

**THE USE OF CROSSWORD PUZZLE GAME TO IMPROVE STUDENTS'  
VOCABULARY MASTERY**

*(At SMPN 3 Natar in Academic Year 2021/2022)*

**(A Script)**

**By:**

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**FACULTY OF TEACHER TRAINING AND EDUCATION  
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2022**

**ABSTRACT****THE USE OF CROSSWORD PUZZLE GAME TO IMPROVE STUDENTS' VOCABULARY MASTERY AT THE FIRST GRADE OF SMPN 3 NATAR****By****Vina Mustika**

The objectives of this research were to find out whether teaching by using crossword puzzle could give improvement toward students' vocabulary mastery and to find out the students responses in teaching vocabulary by using crossword puzzle. This research was conducted at the first grade of SMPN 3 Natar in Academic year 2021/2022. The 7B class which consists of 30 students were chosen as sample of this research. The design used quantitative approach. The instruments used in this research were vocabulary test that consisted pre-test and post-test in multiple choice to answer the first question and questionnaire to answer the second question. The test was given to know how far the students improve their vocabulary after the treatment. The data were analyzed by using SPSS 22.0. The result of this research showed that crossword puzzle could improve students' vocabulary mastery. It could be seen from the result of t-value (11.096) was higher than t-table (2.045) with the value of significant level  $0.000 < 0.05$  which indicates that  $H_1$  is accepted and  $H_0$  is rejected. Moreover, the mean score of pre-test was (75.58) and the mean score of post-test was (84.29) it means that the students improved about (8.91) with the N-gain score was (0.38). In addition, the result of students' response showed that students gave positive response after the implementation of crossword puzzle game in teaching English. It could be seen from the result of the total score of the questionnaire of which the students mostly choose strongly agree and agree statements. So, It means that crossword puzzle game technique is good to be used in teaching vocabulary.

*Keyword: Crossword Puzzle, Vocabulary, Response.*

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VOCABULARY MASTERY**

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Vina Mustika**

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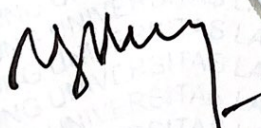
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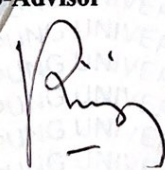
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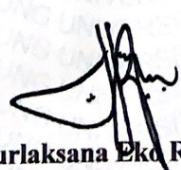
  
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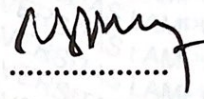
  
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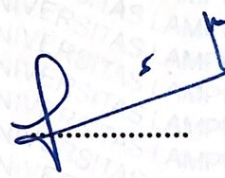
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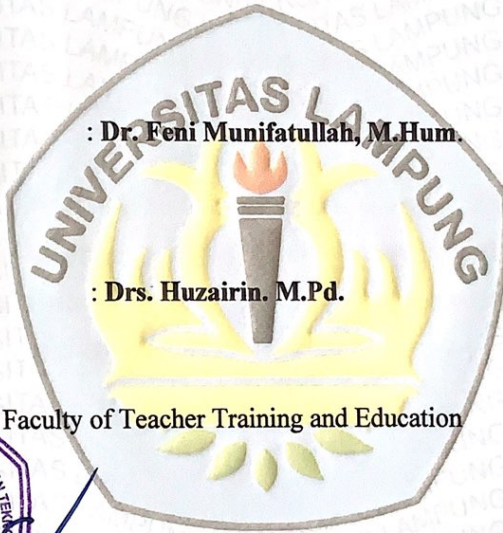
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Menyatakan bahwa skripsi ini adalah karya saya sendiri. Sepanjang pengetahuan saya, karya ini tidak berisi materi yang ditulis orang lain, kecuali bagian-bagian tertentu yang saya ambil sebagai acuan. Apabila ternyata terbukti bahwa pernyataan ini tidak benar, sepenuhnya menjadi tanggung jawab saya.

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## **CURRICULUM VITAE**

Vina Mustika was born on August 1<sup>st</sup> 2000 in Batu Raja Lama. She is the first daughter of three children from happy couple, Ujang Sahri and Indra Wati. She has two sister named Revi Gustina, Vika Mardesta. She started her study in elementary school- SD Negeri 10 Tebing Tinggi. Six years later, she completed her study in 2012. After that, she continued her study at SMP Negeri 4 Tebing Tinggi and graduated in 2015. Then, she went on her education at SMA Negeri 1 Tebing Tinggi and successfully graduated in 2018.

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**MOTTO**

If you can't do great things, do small things in a great way.

—Napoleon Hill



## **DEDICATION**

This script is entirely dedicated to:

My beloved parents, Ujang and Indra

My loving siblings, Revi Gustina, Vika Mardesta

My honorable lectures in English Education Study Program

My gorgeous friends in English Department 2018

My outstanding Alma mater, Lampung University

And everyone who directly or indirectly helps me to arrange this script

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Finally, the writers believes that her writing is still distant from perfection. There might be flaws in this research. Thus, comments, criticism, and sugesstions are always acceptable for better research. Somehow, the author hopes this research would give a positive contribution to the educational development, to the readers, and to those who want to conduct further research.

Bandar Lampung, 4 September 2022

The Writer,

Vina Mustika

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## **I. INTRODUCTION**

This chapter discusses the introduction which covers some points of the research, as follows: background of the problem, research questions, objectives of the research, uses of the research, scope of the research, definition of terms.

### **1.1 Background of The Research**

Language is very important for human life especially in learning English. It is used by people to communicate each other. Many experts say that there are three language components that we know and must be mastered by the students or learners they are grammar, pronouncation, and vocabulary. Vocabulary is one of the language components in learning English because it is important to make students speak English well. According to Anwar and Efransyah (2018), vocabulary is one of the important aspect in learning language because vocabularies carry meaning which are utilized in communication. Meanwhile, Freeman (2000;29) defines that “Vocabulary is emphasized over grammar. Although work on all four skills (reading, writing, speaking, and listening) happens from the start, oral communication is visible as basic”. If people could mastered vocabulary well, they will speaking, listening, reading and writing well. This means that the vocabulary plays an important role for the study in their field of study. The students, who are lack of vocabulary, will be difficult in understanding the text, unable to speak English, and difficult to write their own idea.

From the statement above, it can be concluded that vocabulary is an essential part of language development since vocabularies hold meaning and are used in communication.



According to curriculum 1994, the aims of English language learning is to make the students able to communicate and have vocabulary size estimated 1000 words for junior high school and 2000 words for senior high school.

Thornbury (2002) states that “Moreover, a passive knowledge of 2000 most frequency words in English would provide a reader with familiarity with nearly nine out of every ten words most written text”. It means that when somebody has learned the top 2000 words, they will be able to understand over 90% of what a native speakers says. While, according to Graves (1986), the ideal number of vocabulary size for beginner to support them in learning English is estimated between 2500 to 5000 words.

