# THE EFFECT OF WORD SEARCH PUZZLE GAME TO VOCABULARY MASTERY AT THE VIII GRADE STUDENTS OF SMP N 5 PADANGSIDIMPUAN 

## A THESIS

Submitted to the State Istitute for Islamic Studies Padangsidimpuan as a Partial Fulfillment of the Requirement for the Graduate Degree of Islamic Education (S.Pd) in English

Written by:
LINDA SARI LUBIS
Reg. No. 1620300013

## ENGLISH EDUCATION DEPARTMENT

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## STATE INSTITUTE FOR ISLAMIC STUDIES

PADANGSIDIMPUAN
2021

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Padangsidimpuan, july 2021
an. Linda Sari Lubis
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 the thesis belongs to Linda Sari Lubis, entitled "The Effect of Word Search Puzzle Game to Vocabulary Mastery at the VIII Grade Students of SMP N 5 Padangsidimpuan". We assumed that the thesis has been acceptable to complete the assignments and fulfill the requirements for graduate degree of Education (S.Pd) in English Education Department, Tarbiyah and Teacher Training Faculty in IAIN Padangsidimpuan.

Therefore, we hope that the thesis will soon be examined by the Thesis examiner team of English Education Department of Tarbiyah and Teacher Training Faculty IAIN Padangsidimpuan. Thank you.

Wassalam 'alaikumwr.wb.

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## LEGALIZATION

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#### Abstract

This research discussed about the effect of word word search puzzle game to vocabulary mastery at the VIII Grade Students' of SMP N 5 Padangsidimpuan. The problems of the research were the students cannot used vocabulary correctly and uninterested teaching strategy. As the result, the students are difficult in understanding vocabulary and the students so lazy in opening the dictionary. The aim of this research was to find out the effect of word search puzzle game to vocabulary mastery at the VIII grade students' of SMP N 5 Padangsidimpuan.

This research has three formulations of the problem, they are how the students' vocabulary mastery before using Word Search Puzzle Game is, how the students' vocabulary mastery after using Word Search Puzzle Game is, there is any significant effect of Word Search Puzzle Game to vocabulary mastery or not. The purpose of this research are to know the students' vocabulary mastery before using Word Search Puzzle Game. To know the students' vocabulary mastery after using Word Search Puzzle Game. To examine there is or there is no significant effect of using Word Search Puzzle Game to vocabulary mastery at the VIII grade students of SMP N 5 Padangsidimpuan.


This research applied experimental research. The population of this research was the VIII grade of SMP N 5 Padangsidimpuan. The total of population were nine classes. Then, the sample of the research was 2 classes, experiment class (VIII-1 and control calss VIII-2). 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.

After analyzing the data, the researcher found that the mean of experimental class in pre-test was 60,12 and in the post test was 74,71 . The proof was 15,36 . Then the mean score of control class in pre-test was 55,12 and in the post-test was 58,37 . The proof was 3,25 . The effect of Word Search Puzzle Game to vocabulary mastery at the VIII grade students of SMP N 5 Padangsidimpuan was 5,31 where $t_{\text {count }}>t_{\text {table }}$ $(5,31>2,39)$, it means that hypothesis $\mathrm{H}_{\mathrm{a}}$ was accepted and $\mathrm{H}_{0}$ was rejected. So, it shows that there was a significant effect of Word Search Puzzle Game to vocabulary mastery at the VIII grade students of SMP N 5 Padangsidimpuan.

Key words :Word Search Puzzle, Vocabulary Mastery

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#### Abstract

ABSTRAK Penelitian ini membahas tentang pengaruh permainan puzzle pencarian kata terhadap penguasaan kosakata pada Siswa Kelas VIII SMP Negeri 5 Padangsidimpuan. Masalah penelitian ini adalah siswa tidak dapat menggunakan kosakata dengan benar dan strategi pengajaran yang tidak menarik. Akibatnya siswa sulit memahami kosakata dan siswa malas membuka kamus. Penelitian ini bertujuan untuk mengetahui pengaruh permainan puzzle pencarian kata terhadap penguasaan kosakata pada siswa kelas VIII SMP N 5 Padangsidimpuan.

Penelitian ini memiliki tiga rumusan masalah yaitu bagaimana penguasaan kosakata siswa sebelum menggunakan Word Search Puzzle Game, bagaimana penguasaan kosakata siswa setelah menggunakan Word Search Puzzle Game, adakah pengaruh yang signifikan dari Word Search Puzzle Game terhadap penguasaan kosakata atau tidak. Tujuan dari penelitian ini adalah untuk mengetahui penguasaan kosakata siswa sebelum menggunakan Word Search Puzzle Game. Untuk mengetahui penguasaan kosakata siswa setelah menggunakan Word Search Puzzle Game. Untuk menguji ada atau tidak ada pengaruh yang signifikan penggunaan Word Search Puzzle Game terhadap penguasaan kosakata pada siswa kelas VIII SMP N 5 Padangsidimpuan.

Penelitian ini merupakan penelitian eksperimental. Populasi dalam penelitian ini adalah siswa kelas VIII SMP N 5 Padangsidimpuan. Jumlah populasi sebanyak sembilan kelas. Kemudian sampel penelitian adalah 2 kelas yaitu kelas eksperimen (VIII-1 dan kelas kontrol VIII-2). Itu diambil setelah melakukan uji normalitas dan homogenitas. Untuk mengumpulkan data, peneliti menggunakan tes untuk mengukur penguasaan kosakata siswa. Untuk menganalisis data, peneliti menggunakan uji-t.

Setelah menganalisis data, peneliti menemukan bahwa rata-rata kelas eksperimen pada pre-test adalah 60,12 dan pada post-test adalah 74,71 . Buktinya adalah 15,36 . Kemudian nilai rata-rata kelas kontrol pada pre-test adalah 55,12 dan pada posttest adalah 58,37. Buktinya adalah 3,25. Pengaruh Word Search Puzzle Game terhadap penguasaan kosakata pada siswa kelas VIII SMP N 5 Padangsidimpuan adalah 5,31 dimana $\mathrm{t}_{\text {count }}>\mathrm{t}_{\text {tabel }}(5,31>2,39)$, artinya hipotesis $\mathrm{H}_{\mathrm{a}}$ diterima dan $\mathrm{H}_{0}$ ditolak. Jadi, hal ini menunjukkan bahwa ada pengaruh yang signifikan dari Word Search Puzzle Game terhadap penguasaan kosakata pada siswa kelas VIII SMP N 5 Padangsidimpuan


Kata kunci : Teka-Teki Pencarian Kata, Penguasaan Kosakata

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Padangsidimpuan, June 2021 Researcher

Linda Sari Lubis Reg. No. 1620300013

## TABLE OF CONTENTS

TITLE PAGE ..... i
LEGALIZATION OF ADVISOR SHEET ..... ii
AGREEMENT ADVISOR SHEET ..... iii
DECLARATION OF SELF THESIS COMPLETION ..... iv
ACADEMY CIVITY ..... v
SCHOOLAR MUNAQOSHYAH EXAMINATION ..... vi
LAGALIZATION OF DEAN OF TARBIYAH AND TEACHER TRAINING FACULTY ..... vii
ABSTRACT ..... viii
ACKNOWLEDGMENT ..... x
TABLE OF CONTENT ..... xiii
LIST OF TABLES ..... xv
LIST OF FIGURES ..... xvi
LIST OF APPENDIX ..... xvii
CHAPTER I INTRODUCTION
A. Background of the Problem ..... 1
B. Identification of the Problem ..... 4
C. Limitation of the Problem ..... 4
D. Formulation of the Problem ..... 5
E. Purposes of the Research ..... 5
F. Significances of the Research ..... 6
G. Outline of the Research ..... 6
CHAPTER II LITERATURE REVIEW
A. Theoretical Description ..... 8

1. Vocabulary ..... 8
a. Definition of Vocabulary ..... 8
b. The Principle of Vocabulary ..... 9
c. The Importance of Vocabulary ..... 11
d. Kinds of Vocabulary ..... 12
e. Classification of Vocabulary ..... 13
f. Aspect of Vocabulary ..... 15
2. Word Search Puzzle Game ..... 18
a. The Definition of Word Search Puzzle Game ..... 18
b. The Procedure of Word Search Puzzle Game ..... 19
c. The Advantages and Disadvantages of Word Search Puzzle Game. ..... 20
3. Teaching Vocabulary by Using Word Search Puzzle Game. ..... 21
B. Conventional Teaching ..... 24
C. Review of Related Finding ..... 26
D. Conceptual Framework ..... 28
E. Hypothesis ..... 30
CHAPTER III RESEARCH METHOD
A. The Place and Time of the Research ..... 31
B. The Research Design ..... 31
C. The Population and Sample ..... 32
D. The Instrument of Collecting Data ..... 33
E. The Validity and Reliability of Instrument ..... 36
F. Technique of Analyzing Data ..... 37
CHAPTER IV RESULT OF RESEARCH
A. Description of Data ..... 39
4. Result of Data Pre-Test ..... 39
5. Result of Data Post-Test. ..... 44
B. Testing of Hypothesis ..... 48
C. Discussion ..... 49
D. Limitation of Research ..... 51
CHAPTER V CONCLUSIONS AND SUGGESTIONS
A. Conclusions ..... 52
B. Suggestions ..... 53
REFERENCES

## LIST OF TABLES

Page
Table 1 Teaching Vocabulary Using Word Search Puzzle Game ..... 24
Table 2 Pretest-Posttest Research Design ..... 31
Table 3 The Population of the VIII Grade Students of SMP N 5 Psp. ..... 32
Table 4 The Sample of the Research ..... 33
Table 5 Vocabulary Assessment Rubric ..... 35
Table 6 The Score of Experimental Class in Pre-test ..... 40
Table 7 Frequency Distribution of the Variables ..... 40
Table 8 The Score of Control Class in Pre-test ..... 42
Table 9 Frequency Distribution of the Variables ..... 43
Table 10 The score of Experimental Class in Post-test ..... 44
Table 11 Frequency Distribution of the variables ..... 45
Table 12 The Score of Control Class in Post-test ..... 46
Table 13 Frequency Distribution of the Variables ..... 47
Table 14 Result of T-test from the Both Averages ..... 48

## LIST OF FIGURES

Page
Figure 1 : Conceptual Framework ..... 29Figure 2 : Description Data of Students Word Search Puzzle Game in
Experimental Class (Pre-Test) ..... 41
Figure 3 : Description Data of Students’ Word Search Puzzle Game in
Control Class in (Pre-test) ..... 43Figure 4 : Description Data of Students' Word Search Puzzle Game in
Experimental (Post-Test) ..... 45Figure 5 : Description Data of Students' Word Search Puzzle Game in
Control Class (Post-Test) ..... 47

## LIST OF APPENDIXES

Appendix 1 : Lesson Plan of Experimental Class
Appendix 2 : Lesson Plan of Control Class
Appendix 3 : Instrument for Pre-Test Experimental and Control Class
Appendix 4 : Instrument for Post-Test Experimental and Control Class
Appendix 5 : Score of Experimental Class and Control Class on Pre-Test
Appendix 6 : Result of Normality Test In Pre-Test on Experimental Class and Control Class

Appendix 7 : Homogeneity Test (Pre-Test)
Appendix 8 : Score of Experimental Class and Control Class on Post-Test
Appendix 9 : Result of Normality Test In Post-Test on Experimental Class and Control Class

Appendix 10 : Homogeneity Test (Post-Test)
Appendix 11 : T-test of the Both Averages in Post-Test
Appendix 12 : Gain Score of Experimental Class and Control Class
Appendix 13 : Documentation

## CHAPTER I

## INTRODUCTION

## A. Background of The Problem

Vocabulary is one of the important aspect in teaching a language. Vocabulary is core component of language proficiency and provides much of the basic for how well learners listen, speak, read, and write. It is an essential role in creating understanding of language through what the students learning in school. It helps the students to communicate successfully.

In High School level, listening, speaking, reading and writing are skills that should be mastered by students. However, before mastering those skill, students need to master vocabulary. Without having sufficient lexical knowledge, they will not be able to listen, speak, read or write in English well.

Various types of effort has been done by the government to improve the quality of education. School also make an effort to raise the students ability, the shool has prepared equipment to support the students activities in study. The teacher has an important role in teaching learning process. Teacher gives their knowledge and share some motivation to make students success in education.

In vocabulary mastery, many students at grade VIII in SMP N 5 Padangsidimpuan faced many problems in learning vocabulary, so that they are very difficult to understand all of the materials that the teacher
explained. The problems found in SMP N 5 Padangsidimpuan during preresearch. The teacher of eighth grade of SMP N 5 Padangsidimpuan said:

The students have lack motivation, if the teacher gives exercise or material in class, partly of them always calm down and they did not do what the teacher has given. The teacher did not know how students have understand or not. It makes one problematic in learning English, especially in teaching vocabulary. ${ }^{1}$

It means that the teacher's strategy with the material has not been achieved optimally. Because, the teacher did not use a method while teaching. So, the vocabulary of students still poor. To increase the vocabulary of students, the teacher needs to use several methods. This method can make students easier to understand English, especially vocabulary.

There are some factors that influence student's vocabulary mastery. They are "method, media, song, picture, game, etc". This research only taken a game for discussing. "Game is an interestig and enjoyable activity with a set of rules which is played individully or in group". ${ }^{2}$ Game can make the teaching learning process enjoyable and fun for students.

Games can be found to give practice in all skill and components of language and can be used for different types of communication. ${ }^{3}$ Learning vocabulary through games are effective in helping students to improve

[^0]their vocabulary building skills. ${ }^{4}$ To assess the effectiveness of learning vocabulary through games in the clssroom, it is important to find out whether learners benefit from such experience. Morever, it is crucial to see whether games can be effective in helping learners feel more comfortable and interested in the subject of vocabulary.

There are many kinds of game that can be applied in teaching process including in teaching vocabulary. Such as "search games, matching games, guessing games, role-play games and much more". ${ }^{5}$ These game can be used in learning vocabulary. In this research, the researcher chose "search game" in teaching vocabulary and one of search game that can be used in this research is "word search puzzle game".

Word search puzzle game is a word game that consists of the letters of words placed in a grid, which usually has a rectangular or square shape. The objective of this puzzle is to find and mark all the words hidden inside the box. ${ }^{6}$ This game is good to review general vocabulary, without ever tiring the students.

The role of word search puzzle game is the students need to find the listed hidden words that may be hidden in any direction: horizontally, vertically, diagonally, forwards and backwards. By doing this game, students would get new method in learning vocabulary, they could find a

[^1]lot of new vocabularies in a fun way, and it could enhance their word knowledge.

Based on above explanation, the researcher interested to carry out a research under a title "The Effect of Word Search Puzzle Game to Vocabulary Mastery at The VIII Grade Students of SMP N 5 Padangsidimpuan".

## B. Identification of The Problems

Vocabulary mastery is one of the factors to master English as foreign language. It means that the students have the ability in understanding and using the word and meaning. In vocabulary mastery, many students at grade VIII in SMP N 5 Padangsidimpuan faced many problems in learning vocabulary, so that they are very difficult to understand all of the materials that the teacher explained

Students' capability in learning vocabulary is influence by many factors such as method, media and game. Game means in this research is word Search Puzzle game.

## C. Limitation of The Problems

In vocabulary mastery, many students at grade VIII in SMP N 5 Padangsidimpuan faced many problems in learning vocabulary, so that they are very difficult to understand all of the materials that the teacher explained. In this research doesn't discuss all the factors of vocabulary
mastery above, this research only focus on the word search puzzle game (Part of Body).

This research focused on using word search puzzle game to teach vocabulary because word search puzzle game could make the teaching learning process fun.

## D. Formulation of The Problems

Based on background and identification above, researcher formulated the problem as follow:

1. How is the students' vocabulary mastery before using word search puzzle game at the VIII grade students of SMP N 5 Padangsidimpuan?
2. How is the students' vocabulary mastery after using word search puzzle gameat the VIII grade students of SMP N 5 Padangsidimpuan?
3. Is there a significant effect of using word search puzzle game to students' vocabulary mastery at the VIII grade students of SMP N 5 Padangsidimpuan?

## E. Purpose of The Research

From above formulation of the problem, the purposes of this research were:

1. To know the students' vocabulary mastery before using word search puzzle game at the VIII grade students of SMP N 5 Padangsidimpuan.
2. To know the students' vocabulary mastery after using word search puzzle game at the VIII grade students of SMPN 5 Padangsidimpuan.
3. To examine the significant effect of using word search puzzle game to students' vocabulary mastery at the VIII grade students of SMP N 5 Padangsidimpuan.

## F. Significant of The Research

The significance of this research expected to be useful for:

1. For the English teacher as an information in teaching vocabulary
2. For the headmaster as an information about students ability in learning vocabulary.
3. For the readers as an information and can use for references in the future

## G. The Outline of Thesis

The systematic of this research is divided in to five chapters. Each chapter consists of many chapters with detail as follow:

In chapter one, it consist of background of the thesis problem, identification of the problem, limitation of the problem, formulation of the problem, purposes of the research, significant of the research, and thesis outline. This chapter talking about the problems that found in the field of research, the questions of research and the objective of the research.

Next, in chapter two, it consists of theoretical description of vocabulary and word search puzzle game. Then, review of related findings, conceptual framework, and hypothesis.

Furthermore, in chapter three, consists of research methodology which is consist of the time and place of the research, the research design,
population and sample, definition of operational variable, the instrument of research, validity and reliability of instrument and the last technique of analyzing data.

Chapter four is result of the research or research finding which consist of teaching vocabulary mastery in pre test, teaching vocabulary mastery in post test, the hypothesis testing, discussion, and the treats of the research, this chapter talking about the result of the research.

Finally, chapter five contains conclusion, and suggestion.

## CHAPTER II

## LITERATURE REVIEW

## A. Theoritical Description

## 1. Vocabulary

## a. Definitions of Vocabulary

Vocabulary is one of the language aspects which should be learnt. Learning vocabulary is important because we are able to speak, write, and listen nicely have to know vocabulary first. ${ }^{7}$ Vocabulary is basic part in English that have to be mastered by English students. With vocabulary students are able to speak English. In addition vocabulary is also needed by students to improve English skills; listening, speaking, reading, and writing. Therefore, students who lack of vocabulary will have difficulty in understanding the text, speaking, and also writing their ideas. ${ }^{8}$

David Nunan in Second Language Teaching Learning stated that a vocabulary is more than list of target language words. As apart of the language system, vocabulary intimately interrelated with grammar. In fact, it is possible to device the lexical system of

[^2]most language into "grammatical word" such as preposition, articles and adverb and so on. ${ }^{9}$

In other hand, Vocabulary is central to English language teaching because without sufficient vocabulary students cannot understand others or express their own ideas. ${ }^{10}$

Based on the definitions above, it can be concluded that vocabulary is stock of words in a language used by the people to communicate with other people, it is also used by the people to express their feelings.

