22.32712
<b>3</b>	0.76489	1.63774	2.35336	3.18245	4.54070	5.84091	10.21453
<b>4</b>	0.74070	1.53321	2.13185	2.77645	3.74695	4.60409	7.17318
<b>5</b>	0.72669	1.47588	2.01505	2.57058	3.36493	4.03214	5.89343
<b>6</b>	0.71756	1.43976	1.94318	2.44691	3.14267	3.70743	5.20763
<b>7</b>	0.71114	1.41492	1.89458	2.36462	2.99795	3.49948	4.78529
<b>8</b>	0.70639	1.39682	1.85955	2.30600	2.89646	3.35539	4.50079
<b>9</b>	0.70272	1.38303	1.83311	2.26216	2.82144	3.24984	4.29681
<b>10</b>	0.69981	1.37218	1.81246	2.22814	2.76377	3.16927	4.14370
<b>11</b>	0.69745	1.36343	1.79588	2.20099	2.71808	3.10581	4.02470
<b>12</b>	0.69548	1.35622	1.78229	2.17881	2.68100	3.05454	3.92963
<b>13</b>	0.69383	1.35017	1.77093	2.16037	2.65031	3.01228	3.85198
<b>14</b>	0.69242	1.34503	1.76131	2.14479	2.62449	2.97684	3.78739
<b>15</b>	0.69120	1.34061	1.75305	2.13145	2.60248	2.94671	3.73283
<b>16</b>	0.69013	1.33676	1.74588	2.11991	2.58349	2.92078	3.68615
<b>17</b>	0.68920	1.33338	1.73961	2.10982	2.56693	2.89823	3.64577
<b>18</b>	0.68836	1.33039	1.73406	2.10092	2.55238	2.87844	3.61048
<b>19</b>	0.68762	1.32773	1.72913	2.09302	2.53948	2.86093	3.57940
<b>20</b>	0.68695	1.32534	1.72472	2.08596	2.52798	2.84534	3.55181
<b>21</b>	0.68635	1.32319	1.72074	2.07961	2.51765	2.83136	3.52715
<b>22</b>	0.68581	1.32124	1.71714	2.07387	2.50832	2.81876	3.50499
<b>23</b>	0.68531	1.31946	1.71387	2.06866	2.49987	2.80734	3.48496
<b>24</b>	0.68485	1.31784	1.71088	2.06390	2.49216	2.79694	3.46678
<b>25</b>	0.68443	1.31635	1.70814	2.05954	2.48511	2.78744	3.45019
<b>26</b>	0.68404	1.31497	1.70562	2.05553	2.47863	2.77871	3.43500
<b>27</b>	0.68368	1.31370	1.70329	2.05183	2.47266	2.77068	3.42103
<b>28</b>	0.68335	1.31253	1.70113	2.04841	2.46714	2.76326	3.40816
<b>29</b>	0.68304	1.31143	1.69913	2.04523	2.46202	2.75639	3.39624
<b>30</b>	0.68276	1.31042	1.69726	2.04227	2.45726	2.75000	3.38518
<b>31</b>	0.68249	1.30946	1.69552	2.03951	2.45282	2.74404	3.37490
<b>32</b>	0.68223	1.30857	1.69389	2.03693	2.44868	2.73848	3.36531
<b>33</b>	0.68200	1.30774	1.69236	2.03452	2.44479	2.73328	3.35634
<b>34</b>	0.68177	1.30695	1.69092	2.03224	2.44115	2.72839	3.34793
<b>35</b>	0.68156	1.30621	1.68957	2.03011	2.43772	2.72381	3.34005

<b>36</b>	0.68137	1.30551	1.68830	2.02809	2.43449	2.71948	3.33262
<b>37</b>	0.68118	1.30485	1.68709	2.02619	2.43145	2.71541	3.32563
<b>38</b>	0.68100	1.30423	1.68595	2.02439	2.42857	2.71156	3.31903
<b>39</b>	0.68083	1.30364	1.68488	2.02269	2.42584	2.70791	3.31279
<b>40</b>	0.68067	1.30308	1.68385	2.02108	2.42326	2.70446	3.30688