As an English teacher, it's sometimes difficult to teach vocabulary in the class. Students have problems in vocabulary mastery because of some problems. The problems are that many of them are still confused about the meaning or to memorize vocabulary and even they do not have enough vocabulary in making a sentence. There are a lot of teaching methodology and teaching techniques which can be used but not all of them are helpful for the students. One of the technique in teaching vocabulary is using crossword puzzle game. According to Webster (1990:310), crossword puzzle is a puzzle on which words are filled into a pattern of numbered squares to answer correspondingly numbered clues and in such away that the words read across and down. The crossword puzzles have variety of ways to apply, according to Jones (1992), crossword puzzle can be used for a variety of ways: to teach new vocabulary, to help students to memorize what they already know. Wahyuningsih (2009) defines that a crossword puzzle is a game in which words are placed into a diagram of white and black squares based on their definitions. So, it means that crossword puzzle is a puzzle in which word corresponding to numbered clues are put into a pattern of horizontal and vertical squares in order to assess someones' knowledge.

So, it means that crossword puzzle is a puzzle in which word corresponding to numbered clues are put into a pattern of horizontal and vertical squares in order to assess someones' knowledge.

This problem also occurred in SMPN 3 Natar. Based on the researcher observation and interview with the English teacher in SMPN 3 Natar. One of the problem in English is the students' ability of vocabulary mastery. Especially students' ability to memorize vocabulary. It is caused by the lack of students' vocabulary mastery. Besides that, the researcher found that the ability of students to comprehend the meaning of vocabulary is low. And also, the students have difficulties to use vocabulary in sentences. It makes the students feel lazy to learn English well.

In this case, the researcher has an idea to improve their ability vocabulary mastery by using crossword puzzle as the instructional teaching media. According to Sadiyah, Septiani, Kareviati, (2019), crossword puzzle game is effective to improve students' vocabulary mastery. It means that crossword puzzle game can help the students increasing vocabulary. By using crossword puzzle game, the students will get new word and enjoy the word game while they are learning the vocabulary.

There are some studies that had been done several times in different aspect of language strategies. One of them was conducted by Sunarko, *et al* (2019) this journal states that the use of crossword puzzle can gives a positive effect towards students' vocabulary mastery. Another research was conducted by Orawiwatnakul (2013), the findings showed that studying vocabulary using crossword puzzles is one of the most effective strategies for Thai students to improve their vocabulary. Third, research by Manullang, *et al* (2018) in this research defines that the use of crossword puzzle can improve students' vocabulary mastery.

Furthermore, improving their leaning motivation, it helps students learn vocabulary by putting them in a crossword puzzle (Njoroge, Ndung'u and Gathigia, 2013).

Additionally, Kasor (2018), discovered that incorporating crossword puzzle into the teaching learning process has a good impact on students' vocabulary and the students more active in study vocabular

Furthermore, by including crossword puzzle into the teaching learning process, students' vocabulary achievement has improved. So, the researcher wants to implement the same way or technique to teach vocabulary first grade Students of SMP N 3 Natar. To distinguish between previous research, in this research the researcher using Crossword Puzzle through *Crossword Labs application* in teaching vocabulary. The researcher assumes that by using this technique, they are able to memorize the vocabularies easier and by using Crossword Puzzle can make the students pay attention more and focus on learning process.

From the statement above, the researcher summarizes that crossword puzzle game is one of effective technique that can be applied to improve students' vocabulary mastery. Based on the background, the researcher is interested in conducting a research entitled “ The Use of Crossword Puzzle Game to Improve Students' Vocabulary Mastery at 7<sup>th</sup> Grade Students of SMP N 3 Natar”.

## **1.2 Research Questions**

1. Is there any significant improvement in students' vocabulary mastery after using crossword puzzle game in teaching?
2. What are students' responses in learning vocabulary through crossword puzzle game?

## **1.3 Objectives of the Problem**

In line with the formulations of the problem, the objectives of the study are:

1. To find out the significant improvement of students' vocabulary mastery after they are taught by using crossword puzzle game

2. To find out the students' responses in learning vocabulary by using crossword puzzle game.

#### **1.4 Uses of the Research**

In relation of the research questions and objectives, the uses of research are:

- Theoretically, it can assist and strengthen the previous research, as well as a reference for future researchers who want to conduct some related studies.
- Practically, it might be beneficial for English teachers to find a good way in helping the students in learning English, especially by using crossword puzzle game in the learning activities.

#### **1.5 Scope of the Research**

This study is quantitative research. The researcher focused to the use of crossword puzzle game to improve students' vocabulary mastery because their vocabulary was still low. Also, based on the identification of the problem, the study was focused on the use crossword puzzle game to improve students' vocabulary at the students SMP N 3 Natar.

#### **1.6 Definition of Terms**

The research would like to clarify the term used in title to make this script easy to understand.

##### **1. Improving**

Improving is the process of becoming or making the better (Oxford University Press,2008:222).

##### **2. Vocabulary**

Vocabulary is the collection of words that at individual knows (Lines,2005:121)

### 3. Crossword Puzzle Game

Crossword is puzzle in which word have to be written (form numbered clues) vertically and horizontally (up and down) in scales on a chequered squared or oblong ( Hornby;1963:233). Puzzle is issue plan to test an individual knowledge (Hornby;1963:652). Crossword puzzle is issue plan to test a persons' knowledge on which word have to be composed vertically and evenly in space a squared.

### 4. Response

The response is the way of students' belief, think, and react towards something.



## **II. LITERATURE REVIEW**

In this chapter, theoretical reviews from experts are presented to support the implementation of strategies that has been decided.

### **2.1 The Concept of Vocabulary Mastery**

Vocabulary knowledge refers to single items and phrases that a person knows to convey a particular meaning. According to Schmitt (2010), vocabulary knowledge ranges from perceiving a combination of letters as a word and being able to attach one or more meanings to this perceived form to understanding various meanings of a word changing based on the context. People need vocabulary knowledge to express themselves in every language along with grammatical competence. Additionally, according to Mosher (2007), mastery is attaining a particular level in perceiving and recognizing particular knowledge.

Vocabulary mastery reflects on how far the person knows and understanding certain words. According to Qahtani (2015), vocabulary mastery refers to an ability to understand and use words. The students are required to have knowledge about words, which are knowing and understand the meaning first before they can use the word to be applied in one of language skill. Vocabulary mastery of a person could be different from another. It applies to the education level. For intermediate learners or middle school students are estimated to have around 1,000 to 3,000 word level.

In brief, vocabulary mastery can be defined as the process of getting knowledge of the words in a language. So people who want to master language skills must master vocabulary first.