## b. The Principles of Vocabulary

There are many principles in teaching and learning vocabulary as follows: aims, quantity, need, situation presentation, meaningful presentation, presenting in context, learning vocabulary, inference (guessing) procedure in vocabulary learning, technique in teaching and learning vocabulary. ${ }^{11}$

Wallace in Mulbar indicates nine principles of teaching and learning vocabulary such as follows:

1) Aims

In the teaching vocabulary, we have to be clear about our aims how to explicitly we must decide the vocabulary that we expect the learner to be able to do. If it is not clear at this point, it will

[^3]be difficult to assess how success full the vocabulary learning has been.
2) Quantity

Having decided what are involved in vocabulary learning. We may them then decide on the quantity to be taught the number of few students can learn. If we expect the words that will be tough become part of students" active vocabulary, the put number of factors varying from class to class and from learner to learn. When there are too many new words, the students may be confused, discouraged and frustrated.
3) Need

The vocabulary that taught the students depend on the course book or syllabus but the teacher should consider the aims of the course and the individual lesson.
4) Situation presentation

The words presented are appropriate to the student"s situation.
5) Meaningful presentation

The students must have a clear and specific and understanding of what donates or refers to his required that the presented in such a way the denotation and references are perfectly clear.
6) Presenting in context

The words very seldom occur in isolation, so the students have to know the usual context that the word occurs in.
7) Learning vocabulary and in the mother tongue and in the large language teaching the words of the target language the teacher can compare simulating and differences of the words.
8) Inference (guessing) procedure in vocabulary learning

Inference is also one of strategies in learning in which the learners are heard on a practice by using a definite knowledge tohave clear understanding the word they learn. The students infer the meaning of words by listening or reading them used in certain situation.
9) Frequent exposure and Repetition

A certain amount of repetition is necessary until there is a proof that the students have learn the largest word. The simply way of the checking that the students have done the learning is to see whether or not the students can recognize the target words and identify their meanings. If the words have to be part of the students" productive vocabulary, they must be given an opportunity to use them often as necessary for them to the words at all with the correct pronunciation and indentify their meaning. ${ }^{12}$

[^4]From the explanation above these types must be understood by the teachers, in line with the media, strategy and method that the use.

## c. The Importance of Vocabulary

The importance of vocabulary is demonstrated daily in and out the school. In classroom, the achieving students possess the most sufficient vocabulary. ${ }^{13}$ Vocabulary mastery is very important in learning English. With having a large vocabulary, it will help students learn the four basic skills of English, they are reading, speaking, writing, and listening. Without having large vocabulary, the students will be impossible to easy to study it, and without having many vocabularies it is impossible to make sentences in communication and express their feelings. In communication through language, vocabulary holds the most important role.

Related with the statement above, Tarigan in Dwi Ema said "the quality of language depends clearly on the quantity and the quality of mastering vocabulary". ${ }^{14}$ To achieve this goal, the students must master of English vocabulary and structure as well.

From these definitions, it can be concluded that learning vocabulary is very important. Because without having many vocabulary, the students will be impossible to improve their

[^5]english skill; listening, speaking, reading and writing, and they are impossible to communicate well.
d. Kinds Of Vocabulary

Some experts divide vocabulary into two types: active and passive vocabulary. Harmer distinguishes between these two typesof vocabulary. The first type of vocabulary refers to the one that the students havebeen taught and thatthey are expected to be able to use. Meanwhile, the second onerefers to the words which the students will recognize when they meet them, but which they will probably not be able to pronounce. Haycraft, quoted by Hatch and Brown, indicate two kinds of vocabulary, namely receptive vocabulary and productive vocabulary. ${ }^{15}$

1) Receptive Vocabulary

Receptive vocabulary is the set of words for which an individual can assign meaning when listening or reading. It is about knowing a word involves being able to recognize when the students heard.
2) Productive vocabulary

Productive Vocabulary is the set or words that an individual can use when writing or speaking. It is about knowing a word involves being able to pronounce the word, how to write and spell it, and how to use grammatical pattern and it also involves

[^6]not using the word to stand for the meaning it represents and being able to think that is suitable for the word. ${ }^{16}$

Based on quotation above, the writer can take a conclusion about receptive or passive vocabulary will be easy to understand by using listening and reading to remember words on vocabularies, while productive or active vocabulary will be easy understand by using concentration pattern and grammatical word to get vocabularies.

## e. Classification of Vocabulary

Nation classifies vocabulary into four categories based on how frequently it occurs in the language (its frequency) and how widely it occurs (its range). The four categories of vocabulary are namely high frequency words, academic words, technical words, and low frequency words. ${ }^{17}$

1) High Frequency Words

There is a small group of high frequency which very important because these words cover a very large proportion of the running words in spoken and written texts and occur in all kinds of uses of the language. ${ }^{18}$
2) Academic Words

The text is from academic textbook and contains many words that are common in different kinds of academic text:

[^7]policy, phase, adjusted, sustained. Typically these words make up about $9 \%$ of the running words in the text. ${ }^{19}$
3) Technical Words

The text contains some words that are very closely related to the topic and subject of the text. These words include indigenous, regeneration, pod carp, beech, rimy, and timber. These words are reasonably common in this topic area but no so common else where. As soon as we see them we know that topic is being dealt with. Technical words like this typically cover about $5 \%$ of the running words in a text. ${ }^{20}$
4) Low Frequency Words

This group included words like zoned, pioneering and perpetuity, aired and pastoral. They make up over $5 \%$ of the words in an academic text. There are thousands of them in the language, by far the biggest group of words. They consist of the technical words for other subject areas, proper nouns, words that almost got the high -frequency list and words that we rarely meet in our use in the language. ${ }^{21}$

Based on quotation above, the writer can take a conclusion about high frequency words are quite simply those words which occur most frequently in written material, for example, "and", "the", "as" and "it". They are often words that have little meaning on their own, but they do contribute a great deal to the meaning of a sentence. Academic words, these words are common in academic texts, but they are not so common in everyday writing or speech. This is why they are not so easy to learn, but why at the same time, it is very important for students to learn them. Technical words are words that talk about

[^8]technology and almost science too can be referred as technical words, and low frequency words are words that uncommonly occur in a language, such as "apopemptic," "diaphoretic," and "rebarbative" in English.

## f. Aspect of Vocabulary

Vocabulary is one of the language aspects which should be learnt. Learning it is important because in order to be able to speak, write, and listen learners have to know vocabulary first. A person said to 'know' a word if they can recognize its meaning when they see it. It means that in learning vocabulary learners have to know the meaning of it and also understand and can use it in sentence context. The concept of a word can be defined in various ways, but three significant aspects teachers need to be aware of and focus on are form, meaning, and use.

According to Nation, the form of a word involves its pronunciation (spoken form), spelling (written form), and any word parts that make up this particular item (such as a prefix, root, and suf-fix). An example for word parts can been seen with the word uncommunicative, where the prefix un-means negative or opposite,communicate is the root word, and -ive is a suffix denoting that someone or something is able to do something. Here,
they all go together to refer to someone or something that is not able to communicate, hence uncommunicative. ${ }^{22}$

Nation stated that meaning encompasses the way that form and meaning work together, in other words, the concept and what items it refers to, and the associations that come to mind when people think about a specific word or expression. Use, Nation noted, involves the grammatical functions of the word or phrase, collocations that normally go with it, and finally any constraints on its use, in terms of frequency, level, and so forth. For form, meaning, and use, Nation declared there is both a receptive and productive dimension.

According to Lado as cited in Mardianawati, "there are some aspects of learning vocabulary. They are meaning, spelling, pronunciation, word classes, and word use". ${ }^{23}$

1) Meaning

In learning foreign language, students should know the meaning of word. Knowing the meaning of the word will make students easier to communicate on written or oral. ${ }^{24}$
2) Spelling

Spelling is the writing of a word or words with the necessary letters and diacritics present in an accepted standard

[^9]16order and an arrangement of letters that form a word or part of a word the process of forming words by putting letters together. In learning vocabulary, spelling is very important. It can tighten the connection between sound and letters. Spelling and listening also have a common factor, proficiency with language. There are some important points that should be considered when teaching vocabulary that is form (pronunciation and spelling). The learners have to know what a word sound is like (its pronunciation) and what it looks like (its spelling). ${ }^{25}$

## 3) Pronunciation

This will mean learning some symbols which are different from the letters of the English alphabet. Students really want to be able to speak English well with a good pronounciation so that they can communicate with others without hindrance.

Prounoncing the words also enables students students to remember it longer and identify it more readly when it is hear or read. ${ }^{26}$
4) Word Classes

Word class (alternatively part of speech) describes the category of grammatical behavior of a word. ${ }^{27}$ Word class usually abbreviations n: noun, adj: adjective, etc., whether a

[^10]noun is countable or uncountable, and whether a verb is normally transitive (needs an object) or intransitive (doesn't need an object). ${ }^{28}$
5) Word Use

Word use is how a word, phrase, or concept is used in a language. Word use may also involve grammar and thus become the subject of profound analysis. ${ }^{29}$

Based on statement above the researcher, it could be inferred that the learner could not did well in comprehension without large vocabulary. So, vocabulary is the one aspect should be learn to the students in English learning. Aspect of vocabulay could be learned students were divided into five such as meaning, spelling, pronounciation, word classes and word use.

## 2. Word Search Puzzle Game

a. The Definition of Word Search Puzzle Game

Word search puzzle game is a game in the search for the words, either vertically, horizontally, and diagonally. This game can help students increase their vocabulary and make them happy in doing search puzzle game of words. Word-search-puzzle game is one of many instructional games that reinforce word-level onto a grid and persuades the class to make suggestions for the puzzle

[^11]clues. ${ }^{30}$ According to Hornby, puzzle is a thing that is difficult to understand or answer a mystery or a question or toy that is designed to test a person's knowledge, skill, intelligence, etc. ${ }^{31}$

A word search puzzle is a word game that is letters of a word in a grid that usually has a rectangular or square shape. The objective of this puzzle is to find and mark all the words hidden inside the box. The words may be horizontally, vertically, or diagonally. Often a list of the hidden words is provided, but more challenging puzzles may let the player figure them out. Many word search game have a theme to which all the hidden words are related. The puzzle itself kind to play that can be used to practice certain language features at certain phases in learning process in order to develop communication skill.

## b. The Procedure of Word Search Puzzle Game

The procedure of word search puzzle game is very simple and easy. Word search puzzle game are also fun and easy to make, the procedure of teaching vocabulary through the words search puzzle game can be done with the steps relevant, they are:

1) The teacher gives the word search puzzle photocopied to the student individually or in small group that contains the letter of word to be found.

[^12]2) The teacher explain about the game's rule that the students have to find all of the letter are hidden in the grid. Words will be hidden inside the letters, written horizontally and vertically.
3) The students should circle the word when they find them.
4) After their work are finished, they correct together. ${ }^{32}$

By doing those activities, students will feel comfortable in learning because they can play while learning. Furthermore, their vocabulary will be increased too.

## c. The Advantages and Disadvantages of Word Search Puzzle Game

Models make a good match is used when the teacher wants the students to think of creativity, because through this kind of learning students are expected to able to match the question with an answer that is in the puzzle, therefore, the advantages and disadvantages of this model are:

1) The advantages of this model are:
a) Word search puzzles keep the brain active.
b) Word search puzzles increase the vocabulary. Vocabulary building is one of the biggest benefits of solving word searches.
c) Word search puzzles help to learn new languages.
d) Word searches are a great way to improve your spelling. Word search could actually help you learn to spell better by actively looking for the set of letters in order and the puzzle helps to cement their spelling in your brain.
e) Word search puzzles train our brain to recognize patterns the ability to identify letters, faces, and all manner of objects is a basic cognitive skill (the others include such useful games as decision-making, focus and concentration, memory, problem solving, and categorization).

[^13]2) The disadvantages of word search puzzle game
a) Make a box that varies need creativities of a teacher.
b) Very often found between the boxes provide does not match the existing question.
c) Make questions that require answer that definitely requires a high capability of teaching. ${ }^{33}$

Based o the explanation above, there are so many benefits of word search puzzle game in learning activities. However, there are some disadvantages of word search puzzle game. It can be done by creative teacher. It can increase the students' vocabulary mastery. To make word search puzzle game in word search puzzle, some roles used the researcher, such as using main concept, sub concept, and lines as connection between ideas. Therefore, word search puzzle game is a good way to learn vocabulary mastery.

## 3. Teaching Vocabulary by Using Word Search Puzzle Game

Teaching vocabulary through word search puzzle is not only in written activities and fun so that it would make the students passive learners but also process of the teaching these vocabularies at to be applied in active activities in a form of communication the students will be taught how memorize for a spelling test to do a word search. ${ }^{34}$ To success in teaching vocabulary through word search puzzle, the teacher should have different technique for different level. Teaching vocabulary through word search puzzle enables the students to find out

[^14]to information or guests the meaning on unfamiliar words. So, the word search puzzle can help the students. The students may be happy and interesting in learning and they always try to know the new words from word search puzzle.

In teaching vocabulary teacher must be creative. The teacher can use pictures, or play a game. Then, here the writer want to emphasize to the teacher for use game in teaching vocabulary. One way to make students enjoy in teaching vocabulary is by using game.

One way to make students enjoy in learning vocabulary is by using games. There are so many games to teach English. In this research the researcher uses Word Search Puzzle Game to teach vocabulary. Word Search Puzzle Game is one of kind technique that can use to make teaching learning process more fun to the students. Teaching vocabulary is the process of mastering new word to become our own words.

Therefore, the other said that games are useful and meaningful ways for the students and the teacher in teaching learning process. Beside that, Ayu and Rini explained the purpose of games. ${ }^{35}$ They are as follows:

1) For teacher, games can make them easy to give explanation about the lesson and help them to make the class more active.
2) For students, they more easy to understand the material, the lesson for them not bored, help them to remember the material

[^15]easy and fast, they become active in class, and game can growth up the solidarity and sportsmanship between them.

Teaching vocabulary by using ord search puzzle game can be seen in this table below:

Table. 1
Teaching Vocabulary by Using Word Search Puzzle Game

| Teacher | Procedures | Students |
| :---: | :---: | :---: |
| A. Pre- Teaching |  |  |
| 1. Teacher open the class by greeting and prepare the students to pray before learn. |  | 1. Students listen to the teacher. <br> 2. Students answer the teacher's greeting and pray before learn. |
| 2. Teacher check the students attendence list. |  | 1. Students listen to the teacher. <br> 2. Students state the attendence by saying present. |
| 3. Teacher ask the students about the last material and relate it with the new material. |  | 1. Students answer the teacher questions and the last material. |
| 4. Teacher tell about the new material. |  | 1. Students listen carefully to the teacher. <br> 2. Students add some notes from the teacher. |
| 5. The teacher gives the word search puzzle photocopied to the student. | 1. Gives the word search puzzle photocopied to the students. | 1. Students pay attention to the teacher explanation. |
| B. While- Teaching |  |  |
| 1. The teacher explain about the game's rule that the students have to find all of the letter are hidden | 2. Students have to find all of the letter are hidden in a grid | 1.Students pay attention to the teacher. <br> 2. Students remaind the words |


| in the grid. |  |  |
| :---: | :---: | :---: |
| 2. The teacher instructs the students to circle the word when they find them. Words will be hidden inside the letters, written horizontally and vertically. | 3. Students should circle the word when they find them | 1. Students will search the hidden word. <br> 2. Students will circle the word if they find them. |
| 3. The teacher gives 30 minutes to solve the puzzle | 4. They must solve the puzzle and they correct together after their work are finished. | 1. Students listen to the teacher <br> 2. The students identify the letter word by word and find the correct word. |
| C. Post- Teaching |  |  |
| 1. Teacher ask the students about their understanding about the material. | 1. Feedback | 1. Students answer the teacher's question and tell their problem. |
| 2. The teacher might conclude or summarize the lesson by himself or together with the students. |  | 2. Listen to the teacher. <br> 3. The students make a summarize while the teacher conclude the lesson. |

Based on statement above the teaching english actually was simple and fun. In this case not easier, but must to had quality with the education. One of the games which using in this research was word search puzzle game. The purpose of play this game was to introduce some new words to the students of junior high school.

## B. Conventional Teaching

Conventional teaching is the strategy or the way usually used by the teachers to teach the vocabulary to the students. Conventional teaching or traditional teaching refers to a teaching method involving instructors
and the students interacting in a face-to-face manner in the classroom. These instructors initiate discussions in the classroom, and focus exclusively on knowing content in textbooks and notes. Students receive the information passively and reiterate the information memorized in the exams. ${ }^{36}$

The teacher of SMP N 5 still uses the conventional teaching in teaching-learning process, in can see on the following text:
a. The teacher asks the students to open the textbook.
b. The teacher reads the instrument about the material in the textbook.
c. The teacher explains about the material.
d. The teacher gives some examples about the material and asks the students understanding about the material and the example.
e. The teacher gives the task about the material to the students. ${ }^{37}$

The conventional also has some advantages and disadvantages.
a. Here some advantages. Here overuse of the conventional teaching:

1. Teachers easily master class.
2. The material is easy to organize.
3. The conventional method could be followed by a large number of students.
4. The conventional method is easy to prepare and carry it out.
5. The teachers easily teach lessons well. ${ }^{38}$
b. The conventional method also has some disadvantages. The disadvantages of conventional teaching as follows:
[^16]1. The conventional teaching makes the students feel boring when used at all times and too long.
2. The teacher is difficult to conclude that students understand and are interested in learning-teaching process.
3. The conventional teaching makes the students to be passive. ${ }^{39}$

From the description above, it is conclude that the conventional method has some advantages that help the teacher to teaching speaking. The disadvantages of this method have not big effect to reduce the method.