**Percentage Points of the t Distribution**

<b>Pr df</b>	<b>0.25</b>	<b>0.10</b>	<b>0.05</b>	<b>0.025</b>	<b>0.01</b>	<b>0.005</b>	<b>0.001</b>
	<b>0.50</b>	<b>0.20</b>	<b>0.10</b>	<b>0.050</b>	<b>0.02</b>	<b>0.010</b>	<b>0.002</b>
<b>41</b>	0.68052	1.30254	1.68288	2.01954	2.42080	2.70118	3.30127
<b>42</b>	0.68038	1.30204	1.68195	2.01808	2.41847	2.69807	3.29595
<b>43</b>	0.68024	1.30155	1.68107	2.01669	2.41625	2.69510	3.29089
<b>44</b>	0.68011	1.30109	1.68023	2.01537	2.41413	2.69228	3.28607
<b>45</b>	0.67998	1.30065	1.67943	2.01410	2.41212	2.68959	3.28148
<b>46</b>	0.67986	1.30023	1.67866	2.01290	2.41019	2.68701	3.27710
<b>47</b>	0.67975	1.29982	1.67793	2.01174	2.40835	2.68456	3.27291
<b>48</b>	0.67964	1.29944	1.67722	2.01063	2.40658	2.68220	3.26891
<b>49</b>	0.67953	1.29907	1.67655	2.00958	2.40489	2.67995	3.26508
<b>50</b>	0.67943	1.29871	1.67591	2.00856	2.40327	2.67779	3.26141
<b>51</b>	0.67933	1.29837	1.67528	2.00758	2.40172	2.67572	3.25789
<b>52</b>	0.67924	1.29805	1.67469	2.00665	2.40022	2.67373	3.25451
<b>53</b>	0.67915	1.29773	1.67412	2.00575	2.39879	2.67182	3.25127
<b>54</b>	0.67906	1.29743	1.67356	2.00488	2.39741	2.66998	3.24815
<b>55</b>	0.67898	1.29713	1.67303	2.00404	2.39608	2.66822	3.24515
<b>56</b>	0.67890	1.29685	1.67252	2.00324	2.39480	2.66651	3.24226
<b>57</b>	0.67882	1.29658	1.67203	2.00247	2.39357	2.66487	3.23948
<b>58</b>	0.67874	1.29632	1.67155	2.00172	2.39238	2.66329	3.23680
<b>59</b>	0.67867	1.29607	1.67109	2.00100	2.39123	2.66176	3.23421
<b>60</b>	0.67860	1.29582	1.67065	2.00030	2.39012	2.66028	3.23171
<b>61</b>	0.67853	1.29558	1.67022	1.99962	2.38905	2.65886	3.22930
<b>62</b>	0.67847	1.29536	1.66980	1.99897	2.38801	2.65748	3.22696
<b>63</b>	0.67840	1.29513	1.66940	1.99834	2.38701	2.65615	3.22471
<b>64</b>	0.67834	1.29492	1.66901	1.99773	2.38604	2.65485	3.22253
<b>65</b>	0.67828	1.29471	1.66864	1.99714	2.38510	2.65360	3.22041
<b>66</b>	0.67823	1.29451	1.66827	1.99656	2.38419	2.65239	3.21837
<b>67</b>	0.67817	1.29432	1.66792	1.99601	2.38330	2.65122	3.21639
<b>68</b>	0.67811	1.29413	1.66757	1.99547	2.38245	2.65008	3.21446
<b>69</b>	0.67806	1.29394	1.66724	1.99495	2.38161	2.64898	3.21260
<b>70</b>	0.67801	1.29376	1.66691	1.99444	2.38081	2.64790	3.21079
<b>71</b>	0.67796	1.29359	1.66660	1.99394	2.38002	2.64686	3.20903

<b>72</b>	0.67791	1.29342	1.66629	1.99346	2.37926	2.64585	3.20733
<b>73</b>	0.67787	1.29326	1.66600	1.99300	2.37852	2.64487	3.20567
<b>74</b>	0.67782	1.29310	1.66571	1.99254	2.37780	2.64391	3.20406
<b>75</b>	0.67778	1.29294	1.66543	1.99210	2.37710	2.64298	3.20249
<b>76</b>	0.67773	1.29279	1.66515	1.99167	2.37642	2.64208	3.20096
<b>77</b>	0.67769	1.29264	1.66488	1.99125	2.37576	2.64120	3.19948
<b>78</b>	0.67765	1.29250	1.66462	1.99085	2.37511	2.64034	3.19804
<b>79</b>	0.67761	1.29236	1.66437	1.99045	2.37448	2.63950	3.19663
<b>80</b>	0.67757	1.29222	1.66412	1.99006	2.37387	2.63869	3.19526
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**APPENDIX X**