### **2.1.1 The Definition of Vocabulary**

One of the elements which students need in order to be able to function in a second language is vocabulary. According to Barcroft (2017), an individual's vocabulary refers to all of the words, word parts (e.g. suffixes and prefixes), and lexical phrases that he or she has learned at any given time. Additionally, it would be impossible to learn a language without words or vocabularies support it (Rivers, 1981). According to the definition above, vocabulary is the most important components of language that must first learn by learners. This will help students learn English well.

### **2.1.2 Types of Vocabulary**

In learning English, there are some types of vocabulary in English language. One of them is stated by Nation (1990), vocabulary classified into 2 types, namely receptive and productive vocabulary. vocabulary is words that are first met, learned, comprehended, and accumulated in one's memory by reading and listening, that is called receptive or passive vocabulary. In other word, receptive or passive can also defined as words that students can understand, pronounce correctly, and use the constructively in their oral and writing skills. Meanwhile, the process retrieving( receptive knowledge) and producing the appropriate written or spoken from in order to have access to its meaning. On the other hand, productive vocabulary is a group of words that an individual can use when writing or speaking.

Fries (1974:4) also states other types of vocabulary besides productive and receptive vocabulary, namely content words, function words, substitution words, and distribute words.

## 1. Content Words

Content words carry descriptive meaning, that is called noun, verb, adjectives, and adverbs.

### a. Noun

Noun refers to something ( such as place, person, animal, things and abstract idea). According to Crystal ( 1995:206), there are 8 kinds of nouns as follows:

#### 1. Adjectival Noun

Adjectival noun is a adjective which has come to function as a noun. The example of adjectival noun are; 1). *The ugly* is still on the way.

#### 2. Animate Noun

Animate noun are a noun refers to animal, person, or other creature. The animate noun has different noun endings, which make the gender clear.

The examples of animate noun are;

#### 3. Collective Noun

Collective noun is a noun that represents a collection of object, where the object usually people, animal, emotions, concepts, or other things. For example 1). *The police* are coming 2). *The family* next door is very quiet.

#### 4. Concrete Noun

Concrete noun is a noun that refers to something that can be seen, touched, tasted, smelt, or heard. Examples of concrete noun; 1). My sister bring a *book* 2). My mother buy a *bottle*

#### 5. Abstract Noun

Abstract noun is a noun refers to something that cannot be seen, touched, tasted, smelt, or heard ( idea or concepts). The example of abstract noun; 1) her *dedication* to her work was amirable. 2). In my *opinion*, he will win the election.

#### 6. Countable Noun

Countable noun refers to something (individual) that we can count , such as bottle, coin, table, chair. For example; She bought three *bottles* in her bag.

### 7. Uncountable Noun

The uncountable noun is a noun cannot be counted or not individual object. Such as water, cheese, and information.

### 8. Proper Noun

Proper noun is a specific name for particular person, place or things. Usually proper noun always using capital letter in English. For example; 1). will you visiting *Lampung* in the next week?. 2). I went to mall on *Saturday*.

## b. Verb

A verb is a combination of words that indicates action or help to make statement in the sentence. Verb is the part important component of English sentences. According Ginger (2016), there are some types of verbs; they are:

### 1. Action Verb

Action verb is verb that express specific action, and explains what the subject or someone doing something. For example; He *left* in the restaurant.

### 2. Transitive verb

Transitive verb is a verb that takes one or more object, meaning something or someone receive the action of the verb. For example: "Dina cooks vegetables".

### 3. Intransitive verb

Intransitive verb is a verb do not need an object, meaning something or someone receives in the action of the verb in the sentences. For example: "The bus arrives at 2 pm".

### 4. Regular verb

Regular verbs are those in which the suffixes "-d" or "-ed" are added to the end of the word to create the **past simple** tense and **past participle** forms. For example : Agus *played* football yesterday.

## 5. Irregular Verb

Irregular verbs don't have any spelling standards that we may use to make the past simple tense and past participles. This means that the only way to learn how to spell these forms is to memorize them one by one for each irregular verb. For example : He *thought* a cat would provide some good company.

### c. Adjective

Adjective is a word that gives more information about a noun or pronoun (Harmer: 37). An adjective is a word that describes a quality of the person or object to which a noun refers. There are 2 types of an adjectives;

#### 1. Possessive Adjective

A possessive adjective is a modifier. Possessive adjectives alter nouns by demonstrating ownership over them. Possessive adjectives look similar to possessive pronouns in form, but they cannot stand alone in a sentence. For example : This is *your* juice.

#### 2. Demonstrative Adjectives

A demonstrative adjective is an adjective that is used to express something or someone's position in space or time. 'This', 'That', 'These', and 'Those' are demonstrative adjectives. For example : 1). What do you think about **this** book? 2). Look at **these** beautiful pictures in the gallery.

### d. Adverb

An adverb is a word (or a set of words) that characterizes or complements the meaning of a verb, an adjective, another adverb, or a complete sentence (Harmer 2004:37). While according Thomson and Martinet (1986:47) classified the category of adverbs into eight, they are:

1. Manner :fast, happily, quickly, well, hard.
2. Place and direction : far, here, down, up, there, west, near.
3. Time : soon, still, then, yet, today, soo

- 4. Frequency : never, often, twice, occasionally.
- 5. Sentence : surely, definitely, luckily, certainly.
- 6. Degree : hardly, rather, quiet, very, too, fairly.
- 7. Interrogative : why?, where?, when?
- 8. Relative : why, when, where.

## 2. Function Words

Determiners, conjunctions, prepositions, auxiliary verbs, and particles are examples of function words that are used to indicate grammar and structure relationships.

For examples:

- 1. Preposition : of, at, in, without, between.
- 2. Determiners : a, that, the, my, more, much, either, neither.
- 3. Conjunctions : and, that, while, when, although, or.
- 4. Auxiliary verbs : e (is, am, are), have, got, do.
- 5. Particles : no, not, nor, as.

## 3. Substitute Words

Substitute words are words which perfume the individual things or specific action as substitutes for whole form classes of words ( anybody, anyone, somebody, and someone). E.g:

- a. *Everyone* has left the room.
- b. *Nobody* is perfect.

## 4. Distributed Words

Distributed Words are those that are utilized according to grammatical matters such as the presence or absence of a negative, such as any, either, etc, e.g.:

- a. You do not allow passing line and *neither* do I.
- b. She cannot finish the task and I do not *either*.

Based on all types of vocabularies above, the researcher concentrated on content words that consist of noun, verbs, adjectives, and adverb. In the part of speech or words order, those four categories of content words were regarded the most important.