The disadvantage of conventinal teaching is that the lecturers' explanation takes a long time, often becomes boring. Because active interactions rarely occur, there is no benchmark that the lecture material presented is interesting, and makes the lecturer not objective in assessing the lecture he is doing. ${ }^{40}$

## C. Review of Related Findings

This research is not as beginner in this title but there is the researched had researched before which relevant with title below:

Khoirul Bahri Lubis in his script: the effect of using crossword puzzle in reinforcing activity toward students' vocabulary mastery. ${ }^{41} \mathrm{He}$

[^17]found that using crossword puzzle in reinforcing activity is very useful toward the improvement of students.

The researcher Munika Duri with the titled "The use of bilingual crossword puzzle toward students' vocabulary mastery of fifth grade in MI Salafiyah-Selopuro academic year 2012/2013. Here she used bilingual crossword puzzle as teaching media. The result of the study showed that the students get better achievement in vocabulary score after taught by using the treatment. It found that the use of vocabulary by bilingual crossword puzzle can improve students' vocabulary. The writer used pre experimental research with the quantitative approach. ${ }^{42}$ So, there are three steps like pretest, treatment, and posttest with the design in the form of one group.

Other research with the titled "The effectiveness of using word square game towards the students' mastery of vocabulary the second grade at SMP Negeri 2 Pakel year 2012/2013". The writer is Pujiastuti. ${ }^{43}$ This research used pre experimental with one group pretest-posttest design. This research was using word square game in the teaching vocabulary. This research was succeeded and shows a better result.

Tri Riski Hasibuan in her script was improving students' vocabulary mastery through crossword puzzle at SD Muhammadiyah 1 Padangsidimpuan has a significance, based on the result of the classroom

[^18]action research, it was concluded that crossword puzzle technique improved students' vocabulary mastery at grade VI SD Muhammadiyah 1 Padangsidimpuan. ${ }^{44}$

So that, from the description above, the researcher concluded that many method can increase students' vocabulary mastery. Next, the writer hopes that word search puzzle game method can increase the students' vocabulary mastery in word search puzzle, so that the writer interested to make the research about "The effect of word search puzzle game to vocabulary mastery at the VIII Grade students of SMP N 5 Padangsidimpuan".

## D. Conceptual Framework

Vocabulary is an important part of language there will be no language aspects which should be learnt. Vocabulary is important part of language to speak, write, and listen without vocabulary will not a language or sentence. So, since we can see, speak, know about we are around will there vocabulary, through game will find vocabulary or all word of listen, look, and speak, one of games to increase vocabulary is word search puzzle game.

Word search puzzle game is a game in which you have to fit the words across, down or diagonal. You find the words by solving clues word search puzzle is a puzzle used in English teaching and learning process, it is a table with some random of letters, where the students have to find the

[^19]words in random letters, students must draw a line on each word across, down or diagonal.

The concept of Word Search Puzzle Game is to make the students easier to learn vocabulary. To know the effect of this there are two classes used as the sample of collecting data for this research. The classes are pretest and post-test.

The first step is pre-test, it give to the students to find the students ability before the treatment. After that,Word Search Puzzle Game used to teach the experimental class and the teacher techniques used to teach the control class. The last, post-test to find out the effect of Word Search Puzzle Game to vocabulary mastery at the VIII grade students of SMP N 5 Padangsidimpuan.

In this research there are Ho and Ha to see, there is the significant effect of word search puzzle game to vocabulary mastery at the VIII grade of SMP N 5 Padangsidimpuan or there is no the significant effect of word search puzzle game to vocabulary mastery at the VIII grade of SMP N 5 Padangsidimpuan.

Based on the above, conceptual framework can be seen from the figure below:

Figure 1. Conceptual Framework
problem

1. The students are less in vocabulary
2. The students are low in memories the words
3. The students do not know the meaning of the words
4. The students difficult to read and speak the words


## E. Hypothesis

The hypothesis of this research:

1. Ha: there is the significant effect of word search puzzle game to vocabulary mastery at the VIII grade of SMP N 5 Padangsidimpuan.
2. Ho: there is no the significant effect of word search puzzle game to vocabulary mastery at the VIII grade of SMP N 5 Padangsidimpuan.

## CHAPTER III

## RESEARCH METHOD

## A. The Place and Time of the Research

The research was conducted at SMP N 5 Padangsidimpuan, at Jln. Perintis Kemerdekaan No. 61, Padangsidimpuan Selatan. The population of this research was grade VIII of SMP N 5 Padangsidimpuan. This research will done from November 2019 until the researcher finish the research.

## B. The Research Design

This research was conducted with quantitative research with experimental method. L.R Gay Said, "Experimental research is the only type of research that can test hypothesis to establish cause and effect." ${ }^{45}$ Then, Cresswell says, "Experimental research induced the experiment with the Random assignment of subject to treatment condition as well as, quasi experiment, that we none randomized. ${ }^{46}$ This research used two rooms in this research. One of the room is taught with word search puzzle game and it called as experimental class or as a treatment. Meanwhile the other class is taught with conventional teaching and called as control class.

Based on using control and experimental class, the research design that is used 'true experimental design'. The design which used is PretestPosttest Control Group Design. The pretest-posttest control group design

[^20]requires at least two groups, each of which is formed by random assignment. Both groups were administered a pretest, each group received a different treatment, and both groups were posttest at the end of the study. Posttest scores are compared to determine the effectiveness of the treatment. The research designed for pre-test and post-test control group design by using one treatment can be seen below:

Table 2
Pretest-Posttest Research Design

| E | $\mathrm{O}_{1}$ | X | $\mathrm{O}_{2}$ |
| :---: | :---: | :---: | :---: |
| P | $\mathrm{O}_{1}$ | - | $\mathrm{O}_{2}$ |

Where: $\mathrm{E}=$ Symbol for experimental class
$\mathrm{P}=$ Symbol for control class
$\mathrm{X}=$ Symbol for treatment ${ }^{47}$

## C. The Population and Sample

1. Population

The population of this research was the VIII grade students of SMP N 5 Padangsidimpuan. The population of the research consist of 9 rooms with 287 students. Can be seen in the following table:

Table 3
The Population of VIII Grade Students of SMP N 5 Padangsidimpuan

| No | Class | Total |
| :---: | :---: | :---: |
| 1 | VIII-1 | 32 Students |
| 2 | VIII-2 | 32 Students |
| 3 | VIII-3 | 31 Students |
| 4 | VIII-4 | 32 Students |
| 5 | VIII-5 | 31 Students |
| 6 | VIII-6 | 33 Students |
| 7 | VIII-7 | 32 Students |

[^21]| 8 | VIII-8 | 32 Students |
| :---: | :---: | :---: |
| 9 | VIII-9 | 32 Students |
|  | TOTAL | 287 Students |

Source: School Data Administration of SMP N 5 Padangsidimpuan
2. Sample

In this research, this research used random sampling to take the sample the research. This research used random sampling because of all the sample had the same time, age, teacher, lesson, placed, to chose and it is the best way to obtain a representative sample.

The population was all the $8^{\text {th }}$ Grade. After that, 2 classes as a sample there were class VIII-1 consist of 32 students such as control class and VIII-2 consisted of 32 students such as experiment class. Therefore, total samples were 64 students.

Table 4
Sample of Research

|  | Class | Sample |
| :--- | :---: | :---: |
|  | Experimental Class VIII-1 | 32 |
|  | Control Class VIII-2 | 32 |
| TOTAL |  | 64 |

Source: School Data Administration of SMP N 5 Padangsidimpuan

## D. The Instrument of Collecting Data

These are the instrumentations in the research. They are test, test is the tool why is in the measurement to collect the data in the research, research used vocabulary test which is 20 items essays for filling word
search puzzle game test. Brown defined test a method of measuring a persons ability knowledge or performance in a given domain. ${ }^{48}$

In this research, the data was collected by quantitative research. The instrument of collecting data was used by this research to get the data observation by using test. Test is used for getting data of research result and students activities in teaching learning. According to Arikunto, test is series of exercises as well as other tools used to measure the skills, knowledge, inteligence, ability or talent possessed by individuals or groups ${ }^{49}$. The test that the writer made was vocabulary test. The vocabulary test referred to Part of Body.

Table 5
Vocabulary Assessment Rubric ${ }^{50}$

| N <br> o | Aspect | Indicator | Score |
| :--- | :--- | :--- | :---: |
| 1 | Meaning | Students can interpret English vocabulary <br> well. | 20 |
|  |  | Students are not fluent in interpreting English <br> vocabulary well | 10 |
| 2 | Spelling | Students can read English vocabulary well | 20 |
|  |  | Students are not fluent in reading English <br> vocabulary well | 10 |
| 3 | Pronounciation | Students can pronounce English vocabulary <br> fluently | 20 |
|  |  | Students are not fluent in pronouncing <br> English vocabulary fluently | 10 |
| 4 | Word Classes | Students can write English vocabulary well <br> and quickly in notebooks | 20 |
|  |  | Students are not fluent in writing English <br> vocabulary well and quickly in notebooks | 10 |

[^22]| 5 | Word Use | Students can use English vocabulary in <br> classroom learning | 20 |
| :---: | :--- | :--- | :---: |
|  |  | Students are not fluent in using English <br> vocabulary in learning in class | 10 |

This research is very limited to vocabulary assessment. The
researcher only used 2 aspects for this research. That is meaning and pronounciation.

Table. 6

| No | Aspect | Indicator | Score |
| :---: | :---: | :--- | :---: |
| 1 | Meaning | Students can interpret English vocabulary <br> well. | 50 |
| 2 | Pronounciation | Students can pronounce English vocabulary <br> well | 50 |

Maximal score 100
In collection the data, the research conducted twice of test for these groups. They are Pre-test and Post-test.
a. Pre - test

The pre test was conducted to find out the homogeneity of the sample, the function of the pre test was to find the main scores of the interactive strategy class and conventional class before the research gave treatment.
b. Treatment

In this research, after doing the pre-test, the experimental class and the control class gave the same material. Treatment to the students in experimental class by used Word Search Puzzle Game and the students in control class by conventional teaching.
c. Post - Test

After giving the treatment the researcher conducted the post test which the same test with the pre test, and had been conducted in the previous of the research, this post test was the final test in the research especially measuring the treatment, whether was significant or not, after conducting the post test the researcher analyzed the data, and the researcher found out the effect of word search puzzle game in experimental class

## E. The Validity and Reliability of Instrument

## 1. Validity of the Test

Validity (in testing) is the degree to which a test measures what it supposed to measure or can be used successfully for the purpose for which it is intended. A number of different statistical procedures generally seek to determine what the test measure and how well it does so. Validity is supported most convincingly by subsequent personal observation by teachers and peers. By far the most complex criterion of a good test is validity. ${ }^{51}$ To make it sure that the test was valid, the test was validated by checking by the English teacher of SMP N 5 Padangsidimpuan.

[^23]
## 2. Reliability of the Test

An instrument of the rereach must be reliable. A reliability test isconsistent and dependable. ${ }^{52}$ Reliability also needed to create the good test because a test must be reliable to measuring the instrument. The instrument can be said reliable when the instrument believable to use as an instrument because the instrument is good to collecting the data.

## F. Technique of Analyzing Data

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

## 1. Requirement test

a) Normality test

Normality test use to know whether the data of research was normal or not. To know the normality, the researcher used ChiSquare formula. The formula is follow:

$$
x^{2}=\sum\left(\frac{f_{o}-f_{h}}{f_{h}}\right)
$$

Where
$x^{2}=$ Value of Chi-Square
$\mathrm{f}_{0} \quad=$ Observed Frequency
$\mathrm{f}_{\mathrm{h}} \quad=$ Expected Frequencye
To Calculate the result of Chi- Square, it used significant level $5 \%(0,05)$ and degree of freedom as big as of frequncy is lessened $3(d k=k-3)$. If result $x^{2}$ count $<x^{2}$ table. ${ }^{53}$

[^24]
## b) Homogeneity Test

Homogeneity test was used to know whether both experimental class have the same variant or not. If both classes were same, it can be called homogenous. To find the homogeneity, the researcher used Harley test.

The formula is as follow:
$\mathrm{F}=\frac{\text { The biggest variant }}{\text { The smallest variant }}$
Hypotheses is accepted if $F_{(\text {count })} \leq F_{(\text {table })}$
Hypotheses is rejected if $F_{(\text {count })} \geq F_{(\text {table })}$

## 2. Hypotheses Test

The technique in analyzing the data was used by t -test, because it is aimed to examine the different of two variable. Such examination performed both on pre-test and post-test score from the experimental class and control class. The hypothesis test stated as:

$$
t=\frac{X_{1}-X_{2}}{\sqrt{\left(\frac{\left(n_{1}-1\right) s_{1}^{2}+\left(n_{2}-1\right) s_{2}^{2}}{n_{1}+n_{2}-2}\right)\left(\frac{1}{n_{1}}+\frac{1}{n_{2}}\right)}}
$$

Where :
$\mathrm{t} \quad$ : the value which the statistical significant
$\mathrm{X}_{1} \quad$ : the average score of the experimental class
$\mathrm{X}_{2}$ : the average score of the control class
$\mathrm{s}_{1}{ }^{2} \quad$ : deviation standard of the experimental class
$\mathrm{s}_{2}{ }^{2} \quad$ deviation standard of the control class
$\mathrm{n}_{1} \quad$ : number of experimental class
$\mathrm{n}_{2} \quad:$ number of control class ${ }^{54}$

[^25]
## CHAPTER IV

## THE RESULT OF THE RESEARCH

To analyze the data as mentioned is earlier chapter, in order to evaluate the effect of word search puzzle game to vocabulary mastery, the researcher has calculated the data using pre-test and post-test. Pre-test was done before conducting the treatment and post-test was done after conducting the treatment. Researcher applied quantitative analysis by using the formulation of T-test. It was done to know the effect of word search puzzle game to vocabulary mastery. Next, researcher described the data as follow:

## A. Description of Data

The pre-test scores obtained before teaching in experimental class and control class.

## 1. Description of Data Before Using Word Search Puzzle

## a. The Pre-test Score for Experimental Class

As the experimental class, the researcher took class VIII-1. In pre-test for experimental class, the researcher calculated the result that had been gotten by the students' word search puzzle (essay test). The researcher has calculated the students' score in appendix 6 and 7. The score of pre-test for experimental class can be seen in the following table:

Table. 6
The Score of Experimental Class in Pre-test

| Descriptive | Statistic |
| :---: | :---: |
| Total score | 1.855 |
| Highest score | 80 |
| Lowest score | 35 |
| Mean | 60,12 |
| Median | 58,09 |
| Modus | 57,81 |
| Range | 45 |
| Interval | 7 |
| Standard deviation | 11,69 |
| Variant | 143,32 |

Based on the above table, the total score of pre-test for experimental class was 1.855 , mean was 60,12 , standard deviation was 11,69 , variant was 143,32 , median was 58,09 , range was 45 , modus wa 57,81 , interval class was 7 . The researcher got the lowest score was 35 and highest score was 80 . Next, the calculation of how to get it could be seen in appendix 6. Then the calculation of the frequency distribution of the students' score as follow:

Table. 7
Frequency Distribution of the Variables

| nterval | Point | equency | centages |
| :--- | :--- | :--- | :--- |
| $35-41$ | 38 | 4 | $2,5 \%$ |
| 42,48 | 45 | 3 | $375 \%$ |
| $49-55$ | 52 | 6 | $8,75 \%$ |
| $56-62$ | 59 | 8 | , $125 \%$ |
| $63-69$ | 56 | 4 | $2,5 \%$ |
| $70-76$ | 73 | 1 | $125 \%$ |
| $77-83$ | 30 | 2 | 6,25 |
| $i=7$ |  | 32 | $100 \%$ |

From the table above, the students' score in class interval between $35-41$ was 4 students (12,5\%), class interval between 42-48
was 3 students, ( $9,375 \%$ ), class interval between 49-55 was 6 students (18,75\%), class interval between $56-62$ was 8 students $(28,125 \%)$, class interval between $63-69$ was 4 students ( $12,5 \%$ ), class interval between $70-76$ was 1 student $(3,125 \%)$ and the last class interval between $77-83$ was 2 students ( $6,25 \%$ ).

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


Figure 2: Description Data of Students’ Word Search Puzzle in Experimental Class (Pre-test)

From the histogram above shows that, the data was normal.

## b. The Pre-test Score for Control Class

In pre-test of control class, the researcher calculated the result that had been gotten from students' word search puzzle test (essay test). The score of pre-test for control class can be seen in the following table:

Table. 8
The Score of Control Class in Pre-test

| Descriptive | Statistic |
| :---: | :---: |
| Total score | 1.700 |
| Highest score | 75 |
| Lowest score | 30 |
| Mean | 55,12 |
| Median | 52,81 |
| Modus | 52,81 |
| Range | 45 |
| Interval | 7 |
| Standard deviation | 11,97 |
| Variant | 152,82 |

Based on the above table, the total score of pre-test for control class was 1.700 , mean was 55,12 , standard deviation was 11,97 , variant was 152,82 , median was 52,81 , range was 45 , modus was 52,81 , interval class was 7 . The researcher got that the lowest score was 30 and highest score was 75 . Next, the calculation of how to get it could be seen in appendix 7. Then the calculation of the frequency distribution of the students' score as follow:

Table. 9
Frequency Distribution of the Variables

| nterval | Point | equency | centages |
| :--- | :--- | :--- | :--- |
| $30-36$ | 33 | 4 | $2,5 \%$ |
| $37-43$ | 40 | 3 | $375 \%$ |
| $44-50$ | 47 | 6 | $8,75 \%$ |
| $51-57$ | 54 | 9 | $\beta, 125 \%$ |


| $58-64$ | 61 | 3 | $375 \%$ |
| :--- | :--- | :--- | :--- |
| $65-71$ | 68 | 5 | , $625 \%$ |
| $72-78$ | 75 | 2 | 5,625 |
| $\mathrm{i}=5$ |  | 32 | $100 \%$ |

From the table above, the students' score in class interval between 30-36 was 4 students (12,5\%), class interval between 37-43 was 3 students, ( $9,375 \%$ ), class interval between $44-50$ was 6 students (18,75\%), class interval between 51-57 was 9 students (28,125\%), class interval between $58-64$ was 3 students ( $9,375 \%$ ), class interval between $65-71$ was 5 students $(15,625 \%)$ and the last class interval between 772-78 was 2 students ( $6,25 \%$ ).

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


Figure 3: Description Data of Students’ Word Search Puzzle in Control Class (Pre-test)

From the histogram above it was shawn that the data was normal.