## **CURRICULUM VITAE**

### **A. Identity**

Name : Zulpadli Ardiansah  
Reg. No. : 12 340 0082  
Place and Birth : Padangsidempuan, January, 2<sup>th</sup> 1994  
Sex : Male  
Religion : Islam  
Address : Jalan Kolonel H. M. Nurdin, Desa Huta Lombang  
Lubis Kecamatan Panyabungan Kota, Kabupaten  
Mandailing Natal

### **B. Parents**

Father's Name : Alm. Manaon Lubis  
Mother's Name : Khadijah Mardia

### **C. Educational Background**

1. Elementary School : SD Negeri 145606 Panyabungan (2006)
2. Junior High School : SMP Negeri 2 Panyabungan (2009)
3. Senior High School : SMK Negeri 2 Panyabungan (2012)
4. Institute : IAIN Padangsidempuan (2019)



PEMERINTAH KOTA PADANGSIDIMPUAN  
DINAS PENDIDIKAN  
**SMP NEGERI 3 PADANGSIDIMPUAN**  
NPSN : 10212236 NSS : 201072001003  
JL. K. H. A. DAHLAN NO. 39 TELP. (0634) 21521  
**PADANGSIDIMPUAN UTARA**

KODE POS : 22171

**SURAT KETERANGAN**

Nomor : 421.3 / 120 / SMP.3 / 2019

Yang bertanda tangan di bawah ini :

Nama : **ELLI FARIDA LUBIS, M.Pd.I**  
NIP : 19710808 199702 2 002  
Pangkat/Golongan : Pembina TK I, IV/b  
Jabatan : Kepala SMP Negeri 3 Padangsidempuan

Dengan ini menerangkan bahwa :

Nama : **ZULPADLI ARDIANSYAH**  
NIM : 12 340 0082  
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Fakultas : Tarbiyah dan Ilmu Keguruan  
Alamat : Panyabungan

adalah benar telah melaksanakan **Penelitian** di SMP Negeri 3 Padangsidempuan 10 Juni 2019 sampai dengan 17 Juni 2019 dengan judul Skripsi: "**The Effec of Semantic Mapping Technique on Vocabulary Mastery at Grade VII Students' Of SMP Negeri 3 Padangsidempuan**".

Demikian surat keterangan penelitian ini kami buat untuk dapat dipergunakan seperlunya.

Dikeluarkan di : Padangsidempuan  
Pada Tanggal : 17 Juni 2019  
Kepala SMP Negeri 3 Padangsidempuan



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Perihal : Pengesahan Judul dan Pembimbing Skripsi

Padangsidempuan, 08 Juli 2015

Kepada Yth Bapak/Ibu;

1. Dr. Fitriadi Lubis, M.Pd (Pembimbing I)
2. Fitri Rayani Siregar, M.Hum (Pembimbing II)

di-  
Padangsidempuan

*Assalamu 'Alaikum Wr. Wb*

Dengan hormat, sehubungan dengan hasil sidang bersama tim pengkaji judul skripsi jurusan tadaris bahasa inggris (TBI) fakultas tarbiyah dan ilmu keguruan IAIN Padangsidempuan, maka dengan ini kami mohon kepada Bapak/Ibu agar dapat menjadi pembimbing skripsi, dan melakukan penyempurnaan judul bila mana perlu untuk mahasiswa dibawah ini dengan data sebagai berikut:


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Judul Skripsi : THE EFFECT OF SEMANTIC MAPPING TECHNIQUE ON VOCABULARY MASTERY AT GRADE VII STUDENTS' OF SMPN 3 PADANGSIDIMPUAN

Demikian surat ini disampaikan, atas perhatian dan kesediaan Bapak/Ibu kami ucapkan terima kasih.


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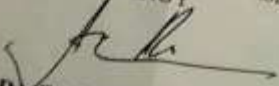
  
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Mengetahui  
a.n. Dekan  
Wakil Dekan Bidang Akademik

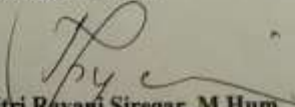
  
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