### **2.1.3 Aspects of Vocabulary**

There are several aspect of learning vocabulary. According to Lado in Mardianawati (2012:11), there are some vocabulary aspects as follows:

#### **1. Meaning**

When teaching students about meaning, the teacher should clarify that a word can have multiple meanings depending on the context in which it is used. The teacher can use guided discovery and dictionaries to help students understand the meaning.

#### **2. Spelling**

In learning vocabulary, spelling is essential for learning vocabulary since it promotes reading and serves as a link between letters and sounds. due to the fact that they belong to various types, spelling there may be different acceptable written versions of an equivalent word within the same variety of English, as is the case with many American English terms (Nation, 1990).

#### **3. Pronunciation**

The manner a person pronounces words in a language is referred to as pronunciation (Hornby, 2006:1164). The majority of words have only one pronunciation, however some words have two or more. It can be seen from some words are “present” which pronunciation /”preznt/ and /”prl”zent/ and the word “read”, which pronunciation /ri:d/ and /red/. Because it is unrelated to word spelling, English pronunciation is difficult to master. Students want to be able to speak English fluently and clearly. So that they can communicate without being irritated, and so that the receiver can communicate more easily.

#### 4. Word Classes

Word classes are a sets of word in a language. (Hatch and Brown, 1995:218) defines that the word classification is based on their functional classification, namely part of speech. There are parts of speech that students must know such as noun, verb, adjectives, adverbs, pronouns, preposition, conjunctions, and interjections.

#### 5. Word Use

Words use is how a word, phrase, or concept is employed in a language. Word use can also entail grammar, which can be the topic of profound analysis ( Mardianawati,2012: 11).

Based on the aspects of vocabularies above, the researcher focused on meaning, word classes and word use. Those are the skills that early learners acquire in order to communicate effectively.

### **2.1.4 The Important of Vocabulary**

As we know that students use vocabulary to express opinion, ideas or thought in sentences or their daily activities. Another statement that vocabulary is important as follow:

“Vocabulary is important to students. In terms of communication, it is more important than grammar. Notably, in the early stage of motivating students to learn basic words, they need to learn it in language. Furthermore, the vocabulary system is "open", when students "finish" the grammar, there will always be something new to



learn. As a result, more advanced students are motivated to increase their vocabulary, understand the nuances of meaning, and become more proficient in their choice of words and expressions (Gower,1995: 142)”.

In conclusion based on statement above, basically vocabulary is the most important things when learning a foreign language. Because, if there is no vocabulary everyone will have difficulty to communicate each other.

### **2.1.5 Types of vocabulary test**

According to Thornbury (2007), there are two types of vocabulary test.

#### **1. Multiple choice**

A multiple choice test is a common testing method because it is simple to score (by computer) and to create. Furthermore, the multiple choice style can be utilized with isolated words, words in context, or words in the entire text.

#### **2. Gap-fill**

To finish the sentence or text in a gap-fill test, the student must recall the word from memory. As a result, rather than simply identifying words, they examined the ability to generate words. These are the types of tests:

##### **1. Cloze test**

The gaps are spaced evenly, for example, every seven, eight, or nine characters. This method assesses knowledge of a broad range of word categories, including grammatical and content words. As a result, this test is frequently used to assess grammar rather than vocabulary.

##### **2. C-test**

The success of various kinds of vocabulary examinations is linked to taking the C-test. As a result, some individuals believe the C-test is a good way to assess total vocabulary. As a result, it can be utilized as a placement test with success.

Based on the explanation above, the researcher focus on multiple choice as testing method in vocabulary tes

## **2.2 The Concept of Crossword Puzzle**

### **2.2.1 Definition of Crossword Game**

Crossword game is one letter/number for each squares in a puzzle with sets of squares to be filled in with words or numbers (Dhand, 2014:55). The numbers in the squares represents the term's synonyms or definition. In response to the clues, letters/words are fitted into a pattern of numbered squares.

According to Mousund (2013:8), crossword is a popular puzzle game in which the goal is for the puzzle solver to solve a certain mentally tough problem or finish a specific mentally demanding task. The crossword game, as stated previously is a popular game in which participants fill up grids with words or letters. It is become one of the most popular teaching-learning games, with language instruction included. This game is rated as difficult.

### **2.2.2 Types of Crossword Game**

According to Nation (2014:45), a communicative word cross game that may be played while speaking. He gives the kids the following directions, and they work in pairs. Despite the fact that the puzzle contains no suggestions, learners A has half of the words put in while learner B has the other half. They exchange requests for the words that are missing from their version. They are not allowed to pronounce the words out loud or show their problem to each other, but they must have paraphrases the words. A is as well, asking, "what is 6 down?" B will have to explain. Its goal is to give a comprehensive overview of how communicative words cross games are employed in the teaching-learning process.

Sentences can also be utilized to help kids figure out how to understand words. According to Johnson (2013:43), students look at the context of the sentence or paragraph to find the missing or unknown word. He also includes cloze sentences, which are sentence structures that are contextual.

Finally, there are many types of crossword games, such as crossword game with picture or cloze sentences, and communicative crossword games, can be designed to improve the English teaching-learning process, particularly the teaching-learning of vocabulary.

### **2.2.3 The Benefit of Using Crossword Game**

According to Dhand (2014:55) explained how crossword game help the students in learning, as follow:

1. The crossword game strategy is a fantastic technique to educate and improve vocabulary because the meaning or synonym of the terms are right there to provide reinforcement.
2. A crossword game can be used to encourage the usage of dictionary or thesaurus as well as the acquisition of topic-specific vocabulary. They can be used as a quiz or assessment at the end of a unit, chapter, or lesson.
3. The instructor can quickly construct a crossword game for the students to play.

### 2.3 Teaching Vocabulary by Using Crossword Puzzle

According to Case (1994), the puzzle are meant to be used in conjunction with the students' practice. Puzzle can be utilized in the classroom in the same way that writing exercises or reading comprehension tests are. They are:

- a. Students can work on crossword puzzles on their own. All of the students have the same puzzles, or only a few students have one. Another group of students is comparing the solutions, followed by a full-class review.
- b. Crossword puzzle can be completed by two people or a small group. All group may work on the same puzzle, or many puzzles may be employed in the separate groups at the same time, with inter-group comparisons and Full-class verification as described above. Alternatively, each group might be given a set of three puzzles
- c. to solves (all groups would have the same three challenges), introducing a competitive element between the groups.
- d. Because artwork puzzles (those containing grids, such as crosswords) are relatively easy to copy by hand, the teacher may wish to reproduce the grid on the blackboard while the students are completing the puzzle and use the blackboard grid in the solution checking.
- e. The majority of the puzzle are self-contained, and the goal is to find the solution. On the other hand, are accompanied by a question that. If requested, can lead to a brief follow-up conversation.
- f. Crossword can be utilized as homework since they are a fun way to complement exercises while also reinforcing the language areas that students have been working on in class.
- g. If the school has one, crossword puzzle can also be used in self-acces center. In this scenario, it would be beneficial to make the indexes available to the users so that they can locate the puzzles they want to tackle on their own

## **2.4 Theoretical Assumption**

According to the previously theory presented, this research will investigate whether the use of crossword puzzle in language teaching can improve students' vocabulary and to find out the students' response concerning to the implementation of using crossword puzzle in teaching English at the first grade of junior high school level.