## 2. Description of Data After Using Word Search Puzzle

## a. Score of Post-test for Experimental Class

In post-test for experimental class, the researcher calculated the result that had been gotten from students' word search puzzle test (essay test). The researcher has calculated the students' score in appendix 9 and 10. The score of post-test for experimental class can be seen in the following table:

Table. 10
The Score of Experimental Class in Post-test

| Descriptive | Statistic |
| :---: | :---: |
| Total score | 2.140 |
| Highest score | 85 |
| Lowest score | 40 |
| Mean | 74,71 |
| Median | 75,48 |
| Modus | 78 |
| Range | 45 |
| Interval | 7 |
| Standard deviation | 11,97 |
| Variant | 342,33 |

Based on the above table, the total score of post-test for experimental class was 2,140 , mean was 74,71 , standard deviation was 11,97 , variant was 342,33 , median was 75,48 , range was 45 , modus was 78 , interval class was 7 . The researcher got the lowest score was 40 and highest score was 85 . Next, the calculation of how to get it could be seen in appendix 9. Then the calculation of the frequency distribution of the students' score as follow:

Table. 11
Frequency Distribution of the Variables

| nterval | Point | equency | centages |
| :--- | :--- | :--- | :--- |
| $40-46$ | 43 | 2 | ,, $25 \%$ |
| $47-53$ | 50 | 3 | $375 \%$ |
| $54-60$ | 57 | 4 | $2,5 \%$ |
| $61-67$ | 64 | 6 | $8,75 \%$ |
| $68-74$ | 71 | 7 | , $875 \%$ |
| $75-81$ | 78 | 6 | $8,75 \%$ |
| $82-88$ | 85 | 4 | $2,5 \%$ |
| $\mathrm{i}=7$ |  | 32 | $100 \%$ |

From the table above, the students' score in class interval between $40-46$ was 2 students ( $6,25 \%$ ), class interval between 47-53 was 3 students, ( $9,375 \%$ ), class interval between $54-60$ was 4 students ( $12,5 \%$ ), class interval between $61-67$ was 6 students ( $18,75 \%$ ), class interval between $68-74$ was 7 students ( $21,875 \%$ ), class interval between $75-81$ was 6 students $(18,75 \%)$ and the last class interval between $82-88$ was 4 students (12,5\%).

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


Figure 3: Description Data of Students' Word Search Puzzle in Experimental Class (Post-test)

From the histogram above shows that, the data was normal.

## b. The Post-test Score for Control Class

In post-test for control class, the researcher calculated the result that had been gotten by students' word search puzzle (essay test). The researcher has calculated the students' score in appendix 10. The score of post-test for control class can be seen in the following table:

Table. 12
The Score of Control Class in Post-test

| Descriptive | Statistic |
| :---: | :---: |
| Total score | 1.870 |
| Highest score | 80 |
| Lowest score | 35 |
| Mean | 58,37 |
| Median | 59 |
| Modus | 58,58 |
| Range | 45 |
| Interval | 7 |
| Standard deviation | 12,25 |
| Variant | 124,89 |

Based on the above table, the total score of post-test for control class was 1.870 , mean was 58,37 , standard deviation was 12,25 , variant was 124,89 , median was 59 , range was 45 , modus was 58,58 , interval class was 7 . The researcher got the lowest score was 35 and highest score was 80 . Next, the calculation of how to get it could be seen in appendix 10. Then the calculation of the frequency distribution of the students' score as follow:

Table. 13
Frequency Distribution of the Variables

| nterval | Point | equency | centages |
| :--- | :--- | :---: | :--- |
| $35-41$ | 38 | 3 | $375 \%$ |


| $42-48$ | 45 | 3 | $375 \%$ |
| :--- | :--- | :--- | :--- |
| $49-55$ | 52 | 6 | $8,75 \%$ |
| $56-62$ | 59 | 8 | $25 \%$ |
| $63-69$ | 66 | 3 | $375 \%$ |
| $70-76$ | 73 | 6 | $8,75 \%$ |
| $77-83$ | 80 | 3 | $375 \%$ |
| $i=7$ |  | 32 | $100 \%$ |

From the table above, the students' score in class interval between $35-41$ was 3 students ( $9,375 \%$ ), class interval between 42-48 was 3 students, ( $9,375 \%$ ), class interval between $49-55$ was 6 students (18,75\%), class interval between 56-62 was 8 students (25\%), class interval between $63-69$ was 3 student (9,375\%), class interval between $70-76$ was 6 students $(18,75 \%)$ and the last class interval 77-83 was 3 students ( $9,375 \%$ ).

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


Figure 5: Description Data of Students' Word Search Puzzle in Control Class (Post-test)

From the histogram above shows that, the data was normal.

## B. Hypothesis Test

After calculating the data of post-test, researcher found that the posttest result of experimental class and control class is normal and homogenous. Based on the result, researcher used parametric test by using T-test to analyze the hypothesis. Hypothesis alternative $\left(\mathrm{H}_{\mathrm{a})}\right.$ of the research was "Word Search Puzzle has an effect on students' Vocabulary Mastery at the VIII Grade Students of SMP N 5 Padangsidimpuan." The calculation can be seen in appendix 12. The result of $t$-test was as follow:

Table. 14
Result of T-test from the Both Averages

| Pre-test |  | Post-test |  |
| :--- | :--- | :--- | :--- |
| punt | $\mathrm{t}_{\text {table }}$ | $\mathrm{t}_{\text {count }}$ | $\mathrm{t}_{\text {table }}$ |
| 77 | 2,39 | 5,31 | 2,39 |

The test hypothesis have two criteria. First, if $\mathrm{t}_{\text {count }}<\mathrm{t}_{\text {table }}, \mathrm{H}_{0}$ is accepted. Second, if if $\mathrm{t}_{\text {count }}>\mathrm{t}_{\text {table }}, \mathrm{H}_{\mathrm{a}}$ is accepted. Based on researcher's calculation in pre-test, researcher found $t_{\text {count }} 1,77$ while $t_{\text {table }} 2,39$ with opportunity $(1-\alpha)=1-5 \%=95 \%$ and $d k={ }_{n 1}+{ }_{n 2}-2=32+32-2=62$. Cause $\mathrm{t}_{\text {count }}<\mathrm{t}_{\text {table }}(1,77<1,88)$, it means that hypothesis $\mathrm{H}_{\mathrm{a}}$ was rejected and $\mathrm{H}_{0}$ was accepted. So, in pre-test, two classes were same. There is no difference in the both classes. But, in post-test, researcher found that $\mathrm{t}_{\text {count }}$ 2,80 while $\mathrm{t}_{\text {table }} 1,88$ with opportunity $(1-\alpha)=1-5 \%=95 \%$ and $\mathrm{dk}={ }_{\mathrm{n} 1}+$ $\mathrm{n} 2-2=32+32-2=62$. Because, $\mathrm{t}_{\text {count }}>\mathrm{t}_{\text {table }}(5,31>2,39)$, it means that hypothesis $\mathrm{H}_{\mathrm{a}}$ was accepted and $\mathrm{H}_{0}$ was rejected. The calculation can be seen on the appendix 12. Based on the result of the data analysis, the
researcher got the mean score of experimental class in pre-test was 60,12 and in post-test was 75,48 . Then the mean score of control class in pre-test was 52,12 and in post-test was 58,37 . The gain score was 12,11 . The calculation can be seen on appendix 12.

## C. Discussion

The researcher discussed the result of this research. Based on the result of the data analysis, the researcher got the mean score of experimental class in pre-test was 60,12 and in post-test was 74,71 . Then the mean score of control class in pre-test was 55,12 and in post-test was 58,37 . So, based on its comparing can be concluded that the improvement of experimental class was higher than control class. Automatically, word search puzzle game had the effect on Vocabulary Mastery.

It also discussed with the theory and compared with the related finding that has been stated by researcher. Related to the theory from Khoirul Bahri Lubis in his script: the effect of using crossword puzzle in reinforcing activity toward students' vocabulary mastery. ${ }^{55} \mathrm{He}$ found that using crossword puzzle in reinforcing activity is very useful toward the improvement of students. Vocabulary at elementary school with score vocabulary just 48.58 .

The researcher Munika Duri with entitled "The use of bilingual crossword puzzle toward students' vocabulary mastery of fifth grade in MI Salafiyah-Selopuro academic year 2012/2013. Here she used bilingual

[^26]crossword puzzle as teaching media. The result of the study showed that the students get better achievement in vocabulary score after taught by using the treatment. It found that the use of vocabulary by bilingual crossword puzzle can improve students' vocabulary. The writer used pre experimental research with the quantitative approach. ${ }^{56}$ So, there are three steps like pretest, treatment, and posttest with the design in the form of one group.

Other research entitled "The effectiveness of using word square game towards the students' mastery of vocabulary the second grade at SMP Negeri 2 Pakel year 2012/2013". The writer is Pujiastuti. ${ }^{57}$ She research used pre experimental with one group pretest-posttest design. She is using word square game in the teaching vocabulary. Her research was succeeded and shows a better result.

Tri Riski Hasibuan in her script is improving students vocabulary mastery through crossword puzzle at SD Muhammadiyah 1 Padangsidimpuan has a significant, based on the result of the classroom action research, it was concluded that crossword puzzle technique improved students' vocabulary mastery at grade VI SD Muhammadiyah 1 Padangsidimpuan. ${ }^{58}$ It based on the students' vocabulary mastery mean

[^27]score which was in cycle 1 were 61.42 and 62.14 became 84.28 and 91.78 in cycle 2 .

## D. The Limitation of the Research

There were some aspect that could threat for this research as follow:

1. This research is very limited to vocabulary assessment. The researcher only used 2 aspect for vocabulary assessment rubric.
2. The researcher did not know how serious the students were in answering the test. The researcher did not know the students' knowledge whether the students answer the question by their real answer, or they guest the answer, or they cheat their friends' answer.
3. The students need more time in answering the test.
4. There were some of students were noisy while answering the test. So, it can disturb the concentration of the others.

## CHAPTER V

## CONCLUSION AND SUGGESTION

## A. Conclusion

Based on the result of the research, the conclusions of this research are:

1. The students vocabulary mastery at grade VIII of SMP N 5 Padangsidimpuan before using word search puzzle game, the mean score of pre-test for experimental class was 60,12 and the mean score of pre-test for control class was 55,12.
2. The students vocabuary mastery at grade VIII of SMP N 5 Padangsidimpuan after using word search puzzle game, the mean score of experimental class was higher than before using word search puzzle game. The mean score of post-test for the experimental class was 74,71 and the mean score of post-test for control class taught by conventional strategy was 58,37 .
3. There was a significant effect of word search puzzle game to vocabulary mastery at the VIII grade students of SMP N 5 Padangsidimpuan. The researcher found the research result of $t$-test where $t_{0}$ was higher than $t_{t}$ was 5,31 and $t_{t}$ was $2,39(5,31>2,39)$. It means that $\mathrm{H}_{\mathrm{a}}$ was accepted, so there was a significant effect of word search puzzle game to vocabulary mastery at the VIII grade students of SMP N 5 Padangsidimpuan.

## B. Suggestion

After finishing the research, the researcher got many information in English teaching learning. Therefore, from that experience, the researcher show some things need to be proven. It makes the researcher give some suggestion, as follow:

1. From the researcher result it is as the information for the headmaster to motivate the English teacher to teach as well as possible by maximizing the using word search puzzle game in teaching, because this strategy can achieve the students ability especially in vocabulary mastery.
2. From the research result it is also as the information to the English teacher to use Word Search Puzzle Game as a reference in teaching vocabulary to make learning process more active.
3. The researcher suggests to another researchers to use this strategy in solving another problems and find another factors that face by students in learning English process.

## REFERENCES

Ahmad Nizar Rangkuti. Statistik Untuk Penelitian Pendidikan. Medan: Kelompok Penerbit Perdana Mulya Sarana, 2015.

Ahmad Syarofi Al-Furqon. "The Effect of Word Search Puzzle Game in Teaching Vocabulary to the First Grade Students of SMPN 3 Proppo." Wacana Didaktika 5, no. 2 (2017): 101-8. https://doi.org/10.31102/wacanadidaktika.5.02.101-108.

Alqahtani, Mofareh. "The Importance of Vocabulary in Language Learning and How To Be Taught." . . International Journal of Teaching and Education III, no. 3 (2015): 21-34. https://doi.org/10.20472/TE.2015.3.3.002.

Ambiyatul. "The Influence Of Using Word Search Puzzle Game Towards Students' Vocabulary Mastery," 2018.

Arikunto, Suharsimi. Manajemen Penelitian. Jakarta: Rineka Cipta, 2003.
___ Prosedur Penelitian Suatu Pendekatan Praktik. Jakarta: Rineka Cipta, 2010. https://doi.org/Katalog Perpustakaan Badan PPSDMK Kemenkes RI [4513].

David Nunan. Second Language Teaching and Learning. Boston USA: Heinle and Heinle, 1999.

Firmansyah, Moh. "Increasing Students' Vocabulary of VII Grade at SMP N 3 Tolitoli Throught" 3, no. 2 (2015). https://ojs.umada.ac.id
H. Douglas Brown. Teaching by Principles An Interactive Approach to Language Pedadogy. San Fransisco: Longman, 2007.

H Dwi Ema. Picturesan Attractive Media in Teacing Vocabulary. Tulungagung:

Hayati, Rini. Teaching English Vocabulary for Children 8 to 10 Years Old by Using Games. Jakarta, 2003.

Hernawati. "Building Up The Students’ English Vocabulary Trough Fanny Stories at SMP Negeri 2 Duampunua Kab. Pinrang" I, no. 02 (2015): 201$15 . \quad$ http://journal.uinalauddin.ac.id/index.php/Eternal/article/view/2382/2324.

Istarani. 58 Model Pembelajaran Inovatif. Medan: Media Persada, 2012.

Isterya, and Hasan Basri. "Improving Vocabulary Mastery Through Text Twist Game." E-Journal of English Language Teaching Society (ELTS), no. 1 (2003): 1-9. http://jurnal.untad.ac.id

John Cresswell. Research Design Quantitative and Mixed Method Approached Second Edition. Second Edi. USA: Prentice Hall, 2000.

Khoirul Bahri Lubis. "The Effect of Using Crossword Puzzle in Reinforcing Activity Toward Students Vocabulary Mastery at Fifth Grade of Islamic Elementary School." IAIN Imambonjol Padang, 2011. http://jurnal.iainpadangsidimpuan.ac.id
L.R Gay and Peter Airaisan. Educational Research for Analysis and Application. America: Prentice Hall, 1992.

Lessard-Clouston, Michael. Vocabulary and Its Importance in Language Learning. Teaching Vocabulary, 2013. https://www.worldcat.org/title/teaching-vocabulary/oclc/855168341

Lestari, Novia, Yuyun Yulia, Universitas Sarjanawiyata Tamansiswa, and Universitas Sarjanawiyata Tamansiswa. "The Use of Crossword Puzzle to

Improve Vocabulary Mastery Of The Fifth Grade Students" 2, no. 2 (2018): 71-79. http://jurnal.ustjogja.ac.id

Li, Yap Wei. "Transforming Conventional Teaching Classroom to LearnerCentred Teaching Classroom Using Multimedia-Mediated Learning Module." International Journal of Information and Education Technology 6, no. 2 (2016): 105-12. https://doi.org/10.7763/ijiet.2016.v6.667.

M, Hernawati. "Building Up the Studets' English Vocabulary Trough Fanny Stories At Smp Negeri 2 Duampanua Kab. Pinrang." ETERNAL (English, Teaching, Learning and Research Journal) 2, no. 2 (2015): 201-15. https://doi.org/10.24252/eternal.v12.2015.a4.

Meyer, Laura L., and Norbert Schmitt. "Vocabulary in Language Teaching." TESOL Quarterly 36, no. 2 (2002): 235. https://doi.org/10.2307/3588334.

Munika Duri. "The Use of Bilingual Crossword Puzzle Toward Students' Vocabulary Mastery of Fifth Grade in MI Salafiyah." IAIN Tulungagung, 2013. http://repo.iain-tulungagung.ac.id

Nardani, Sri, Eka Sustri Harida, and Fitri Rayani Siregar. "The Effect of Watching Film to Students' Vocabulary Mastery at Grade XI SMK Negeri 1 Padangsidimpuan." English Education 02, no. 01 (2014): 88-106. http://www.e-journal.iain.ac.id.

Nasir, Sudarman, and Sumalee Chinokul. "The English Vocabulary Size and Level of English" 4 (2018): 1-15. https://www.researchgate.net

Nguyen Thi Thanh Huyen, and Khuat Thi Thu Nga. "The Effectiveness of Learning Vocabulary Through Games." Asian EFL Journal, n.d., 17. https://www.academia.edu/upgrade?feature=analytics.

Ni Made Nila Lohita Anggreini. "The Effectiveness of Word Search Puzzle in Vocabulary Mastery at Seventh Grade of SMPN 12 Mataram in Academic Year 2014/2015," 2017. http://unra.ac.id/id/eprint/3496

Priyatna, Surya Eka. "Pendekatan Realita Perkuliahan Pada Media Online." Alhadharah 15, no. 30 (2017): 1. https://doi.org/10.18592/alhadharah.v15i30.1221.

Puji Astuti. "The Effectiveness of Using Word Square Game Towards the Students Mastery of Vocabulary the Second Grade at SMP 2 Pakel." IAIN Tulungagung, 2013. repo.iain-tulungagung.ac.id/4917/.

Seri Mawar, Eka Sustri Harida, \& Fitri Rayani Siregar. "Improving Students’ Vocabulary Mastery Through Word Square Modeling at Grade VII SMP Negeri 5 Padangsidimpuan" 03, no. 2 (2017): 235-50. http://etd.iainpadangsidimpuan.ac.id/id/eprint/3383

Sugiyono. Metode Penelitian Kuantitatif Kualitatif Dan $R \& D$. Bandung: Alfabeta, 2010.

Teacher, English. "Private Interview., November 04th 2020 in SMP N 5 Padangsidimpuan," n.d.

Tri Lestari Nela. Rubrik Penilaian Vocabulary, n.d.

Vossoughi, H. "Using Word Search Puzzle Games for Improving Vocabulary Knowledge of Iranian EFL Learners" 1, no. 1 (2009): 79-85. https://www.sid.ir/en/journal/ViewPaper.aspx?id=201538

Wahyuniati. "Keefektifan Model Kontekstual Untuk Meningkatkan Keterampilan Menulis Narasi." Universitas Muhammadiyah Purwokerto, 2013. https://doi.org/10.1210/jcem.76.6.8501142.

