CHAPTER TWO

LITERATURE RIVIEW

2.1 Previous Studies

Previous studies are required to find out whether previously this method had the same benefits as the research are currently doing in these studies. The first research from Sari (2017), entitled "The Effectiveness of Crossword Puzzle Game Towards Students' Vocabulary Mastery" The objective of the study is to find out whether the crossword puzzle game is effective toward vocabulary mastery at second grade of SMP Puspita Bangsa Ciputat or not, this study was conducted using an experimental design, more specifically quasi experimental design. This research design is mostly used in social science research. And because this study focused on education field included in social science research, the writer used quasi experimental design, The implementation of crossword puzzle game showed positive responses in experimental class by the increase of mean score and total of students who received higher score.

The second research from Widyasari (2010). Widyasari conducted research entitled "The Use of Crossword Puzzle to Improve Vocabulary Mastery". This study to find out whether crossword puzzle can improve the vocabulary mastery of the first-year students in MA Al BIDAYAH in the academic year 2009/2010. In this research, the writer applies classroom action research method. Classroom action research begins with a question or questions about classroom experiences, issues, or challenges. The finding of the research shows that the teaching learning process by using crossword puzzle gives the positive effect in improving the

student's vocabulary and the student's motivation in learning vocabulary. This is shown by the students' enthusiasm in doing crossword puzzle and most of the students more understand what the teacher said in cycle II than in cycle I. Moreover, the student's achievement of vocabulary has improved by using crossword puzzle in teaching learning process.

The third research from Anwar (2018), Anwar conducted research entitled "Teaching English Vocabulary Using Crossword Puzzle Game at The Seventh Grade Students" This research is about teaching English vocabulary through crossword puzzle game in the Seventh-grade students at SMPN 10 Cimahi. The result of this research is the student's English vocabulary test increased from the pretest to posttest score. The average of the pretest is 29.69 and the posttest is 82.50. There is a significant distinction among pretest and posttest score. It could be deduced that the alternative hypothesis of this method is accepted, it means that the crossword puzzle game is effective and significantly improve the students' vocabulary mastery.

The Fourth research from Melasari , Krisna Ismawati , Deri Sis Nanda (2019. This research entitled "The Effect of Using Crossword Puzzle Towards Students' Vocabulary Mastery in the Eleventh Grade Students of SMA Muhammadiyah 2 Bandar Lampung in Academic Year 2017-2018" This research used experimental research for two groups design. The first is experimental group and second is control group. Therefore, in this research, firstly researcher would give a pre-test to know their initial vocabulary mastery before treatment was given. Treatment was given to the students in three meetings. One group was given crossword puzzle for every meeting and another group was without crossword puzzle. The post-test was

given after the last treatment to know the effect of crossword puzzle on students'
vocabulary mastery. This research would be conducted at SMA Muhammadiyah 2
Bandar Lampung in academic year of 2017/2018. The populations of this research
were 136 of 4 classes, two classes were taken to be the experimental and control
class. Students at grade II of SMA Muhammadiyah 2 Bandar Lampung. After
analyzing the results of the research, there are several facts that should be
summarized. First, the students' control and experimental score are quite low on the
pretest. The total score of experimental groups is 2349.7 while control group is 2176
in the pretest, most students make many mistakes in answering the task. Second,
during the treatments of the students increase their vocabulary mastery. As a result,
on posttest their score was improved. This means that there is an effective impact
of using crossword puzzles to students' vocabulary. Therefore, crossword puzzle is
effective to improve students' vocabulary mastery in second grade students of SMA
Muhammadiyah 2 Bandar Lampung.

And the last one from Febtrina, Suparman, Supriyadi (2014). This research
entitled "The Use of Crossword Puzzle on Students' Interaction in Learning
Vocabulary" this research was intended to find out whether a crossword puzzle
game was needed to affect the students' interaction in learning vocabulary and to
investigate the students' motivation to interact when they were learning vocabulary.
This research used phenomenological qualitative study. The participants were
students at SMPN 8 Bandar Lampung, eighth grade students in academic year 2013-
2014. The results showed that the total numbers of interactions in the class were
150 interactions, 133 interactions (89.26 %) were students' interactions, and 17
interactions (10.69 %) were student-teacher interactions. The total number of

students-students interaction was higher than students-teacher interactions. It means that crossword puzzle game has influenced positively the students' interaction and motivated the students to interact actively in learning process.

Based on several previous studies, it is possible to conclude that there are many similarities between the previous study and the current study or research that researcher wishes to conduct in this study. From several previous studies, the similarity is the researchers show the benefits of using crossword puzzle games as a learning method to improved students' vocabulary mastery, and also use pre-test and post-test to collection data. The different with other research is not using descriptive text as teaching material to help improve vocabulary mastery, the same approach would be used as a data analysis tool to help the quantitative design.