Teaching vocabulary for junior high school level in learning language is very important. The researcher assumes that teaching vocabulary through crossword puzzle will be more effective and enjoyable because crossword puzzle will guide students in learning words by playing word game. It can be stated that by using crossword puzzle, the students will give high attention to learn a new vocabulary and augment their vocabulary. Hopefully, by using crossword puzzle the students' difficulties in learning English vocabulary will be decreased and the goal of the teaching learning activity will be achieved.

## **2.5 Hypothesis**

Considering the theory underlying vocabulary and the using of crossword puzzle, the hypothesis is :

H<sub>0</sub>: There is no significant improvement after using crossword puzzle game in teaching vocabulary.

H<sub>1</sub> : There is significant improvement after using crossword puzzle game in teaching vocabulary.

### III. RESEARCH METHODOLOGY

This chapter consist of research methodology which should be constructed thoroughly. It discusses research design, variable of the research population and sample, instrument of the research, data collecting technique, criteria of a good test, procedures of the research scoring system, data analysis, and hypothesis testing.

#### 3.1 Research Design

This research will be conducted to analyze the significant difference in students' vocabulary after the implementation of crossword puzzle game to improve students' vocabulary knowledge. Besides, this research also will find out the students' responses the implementation of the technique in learning vocabulary through crossword puzzle game. To answer the first question, this research will use quantitative approach and *one group pre-test* and *post-test* design (Setiyadi, 2018).

The design for the first research question as illustrated follows:

$$T1 \times T2$$

Where:

T1 : Pre-test

T2 : Post-test

X : The treatment (The implementation of crossword puzzle game)

The second research question will investigate the students' response the implementation of Crossword Puzzle game which will be analyzed through the

questionnaire. It will use a quantitative approach and the design was *One-Shot Case Study* (Setiyadi, 2018). The research design is illustrated as follows:

X T

Where:

X: belongs to the implementation of Crossword Puzzle game

T: belongs to questionnaire

(Setiyadi, 2018)

### **3.2 Variables of the Research**

A characteristics group of people, behaviour, or the environment which have various people characteristics (Setiyadi, 2018). In doing this research, the variable were crossword puzzle game and students' vocabulary mastery. It means that students' vocabulary mastery is dependent variable that will be influenced by the technique. In other word, independent variable is crossword puzzle game which is expected to increase the students' vocabulary mastery.

### **3.3 Population and Sample of the Research**

In this study, the writer selects the 7<sup>th</sup> grade students of SMPN 3 Natar in the academic year 2021/2022 as the subjects of the research.

#### **3.3.1 Population**

Based on Kothari (2004: 55) claimed in other statements that the definition of research population is all projects in any field of research. Based on definition, the writer summarize that population is a number of groups interest to the researcher, a number of groups which he would like to make the results of the study to be reported. In doing this research, the population is 7<sup>th</sup> grade of students in SMP N 3 Natar.

### **3.3.2 Sample**

In selecting the sample, the researcher will use random sampling so that the population has the same opportunity to become research sample in this research. The participants of this research are 7<sup>th</sup>B grade students of SMPN 3 Natar in academic year 2021/2022. The 7<sup>th</sup>B grade students are divided in one class in which consists of 30 students.

## **3.4 Instruments of The Research**

### **1. Vocabulary Test**

The first instruments to gain the data is the vocabulary test. The aim is to find out the students' vocabulary knowledge before and after giving the treatment. In addition, there are 2 kinds of the test, those are pre-test and post-test. The pre-test will be given at the beginning of the meeting. After that, post-test will be given after the treatment or after the students taught by crossword puzzle game to see the difference in students' vocabulary mastery.

To deal with the vocabulary test, the researcher used the test of vocabulary size, based on vocabulary level Nation (1983; 1990). This test classifies vocabulary knowledge according to word frequency: First 1000 word level, Second 1000 word level; Third 1000 word level; and University word list. Based on the curriculum in Indonesia, which define that the junior high school students must achieved 2000 words of vocabulary. So, the researcher only focus on 2000 words of vocabulary.

### **2. Questionnaire**

The second instruments used is questionnaire. It will be administrated to investigate to students' responses the implementation of crossword puzzle game. This instrument will be given at the end of meeting to evaluate all the treatments



to the students based on the students' feeling. The questionnaire is modified from students' positive response through crossword puzzle technique in teaching vocabulary ( Orawiwatnakul, 2013). Based on Orawiwatnakul's theory, the researcher classify the statements into four components the uses of crossword puzzle technique; The students' feel after the implementation of the technique, The effectiveness of the technique, The benefits of the technique related to the vocabulary aspect, The improvement of students' vocabulary mastery.

This research will used close-ended questionare. This kinds of questionare enable the students to choose the most suitable answer. It consists 15 statements for the students to answer. The answer consist of four point scale ranging from strongly agree, agree, disagree,strongly disagree. But, the questionnaire will be written in indonesian language to avoid the students' misunderstanding. To distribute the questionnaire effectively, the questionnaire will be set on the paper so that all the students can be get one by one.

**Table 3.1 The Questionnaire of Students' Responses**

Component	No	Statements	Answers			
			SA	A	D	SD
The students' feel after the implementati on of the technique.	1	Saya sangat antusias belajar kosakata dengan teknik pembelajaran yang digunakan oleh guru.				

	2	Penggunaan teknik pembelajaran crossword puzzle memotivasi saya untuk belajar kosakata Bahasa Inggris.				
	3	Pembelajaran dengan menggunakan crossword puzzle dapat meningkatkan semangat belajar saya.				
	4	Siswa bisa dengan mudah menjawab soal tes setelah penggunaan teknik pembelajaran crossword puzzle.				
	5	Penggunaan crossword puzzle membuat pembelajaran kosakata lebih menarik.				
The effectiveness of the technique	6	Penggunaan teknik crossword puzzle lebih menarik dibandingkan dengan teknik belajar kosakata lainnya.				
	7	Penggunaan teknik pembelajaran crossword puzzle membantu saya dalam belajar kosakata Bahasa Inggris dengan mudah.				
	8	Penggunaan teknik pembelajaran crossword puzzle meningkatkan nilai ujian saya.				