## CURRICULUM VITAE



## A. Identity

Name
: Linda Sari Lubis
Nim
: 1620300013
Place and Birthday
: Padangsidimpuan, 14 November 1998
Gender : Female
Religion : Islam
Address : Jl. Imam Bonjol Gg. Durian, Padangsidimpuan.

## B. Parents

1. Father : Samsul Lubis
2. Mother : Masdelina Nasution

## C. Educational Background

1. Elementary School : SD N 200211/1 Padangsidimpuan 2004-2010
2. Junior High School : SMP N 5 Padangsidimpuan 2010-2013
3. Senior High School : SMA N 3 Padangsidimpuan 2013-2016
4. Collage : IAIN Padangsidimpuan 2016-2021

## APPENDIX 1

EXSPERIMENTAL CLASS

## RENCANA PELAKSANAAN PEMBELAJARAN <br> ( R P P )

| Sekolah | $:$ SMP N 5 Padangsidimpuan |
| :--- | :--- |
| Mata Pelajaran | $:$ Bahasa Inggris |
| Kelas / Semester | $:$ VIII/ 1 |
| Aspek/sub skil | $:$ Vocabulary (Part of Body) |
| Alokasi Waktu | $: 2 \times 40$ Minutes |
| Peneliti | $:$ LINDA SARI LUBIS |

## A. KOMPETENSI INTI

1. : Menghargai dan menghayati ajaran agama yang dianutnya.
2. : Menghargai dan menghayati perilaku jujur, disiplin, tanggungjawab, peduli (toleransi, gotong royong), santun, percaya diri, dalam berinteraksi secara efektif dengan lingkungan sosial dan alam dalam jangkauan pergaulan dan keberadaannya
3. : Memahami dan menerapkan pengetahuan (faktual, konseptual, dan prosedural) berdasarkan rasa ingin tahunya tentang ilmu pengetahuan, teknologi, seni, budaya terkait fenomena dan kejadian tampak mata.
4. : Mengolah, menyaji, dan menalar dalam ranah konkret (menggunakan, mengurai, merangkai, memodifikasi, dan membuat) dan ranah abstrak (menulis, membaca, menghitung, menggambar, dan mengarang) sesuai dengan yang dipelajari di sekolah dan sumber lain yang sama dalam sudut pandang/teori

## B. KOMPETENSI DASAR

3.7 Menerapkan fungsi sosial, struktur teks, dan unsur kebahasaan teks interaksi transaksional lisan dan tulis yang melibatkan tindakan memberi dan meminta informasi terkait noun, dan mampu menebak kosa kata noun sesuai dengan konteks penggunaanya.
4.8 Menyusun teks interaksi transaksional, yang melibatkan tindakan memberi dan meminta informasi terkait noun, fungsi sosial, struktur teks, dan unsur kebahasaan yang benar dan sesuai kontek.

## C. INDIKATOR

1. Memahami maksud dan penggunaan word search puzzle dan part of body
2. Memahami dan menguasai penggunaan vocabulary di dalam metode word search puzzle

## D. TUJUAN PEMBELAJARAN

Pada akhir pembelajaran, siswa dapat :

- Melalui bimbingan dari guru dan penjelasan dari gambar, siswa dapat menggunakan word search puzzle dan vocabulary secara tepat.
E. MATERIAL : Vocabulary (Part of Body)
F. METODE PEMBELAJARAN : Word Search Puzzle dan Presentasi
G. MEDIA ALAT DAN SUMBER BELAJAR

1) Media / Alat
a. Papan tulis, dan spidol.
2) Sumber Belajar
a. Buku teks yang relevan
b. Kamus Bahasa Inggris
c. Internet

## H. LANGKAH - LANGKAH PEMBELAJARAN

## PERTEMUAN KE-1

| Pembelajaran |  | Waktu |
| :---: | :---: | :---: |
| Pendahuluan | a. Greeting <br> b. Mengabsen siswa <br> a. Guru menghubungkan pelajaran yang lalu ke pelajaran selanjutnya <br> c. Guru mengatakan tentang materi baru <br> d. Guru memberikan fotocopi word search puzzle game ke siswa |  |
| Inti | b. Guru menjelaskan peraturan permainan dan siswa harus menemukan semua kata yang |  |


|  | tersembunyi di dalam kotak <br> c. Guru mengarahkan siswa untuk melingkari setiap kara yang mereka temukan <br> d. Guru memberikan waktu 30 menit |  |
| :---: | :---: | :---: |
| Penutup | a. Guru menanyakan siswa tentang pemahaman mereka tentang materi baru <br> b. Guru menyimpulkan dan menyuruh siswa membuat catatan bersama. <br> c. Guru menutup kelas dan berdoa diakhir pembelajaran |  |

## I. PENILAIAN :

A. Tekhnik : Merespon Pertanyaan Tertulis
B. Bentuk : Pertanyaan Tertulis
C. Instrument : Terlampir

## J. PEDOMAN PENILAIAN

Nilaiakhir $=\frac{\text { skor maksimal }}{\text { skor minimum }} \mathrm{X} 100$

Keterangan:
Jumlah Skor Maksimal X 10: 10
Nilai Maksimal :100
Nilai Siswa $:=\frac{\text { skor yang di peroleh }}{\text { skor maksimum }} \mathrm{X} 100$

ENGLISH TEACHER

## APPENDIX 2

CONTROL CLASS

## RENCANA PELAKSANAAN PEMBELAJARAN <br> ( R P P )

| Sekolah | : SMP N 5 Padangsidimpuan |
| :--- | :--- |
| Mata Pelajaran | : Bahasa Inggris |
| Kelas / Semester | : VIII/ 1 |
| Aspek/sub skil | : Vocabulary (Part of Body) |
| Alokasi Waktu | $: \mathbf{2}$ X 40 Minutes |
| Peneliti | : LINDA SARI LUBIS |

## A. KOMPETENSI INTI

1. : Menghargai dan menghayati ajaran agama yang dianutnya.
2. : Menghargai dan menghayati perilaku jujur, disiplin, tanggungjawab, peduli (toleransi, gotong royong), santun, percaya diri, dalam berinteraksi secara efektif dengan lingkungan sosial dan alam dalam jangkauan pergaulan dan keberadaannya
3. : Memahami dan menerapkan pengetahuan (faktual, konseptual, dan prosedural) berdasarkan rasa ingin tahunya tentang ilmu pengetahuan, teknologi, seni, budaya terkait fenomena dan kejadian tampak mata.
4. : Mengolah, menyaji, dan menalar dalam ranah konkret (menggunakan, mengurai, merangkai, memodifikasi, dan membuat) dan ranah abstrak (menulis, membaca, menghitung, menggambar, dan mengarang) sesuai dengan yang dipelajari di sekolah dan sumber lain yang sama dalam sudut pandang/teori

## B. KOMPETENSI DASAR

3.7 Menerapkan fungsi sosial, struktur teks, dan unsur kebahasaan teks interaksi transaksional lisan dan tulis yang melibatkan tindakan memberi dan meminta informasi terkait noun, dan mampu menebak kosa kata noun sesuai dengan konteks penggunaanya.
4.8 Menyusun teks interaksi transaksional, yang melibatkan tindakan memberi dan meminta informasi terkait noun, fungsi sosial, struktur teks, dan unsur kebahasaan yang benar dan sesuai konteks

## C. INDIKATOR

1. Memahami maksud dan penggunaan word search puzzle dan part of body
2. Memahami dan menguasai penggunaan vocabulary di dalam metode word search puzzle

## D. TUJUAN PEMBELAJARAN

Pada Akhir Pembelajaran, Siswa Dapat :

- Melalui bimbingan dari guru dan penjelasan dari gambar, siswa dapat menggunakan word search puzzle dan vocabulary secara tepat.
E. MATERIAL : Vocabulary (Part of Body)
F. METODE PEMBELAJARAN : Convetional Strategy


## G. MEDIA ALAT DAN SUMBER BELAJAR

1) Media / Alat
d. Papan tulis, dan spidol.
2) Sumber Belajar
e. Buku teks yang relevan
f. Kamus Bahasa Inggris
g. Internet

## H. LANGKAH - LANGKAH PEMBELAJARAN

PERTEMUAN KE-1

| Pembelajaran |  | Waktu |
| :---: | :---: | :---: |
| Pendahuluan | e. Greeting <br> f. Mengabsen siswa <br> g. Memberi motivasi pada siswa <br> h. Memberi gambaran mengenai materi yang akan dipelajari dan teknik yang akan digunakan. |  |
| Inti | e. Guru mengucapkan salam dan membuka kelas <br> f. Berdoa bersama sebelum memulai pelajaran <br> g. Guru menghubungkan pelajaran yang lalu |  |


|  | kepelajaran selanjutnya <br> h. Guru memberi materi <br> i. Guru menjelaskan tentang materi yang akan di pelajari <br> j. Guru memberi catatan |  |
| :---: | :---: | :---: |
| Penutup | d. Guru dan siswa secara bersama-sama membuat ringkasan bahan yang sudah dipelajari pada pertemuan ini. <br> e. Guru menjelaskan rencana kegiatan pembelajaran yang akan datang. <br> f. Guru mengumpulkan soal yang dikerjakan siswa <br> g. Berdo'a di akhir pembelajaran. |  |

## I. PENILAIAN :

D. Tekhnik : Merespon Pertanyaan Tertulis
E. Bentuk : Pertanyaan Tertulis
F. Instrument : Terlampir

## J. PEDOMAN PENILAIAN

Nilaiakhir $=\frac{\text { skor maksimal }}{\text { skor minimum }} \mathrm{X} 100$

Keterangan:
Jumlah skor maksimal x 10: 10
Nilai maksimal :100
Nilai siswa $:=\frac{\text { skor yang di peroleh }}{\text { skor maksimum }} \mathrm{X} 100$

## ENGLISH TEACHER

RESEARCHER

## ROS MAWAR, SPD

LINDA SARI LUBIS
NIP. 197302022005022001

## APPENDIX 3

## INSTRUMENT PRE-TEST

Nama :
Kelas :
A. Pengantar :

1. Tes ini hanya bertujuan untuk menyaring data dari siswa
2. Jawaban anda tidak mempengaruhi kedudukan anda di sekolah
3. Terimakasih atas kejujuran dan partisipasi anda
B. Petunjuk :
4. Isilah terlebih dahulu identitas anda (nama dan kelas)
5. Jawaban anda tidak mempengaruhi kedudukan anda di sekolah
6. Carilah kata-kata dibawah ini yang berada didalam kotak baik secara mendatar, menurun, kesamping kanan dan kesamping kiri.
7. Jawablah dengan bahasa inggris.
C. Pertanyaan :

- Please find the words are hidden in this grid by looking the clues below and then please translate them first!

| Wajah | Bibir | Lidah | Pergelangan tangan |
| :--- | :--- | :--- | :--- |
| Kuku | Dada | Jari | Paha |
| Tangan | Betis | Lutut | Pipi |
| Kepala | Lengan | Mata | Tumit |
| Rambut | Siku | Pinggang | Telinga |
|  |  |  |  |


| H | M | O | N | E | Y | H | B | T | Z | L | L | P | R | F | Q |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | S | V | D | R | R | E | L | P | H | I | G | E | T | U | M |
| Z | V | T | E | A | B | A | M | H | O | I | S | E | O | U | F |
| C | Y | M | E | M | K | D | C | V | R | A | G | G | N | K | I |
| H | A | N | D | B | O | O | W | C | V | E | G | H | G | Y | N |
| A | L | B | G | A | V | O | A | V | O | A | T | A | U | R | G |
| I | X | C | D | L | B | D | N | T | B | R | U | A | E | E | E |
| R | S | H | R | L | T | F | L | K | T | S | I | R | W | X | R |
| L | 1 | E | E | S | H | A | N | I | L | P | M | O | H | I | P |
| X | C | S | I | Z | I | E | F | G | H | E | E | L | J | K | I |
| S | M | A | T | E | E | T | R | I | M | L | N | F | L | A | C |
| Q | W | C | D | O | H | T | I | M | I | A | K | U | N | Y | E |
| O | R | O | A | R | M | Y | E | A | T | S | P | I | L | T | M |
| P | O | S | S | D | D | D | N | I | N | D | O | M | I | E | A |
| W | N | E | Y | E | W | A | C | H | E | E | K | I | N | E | P |

Validator

Ros Mawar, S.Pd
NIP. 197302022005022001

## APPENDIX 4

## INSTRUMENT POST-TEST

Nama :

Kelas :
A. Pengantar :

1. Tes ini hanya bertujuan untuk menyaring data dari siswa
2. Jawaban anda tidak mempengaruhi kedudukan anda di sekolah
3. Terimakasih atas kejujuran dan partisipasi anda
B. Petunjuk :
4. Isilah terlebih dahulu identitas anda (nama dan kelas)
5. Jawaban anda tidak mempengaruhi kedudukan anda di sekolah
6. Carilah kata-kata dibawah ini yang berada didalam kotak baik secara mendatar, menurun, kesamping kanan dan kesamping kiri.
7. Jawablah dengan bahasa inggris.
C. Pertanyaan :

- Please find the words are hidden in this grid by looking the clues below and then please translate them first!

| Mulut | Pergelangan kaki | Bahu | Kepala |
| :--- | :--- | :--- | :--- |
| Gigi | Ketiak | Dagu | Ibu jari |
| Leher | Kuku | Kaki | Tangan |
| Hidung | Wajah | Jari kaki | Tahi lalat |
| Punggung | Dahi | Otot | Siku |


| P | L | K | C | A | B | S | C | T | O | O | T | H | L | K | O |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| H | A | N | D | O | P | P | I | C | L | O | C | H | I | N | G |
| B | U | Z | W | H | I | E | B | M | O | N | A | M | E | A | S |
| M | M | K | S | N | S | I | A | K | L | F | A | G | L | 1 | F |
| P | O | S | D | O | G | Z | M | U | S | C | L | E | U | L | O |
| H | L | N | N | U | L | K | G | K | G | H | J | E | C | B | R |
| A | E | F | E | X | P | F | O | O | T | B | S | H | E | O | E |
| T | R | T | C | V | B | N | G | D | S | M | O | U | T | H | H |
| B | A | C | K | T | E | L | B | O | W | H | J | K | L | U | E |
| M | D | R | G | H | I | U | M | B | R | E | L | L | A | A | A |
| U | D | R | M | S | O | U | L | D | E | R | O | N | E | S | D |
| H | A | N | S | P | E | R | R | D | R | T | Y | E | I | D | L |
| T | Q | A | D | G | I | J | K | F | O | O | C | D | G | F | E |
| Y | L | D | F | H | O | T | P | I | T | A | L | S | A | G | C |
| G | A | N | K | L | E | E | V | B | F | I | N | T | O | E | S |

Validator

Ros Mawar, S.Pd
NIP. 197302022005022001

## APPENDIX 5

Score of Experimental Class and Control Class in Pre-Test
a. Score of Experimental Class Pre-Test

| NO | Students Initial Name | Pre-Test | $\mathbf{X}^{2}$ |
| :---: | :---: | :---: | :---: |
| 1 | AAH | 40 | 1600 |
| 2 | AAHP | 65 | 4225 |
| 3 | AEDS | 60 | 3600 |
| 4 | AHH | 60 | 3600 |
| 5 | BSH | 40 | 1600 |
| 6 | DS | 65 | 4225 |
| 7 | DPA | 45 | 2025 |
| 8 | DA | 70 | 4900 |
| 9 | EA | 65 | 4225 |
| 10 | ENS | 60 | 3600 |
| 11 | GSH | 60 | 3600 |
| 12 | HP | 70 | 4900 |
| 13 | HM | 80 | 6400 |
| 14 | IS | 45 | 2025 |
| 15 | KDR | 75 | 5625 |
| 16 | LA | 55 | 3025 |
| 17 | MTPS | 70 | 4900 |
| 18 | MR | 55 | 3025 |


| 19 | MAL | 60 | 3600 |
| :---: | :---: | :---: | :---: |
| 20 | NPMN | 50 | 2500 |
| 21 | NL | 60 | 3600 |
| 22 | NM | 65 | 4225 |
| 23 | PAL | 35 | 1225 |
| 24 | RAY | 75 | 5625 |
| 25 | RAF | 55 | 3025 |
| 26 | RSE | 45 | 2025 |
| 27 | RHA | 35 | 1225 |
| 28 | RAS | 75 | 5625 |
| 29 | SH | 60 | 3600 |
| 30 | SRH | 60 | 3600 |
| 31 | SAL | 50 | 2500 |
| 32 | THS | 50 | 2500 |
|  | TOTAL | 1885 | 111975 |

## APPENDIX 6

## RESULT OF NORMALITY TEST IN PRE TEST

## RESULT OF THE NORMALITY TEST OF VIII-1 IN PRE-TEST

1. The score of VIII-1 in pre test from low score to high score:

| 35 | 45 | 50 | 55 | 60 | 60 | 65 | 75 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 35 | 45 | 50 | 60 | 60 | 65 | 70 | 75 |
| 40 | 45 | 55 | 60 | 60 | 65 | 70 | 75 |
| 40 | 50 | 55 | 60 | 60 | 65 | 70 | 80 |

2. High $=80$

Low $=35$
Range = High - Low
= $80-35$
$=45$
3. Total Classes $=1+3,3 \log (n)$

$$
\begin{aligned}
& =1+3,3 \log (32) \\
& =1+3,3(1,50) \\
& =1+4,95 \\
& =5,95 \\
& =6
\end{aligned}
$$

4. Length of Classes $=\frac{\text { range }}{\text { total of class }}=\frac{45}{6}=7.5=7$
5. Mean

| Interval class | F | Mid Point | x | fx | $\mathrm{x}^{2}$ | $\mathrm{fx}^{2}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $35-41$ | 4 | 38 | +3 | 12 | 9 | 36 |
| $42-48$ | 3 | 45 | +2 | 6 | 4 | 12 |
| $49-55$ | 6 | 52 | +1 | 6 | 1 | 6 |
| $56-62$ | $\mathbf{8}$ | $\mathbf{5 9}$ | $\mathbf{0}$ | $\mathbf{0}$ | $\mathbf{0}$ | $\mathbf{0}$ |
| $63-69$ | 4 | 66 | -1 | -4 | 1 | 4 |
| $70-76$ | 6 | 73 | -2 | -12 | 4 | 24 |
| $77-83$ | 1 | 81 | -3 | -3 | 9 | 9 |
| $\mathrm{i}=7$ | 32 |  |  | 5 |  | 91 |

$$
\begin{aligned}
\mathrm{M}_{\mathrm{x}} & =\mathrm{M}^{1}+i \frac{\sum f x^{1}}{N} \\
& =59+7\left(\frac{5}{32}\right) \\
& =59+7(0,16) \\
& =59+1,12 \\
& =60,12 \\
\mathrm{SD}_{\mathrm{t}} & =i \sqrt{\frac{\sum f x^{2}-}{n}}\left(\frac{\sum f x^{1}}{n}\right)^{2} \\
& =7 \sqrt{\frac{91}{32}-\left(\frac{5}{32}\right)^{2}} \\
& =7 \sqrt{2,84-(0,16)^{2}} \\
& =7 \sqrt{2,84-0,02} \\
& =7 \sqrt{2,82} \\
& =7 \times 1,67 \\
& =11,69
\end{aligned}
$$

Table of Normality Data Test with Chi kuadrad Formula

| Interval of score | Real upper limit | Z-score | Limit of large of area | Large of area | $\mathrm{F}_{\text {e }}$ | $\mathrm{F}_{0}$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 35-41 | 41,5 | -1,59 | 0,4441 | 0,1 | 3,2 | 4 | 0,8 | 0,25 |
| 42-48 | 48,5 | -0,99 | 0,3389 | 0,18 | 5,76 | 3 | -2,76 | -0,47 |
| 49-55 | 55,5 | -0,39 | 0,1517 | 0,26 | 8,32 | 6 | -2,32 | -0,27 |
| 56-62 | 62,2 | 1,4 | 0,4192 | 0,13 | 4,16 | 8 | 3,84 | 0,92 |
| 63-69 | 69,5 | 0,8 | 0,2881 | 0,13 | 4,16 | 4 | -0,16 | -0,03 |
| 70-76 | 76,5 | 1,4 | 0,4192 | 0,05 | 1,6 | 6 | 4,4 | 2,75 |
| 77-83 | 83,5 | 2 | 0,4772 | 0,03 | 0,96 | 1 | 0,04 | 0,04 |



Based on the table above, the researcher found that $\mathrm{x}^{2}$ count $=3,19$ while $\mathrm{x}_{\text {table }}^{2}=$ 7.815 cause $\mathrm{x}^{2}$ count $<\mathrm{x}^{2}$ table $(3.19<7.815)$ with degree of freedoom $(\mathrm{dk})=6-3=3$ and significant level $\alpha=5 \%$. So, distribution of VIII-1 classroom (pre-test) is normal.
6. Median

| Interval class | Fm | Fk |
| :---: | :---: | :---: |
| $35-41$ | 4 | 4 |
| $42-48$ | 3 | 7 |
| $49-55$ | 6 | $\mathbf{1 3}$ |
| $56-62$ | $\mathbf{8}$ | 21 |
| $63-69$ | 4 | 25 |
| $70-76$ | 6 | 31 |
| $77-83$ | 1 | 32 |

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

| Bb | $: 55,5$ |
| :--- | :--- |
| Fk | $: 13$ |
| fm | $: 8$ |
| $i$ | $: 7$ |
| n | $: 32$ |
| $1 / 2 \mathrm{n}$ | $: 16$ |
| So, |  |
| Me | $=B b+i\left[\frac{n / 2^{-F k}}{f m}\right]$ |
| Me | $=55,5+7\left[\frac{32 / 2^{-13}}{8}\right]$ |
| Me | $=55,5+7\left[\frac{16-13}{8}\right]$ |


| Me | $=55,5+7\left[\frac{3}{8}\right]$ |
| :--- | :--- |
| Me | $=55,5+7(0.37)$ |
| Me | $=55,5+2,59$ |
| Me | $=58,09$ |

7. Modus

| Interval class | Fm | Fk |
| :---: | :---: | :---: |
| $35-41$ | 4 | 4 |
| $42-48$ | 3 | 7 |
| $49-55$ | 6 | $\mathbf{1 3}$ |
| $56-62$ | $\mathbf{8}$ | 21 |
| $63-69$ | 4 | 25 |
| $70-76$ | 6 | 31 |
| $77-83$ | 1 | 32 |

$$
\text { Mo } \quad=L+\frac{d_{1}}{d_{1}+d_{2}} i
$$

$$
\mathrm{L} \quad=55,5
$$

$$
d_{1} \quad=2
$$

$$
d_{2} \quad=4
$$

$$
i \quad=7
$$

$$
\text { Mo } \quad=L+\frac{d_{1}}{d_{1}+d_{2}} i
$$

$$
\text { Mo } \quad=55,5+\frac{2}{2+4} 7
$$

$$
\text { Mo }=55,5+\frac{2}{6} 7
$$

$$
\text { Mo } \quad=55,5+(0.33) 7
$$

$$
\text { Mo }=55,5+2,31
$$

$$
\text { Mo }=57,81
$$

## RESULT OF NORMALITY TEST IN PRE TEST

## RESULT OF THE NORMALITY TEST OF VIII-2 IN PRE-TEST

1. The score of VIII-2 in pre test from low score to high score:

| 30 | 40 | 45 | 50 | 55 | 55 | 60 | 70 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 30 | 40 | 45 | 55 | 55 | 55 | 65 | 70 |
| 35 | 40 | 50 | 55 | 55 | 60 | 65 | 75 |
| 35 | 45 | 50 | 55 | 55 | 60 | 70 | 75 |

2. High $=75$

Low $=30$
Range $=$ High - Low
= $75-30$
$=45$
3. Total Classes $=1+3,3 \log (n)$

$$
=1+3,3 \log (32)
$$

$$
=1+3,3(1,50)
$$

$$
=1+4,95
$$

$$
=5,95
$$

$$
=6
$$

4. Length of Classes $=\frac{\text { range }}{\text { total of class }}=\frac{45}{6}=7.5=7$
5. Mean

| Interval class | F | Mid Point | x | Fx | $\mathrm{x}^{2}$ | $\mathrm{fx}^{2}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $30-36$ | 4 | 33 | +3 | 12 | 9 | 36 |
| $37-43$ | 3 | 40 | +2 | 6 | 4 | 12 |
| $44-50$ | 6 | 47 | +1 | 6 | 1 | 6 |
| $51-57$ | $\mathbf{9}$ | $\mathbf{5 4}$ | $\mathbf{0}$ | $\mathbf{0}$ | $\mathbf{0}$ | $\mathbf{0}$ |
| $58-64$ | 3 | 61 | -1 | -3 | 1 | 3 |
| $65-71$ | 5 | 78 | -2 | -10 | 4 | 20 |
| $72-78$ | 2 | 75 | -3 | -6 | 9 | 18 |
| $\mathrm{i}=7$ | 32 |  |  | 5 |  | 95 |

$$
\begin{aligned}
\mathrm{M}_{\mathrm{x}} & =\mathrm{M}^{1}+i \frac{\sum f x^{1}}{N} \\
& =54+7\left(\frac{5}{32}\right) \\
& =54+7(0,16) \\
& =54+1,12 \\
& =55,12 \\
\mathrm{SD}_{\mathrm{t}} & =i \sqrt{\frac{\sum f x^{2}-}{n}}\left(\frac{\sum f x^{1}}{n}\right)^{2} \\
& =7 \sqrt{\frac{95}{32}-\left(\frac{5}{32}\right)^{2}} \\
& =7 \sqrt{2,96-(0,16)^{2}} \\
& =7 \sqrt{2,96-0,02} \\
& =7 \sqrt{2,94} \\
& =7 \times 1,71 \\
& =11,97
\end{aligned}
$$

Table of Normality Data Test with Chi kuadrad Formula

| Interval of score | Real upper limit | Z-score | Limit of large of area | Large of area | $\mathrm{F}_{\mathrm{e}}$ | Fo |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 30-36 | 36,5 | -1,55 | 0,4394 | 0,10 | 3,2 | 4 | 0,8 | 0,25 |
| 37-43 | 43,5 | -0,97 | 0,3340 | 0,18 | 5,76 | 3 | -2,76 | -0,47 |
| 44-50 | 50,5 | -0,38 | 0,1480 | 0,07 | 2,24 | 6 | 3,76 | 1,67 |
| 51-57 | 57,5 | 0,19 | 0,0753 | 0,20 | 6,40 | 9 | 2,6 | 0,40 |
| 58-64 | 64,5 | 0,78 | 0,2823 | 0,13 | 4,16 | 3 | -1,16 | -0,27 |
| 65-71 | 71,5 | 1,36 | 0,4131 | 0,06 | 1,92 | 5 | 3,08 | 1,60 |
| 72-78 | 78,5 | 1,95 | 0,4744 | 0,03 | 0,96 | 2 | 1,04 | 1,08 |


|  |  |  |  |  |  |  |  | 4,26 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Based on the table above, the researcher found that $\mathrm{x}^{2}{ }_{\text {count }}=4.26$ while $\mathrm{x}_{\text {table }}^{2}=7.815$ cause $\mathrm{x}^{2}{ }_{\text {count }}<\mathrm{x}_{\text {table }}^{2}(4.37<7.815)$ with degree of freedoom $(\mathrm{dk})=6-3=3$ and significant level $\alpha=5 \%$. So, distribution of VIII-2 classroom (pre-test) is normal.
6. Median

| Interval class | Fm | Fk |
| :---: | :---: | :---: |
| $30-36$ | 4 | 4 |
| $37-43$ | 3 | 7 |
| $44-50$ | 6 | $\mathbf{1 3}$ |
| $51-57$ | $\mathbf{9}$ | 22 |
| $58-64$ | 3 | 25 |
| $65-71$ | 5 | 30 |
| $72-78$ | 2 | 32 |

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

| Bb | $: 50,5$ |
| :--- | :--- |
| Fk | $: 13$ |
| fm | $: 9$ |
| $i$ | $: 7$ |
| n | $: 32$ |
| $1 / 2 \mathrm{n}$ | $: 16$ |
| So, |  |
| Me | $=B b+i\left[\frac{n / 2^{-F k}}{f m}\right]$ |
| Me | $=50,5+7\left[\frac{32 / 2^{-13}}{9}\right]$ |

$$
\begin{array}{ll}
\mathrm{Me} & =50,5+7\left[\frac{16-13}{9}\right] \\
\mathrm{Me} & =50,5+7\left[\frac{3}{9}\right] \\
\mathrm{Me} & =50,5+7(0.33) \\
\mathrm{Me} & =50,5+2,31 \\
\mathrm{Me} & =52,81
\end{array}
$$

7. Modus

| Interval class | Fm | Fk |
| :---: | :---: | :---: |
| $30-36$ | 4 | 4 |
| $37-43$ | 3 | 7 |
| $44-50$ | 6 | $\mathbf{1 3}$ |
| $51-57$ | $\mathbf{9}$ | 22 |
| $58-64$ | 3 | 25 |
| $65-71$ | 5 | 30 |
| $72-78$ | 2 | 32 |

$$
\text { Mo }=L+\frac{d_{1}}{d_{1}+d_{2}} i
$$

$\mathrm{L}=50,5$
$d_{1}=3$
$d_{2}=6$
$i=7$
Mo $\quad=L+\frac{d_{1}}{d_{1}+d_{2}} i$
Mo $=50,5+\frac{3}{3+6} 7$
Mo $=50,5+\frac{3}{9} 7$
Mo $=50,5+(0.33) 7$
Mo $=50,5+2,31$
Mo $=52,81$

## APPENDIX 7

## HOMOGENEITY TEST (PRE-TEST)

Calculation of parameter to get variant of the first class as experimental class
sample and variant of the second class as control class sample are use homogeneity test by using formula:
$S^{2}=\frac{n \sum x_{1}{ }^{2}-\left(\sum x_{i}\right)^{2}}{n(n-1)}$
Hypotheses:
$\mathrm{H}_{\mathrm{o}} \quad: \delta_{1}{ }^{2}=\delta_{2}{ }^{2}$
$\mathrm{H}_{1} \quad: \delta_{1}{ }^{2} \neq \delta_{2}{ }^{2}$
A. Variant of the VIII- 1 classroom is:

| NO | Students Initial Name | Pre-Test | $\mathbf{X}^{2}$ |
| :---: | :---: | :---: | :---: |
| 1 | AAH | 40 | 1600 |
| 2 | AAHP | 65 | 4225 |
| 3 | AEDS | 60 | 3600 |
| 4 | AHH | 60 | 3600 |
| 5 | BSH | 40 | 1600 |
| 6 | DS | 65 | 4225 |
| 7 | DPA | 45 | 2025 |
| 8 | DA | 70 | 4900 |
| 9 | EA | 65 | 4225 |
| 10 | ENS | 60 | 3600 |


| 11 | GSH | 60 | 3600 |
| :---: | :---: | :---: | :---: |
| 12 | HP | 70 | 4900 |
| 13 | HM | 80 | 6400 |
| 14 | IS | 45 | 2025 |
| 15 | KDR | 75 | 5625 |
| 16 | LA | 55 | 3025 |
| 17 | MTPS | 70 | 4900 |
| 18 | MR | 55 | 3025 |
| 19 | MAL | 60 | 3600 |
| 20 | NPMN | 50 | 2500 |
| 21 | NL | 60 | 3600 |
| 22 | NM | 65 | 4225 |
| 23 | PAL | 35 | 1225 |
| 24 | RAY | 75 | 5625 |
| 25 | RAF | 55 | 3025 |
| 26 | RSE | 45 | 2025 |
| 27 | RHA | 35 | 1225 |
| 28 | RAS | 75 | 5625 |
| 29 | SH | 60 | 3600 |
| 30 | SRH | 60 | 3600 |
| 31 | SAL | 50 | 2500 |


| 32 | THS | 50 | 2500 |
| :---: | :---: | :---: | :---: |
|  | TOTAL | 1885 | 111975 |

$\mathrm{n}=32$
$\sum x_{i}=1.885$
$\sum x_{i}^{2}=111.975$
So,

$$
\begin{aligned}
S^{2} & =\frac{n \sum x_{1}{ }^{2}-\left(\sum x_{i}\right)^{2}}{n(n-1)} \\
& =\frac{32(111975)-(1885)^{2}}{32(32-1)} \\
& =\frac{3583200-3441025}{992} \\
& =\frac{142175}{992}
\end{aligned}
$$

$$
S^{2}=143,32
$$

B. Variant of VIII-2 classroom is:

| NO | Students Initial Name | Pre-Test | $\mathbf{X}^{\mathbf{2}}$ |
| :---: | :---: | :---: | :---: |
| 1 | ALS | 45 | 2025 |
| 2 | ASH | 30 | 900 |
| 3 | FAS | 60 | 3600 |
| 4 | FES | 45 | 2025 |
| 5 | GHJ | 60 | 3600 |
| 6 | JSM | 40 | 1600 |
| 7 | JHG | 55 | 3025 |
| 8 | LWH | 55 | 3025 |


| 9 | LPS | 30 | 900 |
| :---: | :---: | :---: | :---: |
| 10 | MSL | 55 | 3025 |
| 11 | MNCS | 40 | 1600 |
| 12 | OKS | 55 | 3025 |
| 13 | OSS | 70 | 4900 |
| 14 | PJN | 55 | 3025 |
| 15 | PHW | 35 | 1225 |
| 16 | RS | 60 | 3600 |
| 17 | REP | 75 | 5625 |
| 18 | RWS | 55 | 3025 |
| 19 | RVS | 70 | 4900 |
| 20 | RA | 45 | 2025 |
| 21 | RMVA | 70 | 4900 |
| 22 | RLE | 75 | 5625 |
| 23 | RAZ | 65 | 4225 |
| 24 | SGA | 40 | 1600 |
| 25 | SLH | 55 | 3025 |
| 26 | SGA | 35 | 1225 |
| 27 | WP | 65 | 4225 |
| 28 | YSM | 50 | 2500 |
| 29 | YGSPB | 55 | 3025 |


| 30 | AMS | 50 | 2500 |
| :---: | :---: | :---: | :---: |
| 31 | HS | 50 | 2500 |
| 32 | SS | 55 | 3025 |
|  | TOTAL | 1700 | 95050 |

n $=32$
$\sum x_{i}=1.700$
$\sum x_{i}^{2}=95050$
So,
$S^{2}=\frac{n \sum x_{1}{ }^{2}-\left(\sum x_{i}\right)^{2}}{n(n-1)}$
$=\frac{32(95050)-(1700}{32(32-1)}$
$=\frac{3041600-2890000}{992}$
$=\frac{151600}{992}$
$S^{2}=152,82$

The formula was used to test hypothesis was:

1. VIII-1 and VIII-2:

$$
\begin{gathered}
F=\frac{\text { The Biggest Variant }}{\text { The Smallest Variant }} \\
F=\frac{293.70}{168.27}
\end{gathered}
$$