The benefits of the technique related to the vocabulary aspect.	9	Penggunaan teknik belajar crossword puzzle membantu saya memahami materi pembelajaran.				
	10	Saya merasakan bahwa crossword puzzle membantu saya dalam menghafal kosa kata baru.				
	11	Penggunaan teknik pembelajaran crossword puzzle membantu saya meningkatkan kosa kata dalam Bahasa Inggris.				
	12	Penggunaan crossword puzzle turut memecahkan masalah dalam menyelesaikan latihan dikelas.				
	13	Mengisi crossword puzzle membantu saya melepaskan kecemasan sewaktu saya menggunakan kosa kata baru.				
The improvement of students' vocabulary mastery.	14	Tidak hanya meningkatkan kosakata bahasa inggris, pembelajaran menggunakan crossword puzzle juga membantu saya meningkatkan kemampuan menulis.				
	15	Penggunaan teknik pembelajaran crossword puzzle bermanfaat dalam pembelajaran bahasa inggris terutama pembelajaran kosa kata.				

( Source : Orawiatnakul. W, 2013)

Questionare scoring system :

**Table 3.2 Questionnaire scoring system.**

Answer	Score
Strongly Agree	4
Agree	3
Disagree	2
Strongly Disagree	1

( Likert, 1932)

### **3.5 Technique of Collecting Data**

The steps to collecting data, the writer used kinds of pre-test, post-test design, and questionnaire.

#### **1. Conducting Try Out Test**

Try out test was administrated to identify the quality of the test before it was used to obtain the data for the research. The test icluded multiple choices that consisting of 200 items with four options a,b,c,and d, three disctracters and one correct answer.

#### **2. Conducting pre-test**

In this step, the researcher gives the students pre-test to know the students' vocabulary knowledge before they are taught using crossword puzzle game. The pre-test will be given before the treatment is implemented. It will be given through a paper of task.

#### **3. Conducting post-test**

In this step the researcher gives post-test to the students. Post-test given for the students after the treatments have implemented. It has purpose to compare the

students, scores from the pre-test and post-test and find out how far the students improve their vocabulary knowledge after being taught by crossword puzzle game

#### 4. Questionnaire

In this step the researcher gives questionnaire to the students. This questionnaire given for the students after classroom action research. It has purposed to know students' responses in learning vocabulary through crossword puzzle game. From the result from the students questionnaires' answer, showed that there were differences responses the implemented the technique. To answer the questions, students will be asked to choose the most suitable answer based on their feelings.

### 3.6 Criteria of Good Tests

In conducting the research, we must be prove whether the test have good quality, it was tried out first. The test can be said a good quality if it has a good validity, reliability, level of difficulty, and discrimination power. the researcher will use some instruments for gaining the data. validity and reliability are two aspects that cannot be separated in the research regarding to the measuring instruments of the research (Setiyadi, 2018). In this study, the gained data was analyzed to judge the level of difficulty, validity, reliability of the test, and discrimination power.

#### 3.6.1 Validity

##### a. Validity of Vocabulary Test

Testing validity is important to test out the trustworthiness of the data. According to Hatch and Farhady (1982), validity is the extent to which the results of the procedure serve the uses for which they were intended. It means that a test can be judged valid if it measures what become the aim of the test itself. According to Hatch and Farhady (1982), there are two basic types of validity: content validity and construct validity. In this research, to measure the validity of the test, the researcher using content and construct validity.

### 1. Content Validity

Content validity is the extent to which the tests must cover the domain that it purports to cover fairly and comprehensively. In addition, to fulfill this type of validity, the researcher will compose the vocabulary tests based on the syllabus and curriculum of 7<sup>th</sup> grade students in SMP N 3 Natar. It means that the material was based on the basic competence in the syllabus for 7<sup>th</sup> grade of junior high school. The researcher had made the vocabulary test based on the curriculum, so the researcher assumed that this test has fulfilled content validity. To measure the validity of the vocabulary test, the researcher used *pearson correlation* in spss 22.0.

**Table 3.3. Specification of Tryout Test**

NO.	CONTENT WORDS	ITEMS NUMBER	TOTAL	PERCENTAGE
1.	Noun	3,10, 19,20, 21, 24, 25, 26, 27, 28, 41, 42, 43, 53, 54, 55, 58, 59, 62, 63, 64, 68, 70, 71, 72, 74, 75, 76, 77, 78, 80, 81, 85, 86, 105, 106, 115, 123, 126, 128, 138, 142, 145, 152, 154, 155, 163, 166, 171, 172.	50	25%
2.	Verb	2, 4, 7, 8, 12, 13, 15, 16, 17, 22, 56, 89, 91, 92, 93, 94, 96, 97, 98, 99, 100, 101, 109, 110, 112, 124, 125, 129, 130, 131, 132, 134, 135, 136, 143, 144, 146, 147, 149, 150, 151, 153, 157, 160, 161, 169, 173, 175, 176	50	25%

3.	Adjectives	1, 5, 6, 9, 11, 18, 23, 29, 30, 32, 44, 45, 46, 47, 48, 57, 60, 61, 73, 79, 82, 90, 103, 104, 107, 108, 111, 113, 116, 118, 120, 121, 127, 137, 139, 141, 148, 162, 165, 168, 170, 177, 178, 179, 180, 182, 183, 184, 185.	50	25%
4.	Adverb	14, 31, 33, 34, 35, 36, 37, 38, 39, 40, 49, 50, 51, 52, 65, 66, 67, 69, 83, 84, 87, 88, 95, 102, 114, 117, 119, 122, 133, 140, 156, 158, 159, 164, 167, 174, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200.	50	25%
Total		200		100%

**Table 3.4. Specification of Pre-test and Post-test Test**

NO.	CONTENT WORDS	ITEM NUMBERS	TOTAL	PERCENTAGE
1.	Noun	3,10, 19,20, 21, 24, 25, 26, 27, 28, 41, 42, 43, 53, 54, 55, 58, 59, 62, 63, 64, 68, 70, 71, 72, 74, 75, 76, 77, 78, 80, 81, 85, 86, 105, 106, 115, 123, 126, 128, 138, 142, 145, 152, 154, 155, 163, 166, 171, 172.	50	25%

2.	Verb	2, 4, 7, 8, 12, 13, 15, 16, 17, 22, 56, 89, 91, 92, 93, 94, 96, 97, 98, 99, 100, 101, 109, 110, 112, 124, 125, 129, 130, 131, 132, 134, 135, 136, 143, 144, 146, 147, 149, 150, 151, 153, 157, 160, 161, 169, 173, 175, 176	50	25%
3.	Adjective	1, 5, 6, 9, 11, 18, 23, 29, 30, 32, 44, 45, 46, 47, 48, 57, 60, 61, 73, 79, 82, 90, 103, 104, 107, 108, 111, 113, 116, 118, 120, 121, 127, 137, 139, 141, 148, 162, 165, 168, 170, 177, 178, 179, 180, 182, 183, 184, 185.	50	25%
4.	Adverb	14, 31, 33, 34, 35, 36, 37, 38, 39, 40, 49, 50, 51, 52, 65, 66, 67, 69, 83, 84, 87, 88, 95, 102, 114, 117, 119, 122, 133, 140, 156, 158, 159, 164, 167, 174, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200.	50	25%
Total		200		100%

## 2. Construct Validity

Construct validity deals with the degree to which the tests are used to measure the construct that is being examined. Simply, the tests should be in line with the theory of what is being measured.