$=1.74$

## APPENDIX 8

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

a. Score of Experimental Class Post-Test

| No | Students Initial Name | Post Test | $\mathbf{X}^{2}$ |
| :---: | :---: | :---: | :---: |
| 1 | AAH | 50 | 2500 |
| 2 | AAH | 65 | 4225 |
| 3 | AEDS | 65 | 4225 |
| 4 | AHH | 75 | 5625 |
| 5 | BSH | 70 | 4900 |
| 6 | DS | 70 | 4225 |
| 7 | DPA | 50 | 2500 |
| 8 | DA | 80 | 6400 |
| 9 | EA | 75 | 5625 |
| 10 | ENS | 70 | 4900 |
| 11 | GSH | 70 | 4900 |
| 12 | HP | 75 | 5625 |
| 13 | HM | 85 | 7225 |
| 14 | IS | 70 | 4900 |
| 15 | KDR | 85 | 7225 |
| 16 | LA | 60 | 3600 |
| 17 | MTPS | 80 | 6400 |
| 18 | MR | 65 | 4225 |
| 19 | MAL | 70 | 4900 |
| 20 | NPMN | 55 | 3025 |
| 21 | NL | 70 | 4900 |
| 22 | NM | 75 | 5625 |
| 23 | PAL | 40 | 4900 |


| 24 | RAY | 85 | 7225 |
| :---: | :---: | :---: | :---: |
| 25 | RAF | 65 | 4225 |
| 26 | RSE | 50 | 2500 |
| 27 | RHA | 40 | 4900 |
| 28 | SH | 85 | 7225 |
| 29 | SRH | 65 | 4225 |
| 30 | SAL | 65 | 4225 |
| 31 |  | 60 | 3600 |
| 32 |  | 2140 | 3025 |
|  |  |  | 153725 |


| NO | Students Initial Name | Post-Test | $\mathrm{X}^{2}$ |
| :---: | :---: | :---: | :---: |
| 1 | ALS | 50 | 2500 |
| 2 | ASH | 40 | 1600 |
| 3 | FAS | 65 | 4225 |
| 4 | FES | 55 | 3025 |
| 5 | GHJ | 65 | 4225 |
| 6 | JSM | 45 | 2025 |
| 7 | JHG | 60 | 3600 |
| 8 | LWH | 75 | 5625 |
| 9 | LPS | 35 | 1225 |
| 10 | MSL | 65 | 4225 |
| 11 | MNCS | 45 | 2025 |
| 12 | OKS | 60 | 3600 |
| 13 | OSS | 80 | 6400 |
| 14 | PJN | 60 | 3600 |
| 15 | PHW | 40 | 1600 |


| 16 | RS | 70 | 4900 |
| :---: | :---: | :---: | :---: |
| 17 | REP | 80 | 6400 |
| 18 | RWS | 70 | 4900 |
| 19 | RVS | 75 | 5625 |
| 20 | RA | 50 | 2500 |
| 21 | RMVA | 60 | 3600 |
| 22 | RLE | 45 | 2025 |
| 23 | RAZ | 60 | 3600 |
| 24 | SGA | 55 | 3025 |
| 25 | SLH | 60 | 3600 |
| 26 | SGA | 55 | 3025 |
| 27 | WP | 60 | 3600 |
| 28 | YSM | 55 | 3025 |
| 29 | YGSPB | 60 | 3600 |
| 30 | AMS | 55 | 3025 |
| 31 | HS | 60 | 3600 |
| 32 | SS | 60 | 3600 |
|  |  | 1870 | 113150 |

## APPENDIX 9

RESULT OF NORMALITY TEST IN POST TEST RESULT OF THE NORMALITY TEST OF VIII-1 IN POST-TEST

1. The score of VIII-1 in post-test from low score to high score:

| 40 | 50 | 60 | 65 | 70 | 70 | 75 | 85 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 40 | 55 | 65 | 65 | 70 | 70 | 75 | 85 |
| 50 | 55 | 65 | 65 | 70 | 75 | 80 | 85 |
| 50 | 60 | 65 | 70 | 70 | 75 | 80 | 85 |

2. High $=85$

Low $=40$
Range = High - Low

$$
=85-40
$$

$$
=45
$$

3. Total Classes $=1+3,3 \log (\mathrm{n})$

$$
\begin{aligned}
& =1+3,3 \log (32) \\
& =1+3,3(1,50) \\
& =1+4,95 \\
& =5,95 \\
& =6
\end{aligned}
$$

4. Length of Classes $=\frac{\text { range }}{\text { total of class }}=\frac{45}{6}=7.5=7$
5. Mean

| Interval class | F | Mid Point | X | Fx | $\mathrm{x}^{2}$ | $\mathrm{fx}^{2}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $40-46$ | 2 | 43 | +4 | 8 | 16 | 32 |
| $47-53$ | 3 | 50 | +3 | 9 | 9 | 27 |
| $54-60$ | 4 | 57 | +2 | 8 | 4 | 16 |
| $61-67$ | 6 | 64 | +1 | 6 | 1 | 6 |
| $68-74$ | $\mathbf{7}$ | $\mathbf{7 1}$ | $\mathbf{0}$ | $\mathbf{0}$ | $\mathbf{0}$ | $\mathbf{0}$ |
| $75-81$ | 6 | 78 | -1 | -6 | 1 | 6 |


| $82-88$ | 4 | 85 | -2 | -8 | 4 | 16 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathrm{i}=7$ | 32 |  |  | 17 |  | 103 |

$$
\begin{aligned}
\mathrm{M}_{\mathrm{x}} & =\mathrm{M}^{1}+i \frac{\sum f x^{1}}{N} \\
& =71+7\left(\frac{17}{32}\right) \\
& =71+7(0,53) \\
& =71+3,71 \\
& =74,71
\end{aligned}
$$

$$
\mathrm{SD}_{\mathrm{t}}=i \sqrt{\frac{\sum f x^{2}-}{n}}\left(\frac{\sum f x^{1}}{n}\right)^{2}
$$

$$
=7 \sqrt{\frac{103}{32}-\left(\frac{17}{32}\right)^{2}}
$$

$$
=7{\sqrt{3,21-(0,53)^{2}}}^{2}
$$

$$
=7 \sqrt{3,21-0,28}
$$

$$
=7 \sqrt{2,93}
$$

$$
=7 \times 1,71
$$

$$
=11,97
$$

Table of Normality Data Test with Chi kuadrad Formula

| Interval of score | Real upper limit | Z-score | Limit of large of area | Large of area | $\mathrm{F}_{\mathrm{e}}$ | Fo |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 40-46 | 46,5 | -1,96 | 0,4750 | 0,01 | 0,32 | 2 | 1,68 | 5,25 |
| 47-53 | 53,5 | -1,77 | 0,4616 | 0,08 | 0,08 | 3 | 0,44 | 0,17 |
| 54-60 | 60,5 | -1,18 | 0,3810 | 0,15 | 0,15 | 4 | -0,8 | 0,16 |
| 61-67 | 67,5 | -0,60 | 0,2258 | 0,22 | 0,22 | 6 | -1,04 | -0,14 |


| $68-74$ | 74,5 | $-0,01$ | 0,0040 | 0,20 | 0,20 | 7 | 0,6 | 0,09 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| $75-81$ | 81,5 | 0,56 | 0,2123 | $-0,16$ | $-0,16$ | 6 | 0,88 | $-0,17$ |
| $82-88$ | 88,5 | 1,15 | 0,3749 | $-0,10$ | $-0,10$ | 4 | 7,2 | $-0,25$ |
|  |  |  |  |  |  |  |  | 5,11 |

Based on the table above, the researcher found that $\mathrm{x}^{2}$ count $=5,11$ while $\mathrm{x}_{\text {table }}^{2}=7.815$ cause $\mathrm{x}^{2}$ count $<\mathrm{x}_{\text {table }}^{2}(5.11<7.815)$ with degree of freedoom $(\mathrm{dk})=6-3=3$ and significant level $\alpha=5 \%$. So, distribution of VIII-1 classroom (Post-Test) is normal.

## 6. Median

| Interval class | Fm | Fk |
| :---: | :---: | :---: |
| $40-46$ | 2 | 2 |
| $47-53$ | 3 | 5 |
| $54-60$ | 4 | 9 |
| $61-67$ | 6 | $\mathbf{1 5}$ |
| $68-74$ | $\mathbf{7}$ | 22 |
| $75-81$ | 6 | 28 |
| $82-88$ | 4 | 32 |

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

| Bb | $: 74,5$ |
| :--- | :--- |
| Fk | $: 15$ |
| fm | $: 7$ |
| $i$ | $: 7$ |
| n | $: 32$ |
| $1 / 2 \mathrm{n}$ | $: 16$ |

So,
$\mathrm{Me} \quad=B b+i\left[\frac{n / 2^{-F k}}{f m}\right]$
$\mathrm{Me} \quad=74,5+7\left[\frac{32 / 2^{-15}}{7}\right]$
$\mathrm{Me}=74,5+7\left[\frac{16-15}{7}\right]$
$\mathrm{Me}=74,5+7\left[\frac{1}{7}\right]$
$\mathrm{Me}=74,5+7(0.14)$
$\mathrm{Me}=74,5+0,9$
$\mathrm{Me}=75,48$
7. Modus

| Interval class | Fm | Fk |
| :---: | :---: | :---: |
| $40-46$ | 2 | 2 |
| $47-53$ | 3 | 5 |
| $54-60$ | 4 | 9 |
| $61-67$ | 6 | $\mathbf{1 5}$ |
| $68-74$ | $\mathbf{7}$ | 22 |
| $75-81$ | 6 | 28 |
| $82-88$ | 4 | 32 |

Mo $=L+\frac{d_{1}}{d_{1}+d_{2}} i$
$\mathrm{L}=74,5$
$d_{1}=1$
$d_{2}=1$
$i=7$
Mo $\quad=L+\frac{d_{1}}{d_{1}+d_{2}} i$
Mo $\quad=74,5+\frac{1}{1+1} 7$
Mo $=74,5+\frac{1}{2} 7$

Mo $\quad=74,5+(0.5) 7$
Mo $=74,5+3,5$
Mo $=78$

## RESULT OF NORMALITY TEST IN POST TEST

## RESULT OF THE NORMALITY TEST OF VIII-2 IN POST-TEST

1. The score of VIII-2 in post-test from low score to high score:

| 35 | 45 | 50 | 60 | 60 | 65 | 70 | 75 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 40 | 45 | 55 | 60 | 60 | 65 | 70 | 80 |
| 40 | 50 | 55 | 60 | 60 | 65 | 75 | 80 |
| 45 | 50 | 55 | 60 | 60 | 70 | 75 | 80 |

2. High $=80$

Low $=35$
Range $=$ High - Low

$$
=80-35
$$

$$
=45
$$

3. Total Classes $=1+3,3 \log (\mathrm{n})$

$$
\begin{aligned}
& =1+3,3 \log (32) \\
& =1+3,3(1,50) \\
& =1+4,95 \\
& =5,95 \\
& =6
\end{aligned}
$$

4. Length of Classes $=\frac{\text { range }}{\text { total of class }}=\frac{45}{6}=7.5=7$
5. Mean

| Interval class | F | Mid Point | x | fx | $\mathrm{x}^{2}$ | $\mathrm{fx}^{2}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $35-41$ | 3 | 38 | +3 | 9 | 9 | 27 |
| $42-48$ | 3 | 45 | +2 | 6 | 4 | 12 |
| $49-55$ | 6 | 52 | +1 | 6 | 1 | 6 |
| $56-62$ | $\mathbf{8}$ | $\mathbf{5 9}$ | $\mathbf{0}$ | $\mathbf{0}$ | $\mathbf{0}$ | $\mathbf{0}$ |
| $63-69$ | 4 | 66 | -1 | -3 | 1 | 3 |


| $70-76$ | 6 | 73 | -2 | -12 | 4 | 24 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $77-83$ | 4 | 81 | -3 | -9 | 9 | 27 |
| $\mathrm{i}=7$ | 32 |  |  | -3 |  | 99 |

$$
\begin{aligned}
\mathrm{M}_{\mathrm{x}} & =\mathrm{M}^{1}+i \frac{\sum f x^{1}}{N} \\
& =59+7\left(\frac{-3}{32}\right) \\
& =59+7(-0,09) \\
& =59+-0,63 \\
& =58,37
\end{aligned}
$$

$$
\mathrm{SD}_{\mathrm{t}}=i \sqrt{\frac{\sum f x^{2}-}{n}}\left(\frac{\sum f x^{1}}{n}\right)^{2}
$$

$$
=7 \sqrt{\frac{99}{32}-\left(\frac{-3}{32}\right)^{2}}
$$

$$
=7{\sqrt{3,09-(-0,09)^{2}}}^{2}
$$

$$
=7 \sqrt{3,09-0,0081}
$$

$$
=7 \sqrt{3,08}
$$

$$
=7 \times 1,75
$$

$$
=12,25
$$

Table of Normality Data Test with Chi kuadrad Formula

| Interval of score | Real upper limit | Z-score | Limit of large of area | Large of area | $\mathrm{F}_{\mathrm{e}}$ | $\mathrm{F}_{0}$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 35-41 | 41,5 | -1,40 | 0,4190 | 0,13 | 4,16 | 3 | -1,16 | -0,27 |
| 42-48 | 48,5 | -0,80 | 0,2881 | 0,19 | 6,08 | 3 | -3,08 | -0,50 |
| 49-55 | 55,5 | -0,23 | 0,0910 | 0,03 | 0,96 | 6 | 5,04 | 5,27 |
| 56-62 | 62,2 | 0,32 | 0,1293 | 0,18 | 5,76 | 8 | 2,24 | 0,38 |


| $63-69$ | 69,5 | 0,90 | 0,3159 | 0,11 | 3,52 | 3 | $-0,52$ | $-0,14$ |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| $70-76$ | 76,5 | 1,48 | 0,4306 | 0,04 | 1,28 | 6 | 4,72 | $-3,68$ |
| $77-83$ | 83,5 | 2,05 | 0,4798 | 0,06 | 1,92 | 3 | 1,08 | 0,56 |
|  |  |  |  |  |  |  |  | 1,60 |

Based on the table above, the researcher found that $\mathrm{x}^{2}$ count $=1,60$
while $\mathrm{x}_{\text {table }}^{2}=7.815$ cause $\mathrm{x}^{2}$ count $<\mathrm{x}_{\text {table }}^{2}(1,60<7.815)$ with degree of
freedoom $(\mathrm{dk})=6-3=3$ and significant level $\alpha=5 \%$. So, distribution of
VIII-2 classroom (post-test) is normal.
6. Median

| Interval class | Fm | Fk |
| :---: | :---: | :---: |
| $35-41$ | 3 | 3 |
| $42-48$ | 3 | 6 |
| $49-55$ | 6 | $\mathbf{1 2}$ |
| $56-62$ | $\mathbf{8}$ | 20 |
| $63-69$ | 3 | 23 |
| $70-76$ | 6 | 29 |
| $77-83$ | 3 | 32 |

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

| Bb | $: 55,5$ |
| :--- | :--- |
| Fk | $: 12$ |
| fm | $: 8$ |
| $i$ | $: 7$ |
| n | $: 32$ |
| $1 / 2 \mathrm{n}$ | $: 16$ |

So,

$$
\begin{array}{ll}
\mathrm{Me} & =B b+i\left[\frac{n / 2-F k}{f m}\right] \\
\mathrm{Me} & =55,5+7\left[\frac{32 / 2-12}{8}\right] \\
\mathrm{Me} & =55,5+7\left[\frac{16-12}{8}\right] \\
\mathrm{Me} & =55,5+7\left[\frac{4}{8}\right] \\
\mathrm{Me} & =55,5+7(0.5) \\
\mathrm{Me} & =55,5+3,5 \\
\mathrm{Me} & =59
\end{array}
$$

7. Modus

| Interval class | Fm | Fk |
| :---: | :---: | :---: |
| $35-41$ | 3 | 3 |
| $42-48$ | 3 | 6 |
| $49-55$ | 6 | $\mathbf{1 2}$ |
| $56-62$ | $\mathbf{8}$ | 20 |
| $63-69$ | 3 | 23 |
| $70-76$ | 6 | 29 |
| $77-83$ | 3 | 32 |

$$
\begin{array}{ll}
\text { Mo }=L+\frac{d_{1}}{d_{1}+d_{2}} i \\
& =55,5 \\
\text { L } & =4 \\
d_{1} & =5 \\
d_{2} & =7 \\
i & =L+\frac{d_{1}}{d_{1}+d_{2}} i \\
\text { Mo } & =55,5+\frac{4}{4+5} 7 \\
\text { Mo } & =55,5+\frac{4}{9} 7 \\
\text { Mo } & =55,5+(0.44) 7
\end{array}
$$

Mo $=55,5+3,08$
Mo $=58,58$

## APPPENDIX 10

## HOMOGENEITY TEST POST TEST

Calculation of parameter to get variant of the first class as experimental class sample by using direct method and variant of the second class as control class sample by using conventional method are use homogeneity test by using formula:
$S^{2}=\frac{n \sum x_{1}{ }^{2}-\left(\sum x_{i}\right)^{2}}{n(n-1)}$
Hypotheses:
$\mathrm{H}_{\mathrm{O}} \quad: \quad \delta_{1}{ }^{2}=\delta_{2}{ }^{2}$
$\mathrm{H}_{1} \quad: \delta_{1}{ }^{2} \neq \delta_{2}{ }^{2}$
C. Variant of the VIII- 1 class is:

| No | Students Initial Name | Post Test | $\mathbf{X}^{\mathbf{2}}$ |
| :---: | :---: | :---: | :---: |
| 1 | AAH | 50 | 2500 |
| 2 | AAH | 65 | 4225 |
| 3 | AEDS | 65 | 4225 |
| 4 | AHH | 75 | 5625 |
| 5 | BSH | 70 | 4900 |
| 6 | DS | 70 | 4225 |
| 7 | DPA | 50 | 2500 |
| 8 | DA | 80 | 6400 |
| 9 | EA | 75 | 5625 |
| 10 | ENS | 70 | 4900 |
| 11 | GSH | 75 | 4900 |
| 12 | HP | 85 | 5625 |
| 13 | HM | 70 | 7225 |
| 14 | IS |  | 4900 |


| 15 | KDR | 85 | 7225 |
| :---: | :---: | :---: | :---: |
| 16 | LA | 60 | 3600 |
| 17 | MTPS | 80 | 6400 |
| 18 | MR | 65 | 4225 |
| 19 | MAL | 70 | 4900 |
| 20 | NPMN | 55 | 3025 |
| 21 | NL | 70 | 4900 |
| 22 | NM | 75 | 5625 |
| 23 | PAL | 40 | 4900 |
| 24 | RAY | 85 | 7225 |
| 25 | RAF | 65 | 4225 |
| 26 | RSE | 50 | 2500 |
| 27 | RHA | 40 | 4900 |
| 28 | RAS | 85 | 7225 |
| 29 | SH | 65 | 4225 |
| 30 | SRH | 65 | 4225 |
| 31 | SAL | 60 | 3600 |
| 32 | THS | 55 | 3025 |
|  |  | 2140 | 153725 |

$\mathrm{n} \quad=32$
$\sum x_{i}=2.140$
$\sum x_{i}{ }^{2}=153725$
So,

$$
\begin{aligned}
S^{2} & =\frac{n \sum x_{1}{ }^{2}-\left(\sum x_{i}\right)^{2}}{n(n-1)} \\
& =\frac{32(153.725)-(2,140)^{2}}{32(32-1)}
\end{aligned}
$$

$$
\begin{aligned}
& =\frac{4.919 .200-4.579 .600}{992} \\
& =\frac{339.600}{992} \\
S^{2} \quad & =342,33
\end{aligned}
$$

D. Variant of the VIII-2 class is:

| NO | Students Initial Name | Post-Test | $\mathrm{X}^{2}$ |
| :---: | :---: | :---: | :---: |
| 1 | ALS | 50 | 2500 |
| 2 | ASH | 40 | 1600 |
| 3 | FAS | 65 | 4225 |
| 4 | FES | 55 | 3025 |
| 5 | GHJ | 65 | 4225 |
| 6 | JSM | 45 | 2025 |
| 7 | JHG | 60 | 3600 |
| 8 | LWH | 75 | 5625 |
| 9 | LPS | 35 | 1225 |
| 10 | MSL | 65 | 4225 |
| 11 | MNCS | 45 | 2025 |
| 12 | OKS | 60 | 3600 |
| 13 | OSS | 80 | 6400 |
| 14 | PJN | 60 | 3600 |
| 15 | PHW | 40 | 1600 |
| 16 | RS | 70 | 4900 |
| 17 | REP | 80 | 6400 |
| 18 | RWS | 70 | 4900 |
| 19 | RVS | 75 | 5625 |
| 20 | RA | 50 | 2500 |


| 21 | RMVA | 60 | 3600 |
| :---: | :---: | :---: | :---: |
| 22 | RLE | 45 | 2025 |
| 23 | RAZ | 60 | 3600 |
| 24 | SGA | 55 | 3025 |
| 25 | SLH | 60 | 3600 |
| 26 | SGA | 55 | 3025 |
| 27 | WP | 60 | 3600 |
| 28 | YSM | 55 | 3025 |
| 29 | YGSPB | 60 | 3600 |
| 30 | AMS | 60 | 3025 |
| 31 | HS | 60 | 3600 |
| 32 | SS | 1870 | 113150 |
|  |  |  |  |

n $\quad=32$
$\sum x_{i}=1,870$
$\sum x_{i}^{2}=113150$
So,

$$
\begin{aligned}
S^{2} & =\frac{n \sum x_{1}{ }^{2}-\left(\sum x_{i}\right)^{2}}{n(n-1)} \\
& =\frac{32(113150)-(1870)^{2}}{32(32-1)} \\
& =\frac{3.620 .800-3.496 .900}{992} \\
& =\frac{123,900}{992} \\
S^{2} & =124,89
\end{aligned}
$$

The formula was used to test hypothesis was:
2. III-1 and VIII-2

$$
\begin{gathered}
F=\frac{\text { The Biggest Variant }}{\text { The Smallest Variant }} \\
\qquad \begin{array}{c}
F=\frac{342,800}{124,89} \\
=2,74
\end{array}
\end{gathered}
$$

## APPENDIX 11

## T-test of the Both Averages in Pre-Test

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

$$
T t=\frac{x_{1}-x_{2}}{\sqrt{\left(\frac{\left.\left(n_{1}-1\right) s_{1}{ }^{2}+\left(n_{2}-1\right) s_{2}{ }^{2}\right)}{n_{1}+n_{2}-2}\left(\frac{1}{n_{1}}+\frac{1}{n_{2}}\right)\right.}}
$$

$T t=\frac{58.09-52.81}{\sqrt{\left(\frac{(32-1) 143.32+(32-1) 152,82)}{32+32-2}\left(\frac{1}{32}+\frac{1}{32}\right)\right.}}$
$t=\frac{58.09-52.81}{\sqrt{\left(\frac{(31) 143.32+(31) 152.82)}{62}(0.03+0.03)\right.}}$
$t=\frac{58.09-52.81}{\sqrt{\left(\frac{4.442 .93+4,737.42}{62}(0.6)\right.}}$
$t=\frac{58.09-52.81}{\sqrt{\left(\frac{9.180 .35}{62}(0.6)\right.}}$
$t=\frac{58.09-52.81}{\sqrt{(148.07(0.6)}}$
$t=\frac{5.28}{\sqrt{88842}}$
$t=\frac{5.28}{2.98}$
$t=1,77$

Based on researcher calculation result of hypothesis test of both of avarages, researcher found that $\mathrm{t}_{\text {count }}=1,77$ with opportunity $(1-\alpha)=1-5 \%=95 \%$ and $\mathrm{dk}=\mathrm{n} 1+\mathrm{n} 2-2=32+32-2=62$, researcher found that $\mathrm{t}_{\text {table }}=2.39$ cause $\mathrm{t}_{\text {count }}<\mathrm{t}_{\text {table }}$ (1,77<2.39). So, Ha was rejected, it means that there is no difference in average between experimental class and control class in pre-test.

## T-test of the Both Averages in Post-Test

The formula was used to analyze homogeneity test of the both averages was $t$-test, that:
$T t=\frac{x_{1}-x_{2}}{\sqrt{\left(\frac{\left.\left(n_{1}-1\right) s_{1}{ }^{2}+\left(n_{2}-1\right) s_{2}{ }^{2}\right)}{n_{1}+n_{2}-2}\left(\frac{1}{n_{1}}+\frac{1}{n_{2}}\right)\right.}}$
$T t=\frac{75.48-58.37}{\sqrt{\left(\frac{(32-1) 342,300+(32-1) 142,89)}{32+32-2}\left(\frac{1}{32}+\frac{1}{32}\right)\right.}}$
$t=\frac{75.48-58.37}{\sqrt{\left(\frac{(31) 342,300+(31) 142,89)}{62}(0.03+0.03)\right.}}$
$t=\frac{75.48-58.37}{\sqrt{\left(\frac{10.611,300+4.429,59}{62}(0.06)\right.}}$
$t=\frac{75.48-58.37}{\sqrt{\left(\frac{10615729}{62}(0.06)\right.}}$
$t=\frac{75.48-58.37}{\sqrt{(171,221(0.06)}}$
$t=\frac{17,11}{\sqrt{10,27}}$
$t=\frac{17,11}{3,20}$
$t=5,31$

Based on researcher calculation result of hypothesis test of both of avarages, researcher found that $\mathrm{t}_{\text {count }}=5,31$ with opportunity $(1-\alpha)=1-5 \%=95 \%$ and $\mathrm{dk}=\mathrm{n} 1+\mathrm{n} 2-2=32+32-2=62$, researcher found that $\mathrm{t}_{\text {table }}=2.39$ cause $\mathrm{t}_{\text {count }}<\mathrm{t}_{\text {table }}$ ( $5,31<2.39$ ). So, Ha was rejected, it means that there is no difference in average between experimental class and control class in pre-test.

## 1. Pre-Test in Experimental Class


2. Pre-Test in Control Class

3. Treatment in Experimental Class

4. Post-Test in Experimental Class


## 5. Post-Test in Control Class



# SURAT KETERANGAN <br> <br> NOMOR : 422 /204/ SMP.5/ 2021 

 <br> <br> NOMOR : 422 /204/ SMP.5/ 2021}
jang bertanda tangan dibawah ini Kepala SMP Negeri 5 Padangsidimpuan di Padangsidimpuan, menerangkan bahwa:

| Nama | $:$ LINDA SARI LUBIS |
| :--- | :--- |
| NIM | $: 1620300013$ |
| Fakultas | $:$ Tarbiyah dan Ilmu Keguruan |
| Jurusan | $:$ Tadris/Pendidikan Bahasa Inggris |

benar telah mengadakan penelitian (Riset) di SMP Negeri 5 Padangsidimpuan pada tanggal 9 April 2021 sampai dengan selesai, guna untuk melengkapi penelitiannya yang berjudul :
"The Effect of Word Search Puzzle Game to Vocabulary Mastery at the VIII Grade Students of SMP Negeri 5 Padangsidimpuan", sesuai dengan surat Dekan Fakultas Tarbiyah dan Ilmu Keguruan IAIN Padangsidimpuan, Nomor : B-406/In. 14/E.1/TL.00/04/2021 tanggal 8 April 2021.

Demikianlah surat keterangan ini dibuat dengan sebenarnya untuk dipergunakan seperlunya.

Padangsidimpuan, 26 Juni 2021



[^0]:    ${ }^{1}$ English Teacher "Private Interview on November $2^{\text {nd }} 2020$ in $\operatorname{SMP}$ N 5 Padangsidimpuan"
    ${ }^{2} \mathrm{H}$ Vossoughi, "Using Word Search Puzzle Games for Improving Vocabulary Knowledge of Iranian EFL Learners" 1, no. 1 (2009): 79-85.
    ${ }^{3}$ Vossoughi.

[^1]:    ${ }^{4}$ Nguyen Thi Thanh Huyen and Khuat Thi Thu Nga, "The Effectiveness of Learning Vocabulary Through Games," Asian EFL Journal, n.d., 17, https://www.academia.edu/upgrade?feature=analytics
    ${ }^{5} \mathrm{Ni}$ Made Nila Lohita Anggreini, "The Effectiveness of Word Search Puzzle in Vocabulary Mastery at Seventh Grade of SMPN 12 Mataram in Academic Year 2014/2015," 2017.
    ${ }^{6}$ Ni Made Nila Lohita Anggreini.

[^2]:    ${ }^{1}$ Sri Nardani, Eka Sustri Harida, and Fitri Rayani Siregar, "The Effect of Watching Film to Students' Vocabulary Mastery at Grade XI SMK Negeri 1 Padangsidimpuan," English Education 02, no. 01 (2014): 88-106, http://www.e-journal.iain.ac.id.
    ${ }^{2}$ Novia Lestari et al., "The Use of Crossword Puzzle to Improve Vocabulary Mastery Of The Fifth Grade Students" 2, no. 2 (2018): 71-79.

[^3]:    ${ }^{9}$ David Nunan, Second Language Teaching and Learning (Boston USA: Heinle and Heinle, 1999), 188.
    ${ }^{10}$ Ahmad Syarofi Al-Furqon, "The Effect of Word Search Puzzle Game in Teaching Vocabulary to the First Grade Students of SMPN 3 Proppo," Wacana Didaktika 5, no. 2 (2017): 101-8, https://doi.org/10.31102/wacanadidaktika.5.02.101-108.
    ${ }^{11}$ Hernawati M, "Building Up the Studets' English Vocabulary Trough Fanny Stories At Smp Negeri 2 Duampanua Kab. Pinrang," ETERNAL (English, Teaching, Learning and Research Journal) 2, no. 2 (2015): 201-15, https://doi.org/10.24252/eternal.v12.2015.a4.

[^4]:    ${ }^{12}$ Hernawati, "Building Up The Students' English Vocabulary Trough Fanny Stories at SMP Negeri 2 Duampunua Kab. Pinrang" I, no. 02 (2015): 201-15, http://journal.uinalauddin.ac.id/index.php/Eternal/article/view/2382/2324.

[^5]:    ${ }^{13}$ Mofareh Alqahtani, "The Importance of Vocabulary in Language Learning and How To Be Taught," . . International Journal of Teaching and Education III, no. 3 (2015): 21-34, https://doi.org/10.20472/TE.2015.3.3.002.
    ${ }^{14} \mathrm{H}$ Dwi Ema, Pictures an Attractive Media in Teacing Vocabulary (Tulungagung: STAIN, 2001), p. 3.

[^6]:    ${ }^{15}$ Alqahtani, "The Importance of Vocabulary in Language Learning and How To Be Taught."

[^7]:    ${ }^{16}$ Ahmad Syarofi Al-Furqon, "The Effect of Word Search Puzzle Game in Teaching Vocabulary to the First Grade Students of SMPN 3 Proppo, "Wacana Didaktika 5, no. 2 (2017): 101-7."
    ${ }^{17}$ Sudarman Nasir and Sumalee Chinokul, "The English Vocabulary Size and Level of English" 4 (2018): 1-15.
    ${ }^{18}$ Nasir and Chinokul.

[^8]:    ${ }^{19}$ Nasir and Chinokul.
    ${ }^{20}$ Nasir and Chinokul.
    ${ }^{21}$ Nasir and Chinokul.

[^9]:    ${ }^{22}$ Michael Lessard-Clouston, Vocabulary and Its Importance in Language Learning, Teaching Vocabulary, 2013.
    ${ }^{23}$ Isterya and Hasan Basri, "Improving Vocabulary Mastery Through Text Twist Game," E-Journal of English Language Teaching Society (ELTS), no. 1 (2003): 1-9.
    ${ }^{24}$ Isterya and Basri.

[^10]:    ${ }^{25}$ Isterya and Basri.
    ${ }^{26}$ Isterya and Basri.
    ${ }^{27}$ Laura L. Meyer and Norbert Schmitt, "Vocabulary in Language Teaching," TESOL Quarterly 36, no. 2 (2002): 235, https://doi.org/10.2307/3588334.

[^11]:    ${ }^{28}$ Isterya and Basri, "Improving Vocabulary Mastery Through Text Twist Game."
    ${ }^{29}$ Isterya and Basri.

[^12]:    ${ }^{30}$ Vossoughi, "Using Word Search Puzzle Games for Improving Vocabulary Knowledge of Iranian EFL Learners."
    ${ }^{31}$ Hornby, A.S. 1995, Oxford Advanced Learner's Dictionary, (New York: Oxford University Press, 1995), p. 947.

[^13]:    ${ }^{32}$ Ambiyatul, "The Influence Of Using Word Search Puzzle Game Towards Students' Vocabulary Mastery," 2018.

[^14]:    ${ }^{33}$ Istarani, 58 Model Pembelajaran Inovatif (Medan: Media Persada, 2012), 181-84.
    ${ }^{34}$ Moh Firmansyah, 'Increasing Students’ Vocabulary of VII Grade At SMP N 3 Tolitoli Through Word Search Puzzle', 3.2 (2015).

[^15]:    ${ }^{35}$ Rini Hayati, Teaching English Vocabulary for Children 8 to 10 Years Old by Using Games (Jakarta, 2003).

[^16]:    ${ }^{36}$ Yap Wei Li, "Transforming Conventional Teaching Classroom to Learner-Centred Teaching Classroom Using Multimedia-Mediated Learning Module," International Journal of Information and Education Technology 6, no. 2 (2016): 105-12, https://doi.org/10.7763/ijiet.2016.v6.667.
    ${ }^{37}$ English Teacher, "Private Interview., November $04^{\text {th }} 2020$ in SMP N 5 Padangsidimpuan," n.d.
    ${ }^{38}$ Wahyuniati, "Keefektifan Model Kontekstual Untuk Meningkatkan Keterampilan Menulis Narasi" (Universitas Muhammadiyah Purwokerto, 2013), https://doi.org/10.1210/ jcem.76.6.8501142.

[^17]:    ${ }^{39}$ Wahyuniati, "Keefektifan Model Kontekstual Untuk Meningkatkan Keterampilan Menulis Narasi" (Universitas Muhammadiyah Purwokerto, 2013), https://doi.org/10.1210/ jcem.76.6.8501142.
    ${ }^{40}$ Surya Eka Priyatna, "Pendekatan Realita Perkuliahan Pada Media Online," Alhadharah 15, no. 30 (2017): 1, https://doi.org/10.18592/alhadharah.v15i30.1221.
    ${ }^{41}$ Khoirul Bahri Lubis, "The Effect of Using Crossword Puzzle in Reinforcing Activity Toward Students Vocabulary Mastery at Fifth Grade of Islamic Elementary School" (IAIN Imambonjol Padang, 2011).

[^18]:    ${ }^{42}$ Munika Duri, "The Use of Bilingual Crossword Puzzle Toward Students' Vocabulary Mastery of Fifth Grade in MI Salafiyah" (IAIN Tulungagung, 2013).
    ${ }^{43}$ Puji Astuti, "The Effectiveness of Using Word Square Game Towards the Students Mastery of Vocabulary the Second Grade at SMP 2 Pakel" (IAIN Tulungagung, 2013), repo.iaintulungagung.ac.id/4917/.

[^19]:    ${ }^{44}$ \& Fitri Rayani Siregar Seri Mawar, Eka Sustri Harida, "Improving Students’ Vocabulary Mastery Through Word Square Modeling at Grade VII SMP Negeri 5 Padangsidimpuan" 03, no. 2 (2017): 67.

[^20]:    ${ }^{45}$ L.R Gay and Peter Airaisan, Educational Research for Analysis and Application (America: Prentice Hall, 1992), 71.
    ${ }^{46}$ John Cresswell, Research Design Quantitative and Mixed Method Approached Second Edition, Second Edi (USA: Prentice Hall, 2000), 14.

[^21]:    ${ }^{47}$ Suharsimi Arikunto, Manajemen Penelitian (Jakarta: Rineka Cipta, 2003).

[^22]:    ${ }^{48}$ H. Douglas Brown, Language Assessment, Principle and Classroom Practice, (New York: Pearson Education, 2004), p.3.
    ${ }^{49}$ Suharsimi Arikunto, Prosedur Penelitian Suatu Pendekatan Praktik (Jakarta: Rineka Cipta, 2010), https://doi.org/Katalog Perpustakaan Badan PPSDMK Kemenkes RI [4513].
    ${ }^{50}$ Tri Lestari Nela, Rubrik Penilaian Vocabulary, n.d.

[^23]:    ${ }^{51} \mathrm{H}$. Douglas Brown, Teaching by Principles An Interactive Approach to Language Pedadogy (San Fransisco: Longman, 2007)., p. 448.

[^24]:    ${ }^{52}$ H. Douglas Brown.
    ${ }^{53}$ Ahmad Nizar Rangkuti, Statistik Untuk Penelitian Pendidikan (Medan: Kelompok Penerbit Perdana Mulya Sarana, 2015)

[^25]:    ${ }^{54}$ Sugiyono, Metode Penelitian Kuantitatif Kualitatif Dan $R \& D$ (Bandung: Alfabeta, 2010), 197.

[^26]:    ${ }^{55}$ Khoirul Bahri Lubis, "The Effect of Using Crossword Puzzle in Reinforcing Activity Toward Students Vocabulary Mastery at Fifth Grade of Islamic Elementary School."

[^27]:    ${ }^{56}$ Munika Duri, "The Use of Bilingual Crossword Puzzle Toward Students' Vocabulary Mastery of Fifth Grade in MI Salafiyah."
    ${ }^{57}$ Puji Astuti, "The Effectiveness of Using Word Square Game Towards the Students Mastery of Vocabulary the Second Grade at SMP 2 Pakel."
    ${ }^{58}$ Seri Mawar, Eka Sustri Harida, "Improving Students' Vocabulary Mastery Through Word Square Modeling at Grade VII SMP Negeri 5 Padangsidimpuan," 67.