## **b. Validity of Questionnaire**

The questionnaire is valid if it measures what is intended to measure accurately. There are two types of validity which are content validity and construct validity.

### **1. Content Validity**

The content validity of the test determines whether content is sufficiently representative and comprehensive for the test to be valid in measuring what intends to measure. The statement of the questionnaire created to assess the students' responses because the objectives of the questionnaire is to measure as well as to know students' responses after taught the technique. In addition, the questionnaire is adapted by Orawiwatnakul's theory. As a result, based on the contain, which contains all of statements the uses of crossword puzzle proposed by previous study (Orawiwatnakul, 2013). To measures the validity of questionnaire, the researcher used *pearson correlation* in SPSS 22.0.

### **2. Construct Validity**

The construct validity of a test refers to whether it is consistent with the theory being measured. The construct validity of test items or tasks that have been developed based on the theory of what is being tested is referred to as construct validity (Nurweni, 2018). In other words, construct validity is concerned with whether or not the items are written according to the theory or components of what the language implies. To get the construct validity of the questionnaire, the items are categorized based on the theory by Orawiwatnakul (2013). In this part, the researcher will asks the students to choose one option from four option by using Likert scale. As a result, because each items questionnaire based on the statements uses of crossword puzzle theory proposed by (Orawiwatnakul, 2013). It is expected that the questionnaire's construct vailidity has been standardized.

### 3.6.2 Reliability

#### a. Reliability of Vocabulary Test

According to Setiyadi (2018), reliability is the consistency of the instruments in terms of the gained score. An instrument that gives consistent results to measure the same subjects at a different time which is called a reliable instruments. In this study, the researcher will analyze the reliability of the test and the scoring system of the research. A test will be considered reliable if it shows the consistent results. To estimate the reliability of the test this research used split-half technique. In addition, this research used the *Pearson Product Moment formula* to measure the coefficient of the reliability between odd and even group in this research.

$$r_{xy} = \frac{N(\sum xy) - (\sum x)(\sum y)}{\sqrt{[N\sum x^2 - (\sum x)^2][\sum y^2 - (\sum y)^2]}}$$

Where:

$R_{xy}$  : coefficient of reliability between odd and even numbers item

$x$  : odd number

$y$  : even number

$\sum x^2$  : total score of odd numbers items

$\sum y^2$  : total score of even numbers items

$\sum xy$  : total score odd and even number

Then this research used *spearman brown's parophecy formula* Hatch (1982:286) to know the coefficient correlation of the whole items. The formula is as follows:

$$r_k = \frac{2r_{xy}}{1+r_{xy}}$$

Where:

$r_k$  : the reliability of the test

$r_{xy}$  : the reliability of half test

**The criteria of reliability are:**

0.90-1.0 : High

0.50-0.89 : Moderate

0.00-0.49 : Low

( Hatch and Fahardy, 1982:286)

**Reliability of the half test of try out:**

$$r_{xy} = \frac{n \sum xy - (\sum x)(\sum y)}{\sqrt{(n \sum x^2 - (\sum x)^2)(n \sum y^2 - (\sum y)^2)}}$$

$$r_{xy} = \frac{33 \times 97.750 - (1655 \times 1665)}{\sqrt{(33 \times 3.310 - (1655)^2)(33 \times 3.310 - (1665)^2)}}$$

$$r_{xy} = \frac{3.225.750 - 2.755.575}{\sqrt{(109.230 - 3.310)(109.230 - 3.330)}}$$

$$r_{xy} = \frac{3.225.750 - 2.755.575}{\sqrt{(105.920)(105.900)}}$$

$$r_{xy} = \frac{470.175}{\sqrt{11.216.928}} = \frac{470.175}{105.909}$$

$$r_{xy} = 2.65$$

**Reliability of the whole test of try out:**

$$r_k = \frac{2r_{xy}}{1+r_{xy}}$$

$$r_k = \frac{2(2.65)}{1+2.65} = \frac{5.3}{3.65}$$

$$r_k = 1.45 = 1 \text{ ( High Reliability )}$$

## **b. Reliability of Questionnaire**

The reliability test is linked to the consistency of the results. The questions of the questionnaire is examined using *Cronbach alpha* to determine if the questionnaire is reliable or not. If the *Cronbach alpha* score is 0.70 or higher, the questionnaire is

regarded as reliable ( Setiyadi, 2018). To put in another way, the greater the Alpha score, the more trustworthy the questionnaire is.

The follow scale can be used to defined the dependability scale :

0.80-1.00	: very high reliability
0.60-0.79	: high reliability
0.40-0.59	: average reliability
0.20-0.39	: low reliability
0.00-0.19	: very low reliability

( Arikunto,1998)

### 3.6.3 Level of Difficulty

To know difficulty level of students' score is important, since the test items which are too easy can tell us nothing about differences within the test population. Thus, the test items are good if they are not too easy and too difficult level is average. To see the level of difficulty, the researcher used the following formula:

$$LD = \frac{U+L}{N}$$

Where:

LD : level of difficulty

U : number of upper group who answer correctly

L : number of lower group who answer correctly

N : the total number of students following the test.

The criteria are:

<0.30 : difficult

0.30-0.70 : average

>0.70 : easy

(Heaton, 1975)

### 3.6.4 Discrimination Power

To know the discrimination power, the researcher used the following formula:

$$DP = \frac{U-L}{\frac{1}{2}N}$$

Where:

- DP : discrimination power
- U : the proportion of upper group students
- L : the proportion of lower group students
- N : total number of students

The criteria are:

- 0.0-0.19 : poor
- 0.20-0.39 :satisfactory
- 0.40-0.69 : good
- 0.70-1.00 : excellent
- (Negatif) : bad item, should be erased.

(Heaton, 1975)

### 3.6.5. Scoring System

The score pretest and posttest were calculated by using Arikunto's formula as follow:

$$S = \frac{R}{N} 100$$

Where:

- S : the score of the test
- R : the total of the right answer
- N : the total of items on test

In scoring students' result of vocabulary size is estimated by using the following simple formula:

$$\frac{N \text{ Correct answer} \times \text{Total } N \text{ words in each level}}{\text{Total of Items}} = \text{Total Score}$$

The researcher counts how many correct answer for each level, then those correct answer will be divided by the number of items then multiply 1000.

For the 1<sup>st</sup> 1000, 2<sup>nd</sup> 1000, and 3<sup>rd</sup> 1000 words are the same, those correct answers will be divided by 1000. But for University word list, those correct answer will be divided by 800. Then the researcher counts the total score of vocabulary size.

The total score of vocabulary size will calculated by using as follows:

$$\text{Total score} + \text{Score of all each Level} = \text{Vocabulary Size}$$

### 3.7 Procedure of the Research

In order to conduct the research, the researcher did several steps which will be illustrated below:

#### 1. Determining of the Problem

The problem of this research is to find out the significant improvement of students' vocabulary mastery after they are taught by using crossword puzzle. Besides that, to intended the students' responses in learning vocabulary by using crossword puzzle.

#### 2. Determining the Population and Sample

The population of this research is 7<sup>th</sup> grade of the students in SMP N 3 Natar. The 7<sup>th</sup> grade students are divided into one class in which consists 30 students.

The sample was chosen by using random sampling so that all of the population class has the same opportunity to become research sample in this research.

### 3. Administering Pre-test

In order to know the students' initial vocabulary mastery, the pre-test was administered before the implementation of Crossword Puzzle game. In this test, the students were asked to answer the question that contain vocabulary test. The pretest was distributed and collected by using *a paper sheet*.

### 4. Conducting the Treatments

This step is the implementation of Crossword Puzzle game. The treatment consisted of four meetings. All of the treatments were conducted in the classroom in SMPN 3 Natar. The researcher spent about 80 minutes on each meeting with four different activities. The researcher also explained how to produce descriptive text as the crossword puzzle. As a result, the researcher will know their improve vocabulary using of crossword puzzle game.

### 5. Administering Posttest

The posttest was given after all the treatments have conducted. The instruction was similar to the pretest.

### 6. Administering the Questionnaire

At the end of the meeting, the researcher distributed a questionnaire to find out the students' responses the implementation of Crossword Puzzle Game. The students were asked to choose the most suitable answer based on their point of view.

### 7. Analyzing the Data

In order to answer the research question, the researcher analyzed the result of the tests before and after the implementation of Crossword Puzzle Game by using SPSS. Besides, the result of the questionnaire was also analyzed to see the students' response the implementation of the technique.

### 3.8 Data Analysis

In order to get the complete result, the researcher analyzed the data through some steps as follows:

1. Scoring pretest and posttest. In scoring the students result of the pretest and posttest, the highest score is 100. The score pretest and posttest were calculated by using Arikunto (1997) formula as follow:

$$S = \frac{R}{N} \times 100$$

Where:

- S : the score of the test  
 R : the total of the right answer  
 N : the total of items on test

2. To find out the mean score, the researcher using the formula below:

$$\bar{X} = \frac{\sum x}{N}$$

Where:

- $\bar{X}$  : Mean score  
 $\sum x$  : The sum all of score  
 N : Total number of sample

( Gay, 2006: 320)

3. In scoring students' result of vocabulary size is estimated by using the following simple formula:

$$\frac{N \text{ Correct answer} \times \text{Total } N \text{ words in each level}}{\text{Total of Items}} = \text{Total Score}$$



The researcher counts how many correct answer for each level, then those correct answer will be divided by the number of items then multiply 1000.

For the 1<sup>st</sup> 1000, 2<sup>nd</sup> 1000, and 3<sup>rd</sup> 1000 words are the same, those correct answers will be divided by 1000. But for University word list, those correct answer will be divided by 800. Then the researcher counts the total score of vocabulary size.

The total score of vocabulary size will calculated by using as follows:

$$\text{Total score} + \text{Score of all each Level} = \text{Vocabulary Size}$$

4. To see the significant difference in the students' vocabulary knowledge, the researcher used the Paired Sample T-Test in SPSS.
5. The researcher was analyzed the result of the students' pretest, posttest, and response. In the statistically analysis, to see the result of students' improvement was used Repeated Measure T-Test. The interpretation was used to make a descriptions of the whole result after the implementation through Crossword Puzzle.
6. analyzing the result of the questionnaire and grading the items with four categories'score by using *cronbach alpha* formula in SPSS.

### 3.9 Normality Test

Normality test is used to know the distribution of data analysis . This data was used *Shapiro-Wilk Formula* with significance level 0.05. the following was the hypothesis testing of normality test.

$H_0$  : the distribution of the data is normal

$H_1$  : the distribution of the data is not normal

Where :

$H_0$  is accepted if the result is higher than 0.05

### 3.10 Hypothesis

The hypothesis is about to know whether there is any improvement of the students' vocabulary mastery after they are taught through crossword puzzle at SMPN 3 Natar. There are 2 hypothesis of this research.

$H_0$ : There is no significant improvement of the students' vocabulary mastery before and after being taught through crossword puzzle.

$H_1$  : There is significant improvement of the students' vocabulary mastery before and after being taught through crossword puzzle.

The criteria of those hypothesis are:

$H_0$ : is rejected if sign is higher than 0.05.

$H_1$ : is accepted if sign is lower than 0.05.

## V. CONCLUSIONS AND SUGGESTIONS

In this chapter, the researcher will describe the conclusion of the research that has been stated in the previous chapters and also give some suggestions to other researcher and teachers to support the teaching-learning process.

### 5.1. Conclusion

The objectives of this research were to find out whether the use of crossword puzzle game can improve students' vocabulary mastery and to know students' response of crossword puzzle. Based on the research findings and discussion, the conclusion can be shown as follows:

1. There was a significant improvement in the students' vocabulary mastery after being taught using crossword puzzle. Furthermore, the use of crossword puzzle is effective to be used in learning activities. It is proved by statistical result in the previous chapter which shows that t-value ( 11.199) is higher than t-table ( 2.045 ) and significant value ( 0.00 ) which is lower than 0.05.
2. The students' response after the implementation of the crossword puzzle in teaching vocabularies is positive. It can be seen from the result of the questionnaire after the treatment process and the data analysis. The students were enthusiasm in learning process by using crossword puzzle game.

## **5.2. Suggestions**

Based on the conclusion above, some suggestion are proposed as follows:

### **5.2.1. Suggestion for English Teacher**

- a. The researcher suggests to implement crossword puzzle for writing and reading section.
- b. When a teacher notices that their students are getting bored in class, they may use crossword game as an alternative method of teaching English.

### **5.2.2 Suggestion for Further Researcher**

- a. This research was conducted in junior high school level. Besides, the researcher suggests other researcher to apply crossword puzzle in different level of school or different skill.
- b. This research was aimed to find out the students' improvement in vocabulary achievement. Thus, further researcher can try to find out the different language abilities or components ( writing and reading)

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