2.2 Theoretical Framework

2.2.1 The Concept of Vocabulary

There are some definitions of vocabulary according some experts. Linse (2005) stated that vocabulary is the collection of words that an individual knows. Other expert, Neuman and Drawyer as cited in Bintz (2011) said that vocabulary can be defined as the words someone must know to communicate effectively: words in speaking (expressive vocabulary) and words in listening (receptive vocabulary). While Hornby (2006) defined vocabulary as all the words that a person knows or uses when they are talking about particular subject in particular language. From some definitions about vocabulary above, it can be said that vocabulary is the basic element of language which someone needs in learning a language especially to communicate effectively with others. Moreover, based on all of definitions about

vocabulary above, the researcher concludes that vocabulary is all the words in a particular language that an individual knows or uses to communicate effectively.

Learning vocabulary is not only learning about the words or new vocabulary, but also about how to use the vocabulary into correct usage. What is meant by the meaning of a word, is determined by the context where it is formed and also determined by its relation to other words. The word book sometimes means the kind of thing you read from, but it can also mean a number of other things. The example of the second context is vegetables which has general meaning whereas carrot is more specific. Meaning in context Meaning Word Use Word Grammar Word Formation 12 Furthemore, Hammer (1991) says that teaching vocabulary is clearly more than just presenting new words. This may, of course have its place but there are other issues too. However, not all vocabulary can be learned through interaction and discovery techniques. Thus, statement implies that learning vocabulary cannot always be done through interaction and discovery techniques for the beginners. The reason is that, in doing such as technique, the learners are demanded to have an adequate number of vocabularies. It means that the students need to memorize and recall many vocabularies that have been mastered before. Meanwhile, according to Cameron (2001), vocabulary is not simply about learning words, but it is actually much more than that. It is also about learning chunks and finding words inside them.

From all the definitions given above, we know that some experts have difference ideas in giving the definition of vocabulary, because every person has different ways in expressing and showing their ideas. However, it can be concluded from those definition above that vocabulary is a set of words which used in a language and the user knows it. Thus, vocabulary is one of the components of a

language where there is no language without words. From these statements, vocabulary mastery and development of the student is important in language teaching beside grammar and pronunciation to reach the goal of English learning and teaching itself.

Understanding of vocabulary is a general matter of a number individual items, it is not same with study of grammar that is fundamentally a rule-based system. Commonly, the rule seems to be a question memory. By the time of the teaching and learning process, the main problem is: how does memory work? The working memory researcher separated these following systems:

a) Short-term store: short-term store is a system in our brain to keep temporary information and that process of information is only required when we think. If it compared with computer components, short-term memory is similar to RAM (Random Access Memory) that is a temporary storage before being processed in the CPU (Central Processing Unit), data stored in RAM will be erased or lost re-written with the next data. For example, when someone mentions random numbers with a certain speed, and then we are asked to remember and mention of these numbers in order as it mentioned, it needs short-term store.

b) Working memory: Working memory is a system that supports information for a while when complex cognitive activities take place, such as: reading comprehension in English and also in productive activities such as writing. The example in the language learning process that involves working memory is the when the students listen to hear an unknown word in English and then students are asked to repeat it a few seconds later.

c) Long-term memory: is a system in our brain that has a function to keep the information permanently, organized the information, and recall information at a time when the need it at the future. Usually, the information that has stored in long-term memory will be able to remember for a lifetime. If it compared with components of computer, long-term memory is similar to the hard-disk which permanently storage the data. Just like the brain, any of the data that are inputted into a computer will be processed in RAM (short-term memory) but not all of the inputs or processing. For examples, a driver who has decade experiences will be relaxed and easy to do many things while driving a vehicle, such as turn on the radio, change the radio channel, conversing with passenger, even while determining the direction of the vehicle. All information about driving techniques, directions, and the problems on the road has been stored in long-term memory and automatically he will be called when driving. It was not found in someone who is just learning to drive.

2.2.2 The Importance of Vocabulary

Vocabulary has important role in English learning. It is one element that links the four skills of speaking, listening, reading and writing all together (Huyen and Nga, 2003). In order to master all those skills, the students need to have good vocabulary mastery. Adequate numbers of words which is acquired by the students was enable them to master English skills easily. It was be easy for students to communicate their ideas both in written or spoken form and comprehend what people say if they have good vocabulary mastery. Moreover, Dellar H and Hocking D (Thornbury, 2002) also stated that when someone spends most of his/her time to

learn grammar, there is no significant improvement in his/her English. However, the significant improvement can be seen if someone learns more words and expression. Someone can say very little with grammar, but without words someone cannot say anything at all. Those statements show that vocabulary is an important element in language learning. In this case, the role of vocabulary is not less important than grammar. Penny (1996) mentioned five categories about the teaching problem that perhaps will be faced when we teach vocabulary, there are:

1. Discipline: There is difficult to control discipline problem in the class. To solve this problem, the students should have motivation to make themselves keep their willingness of learning language and the teacher have to force the students to be discipline.

2. Correcting written assignment: Some of the students feel over confident with their language knowledge, when they correct written assignment, they sometimes they correcting the answer that actually right. This activity sometimes becomes a burden for students.

3. Interest: To keep away the students' boredom, the teacher has to find interest topics and activities. For example, today the class will be going to learn about public place, the teacher can make over the classroom become a market, a museum, a beach or any kind of public place and if it possible the teacher can bring any kind of property to make it real.

4. Effective learning for all: Not all the students' have same knowledge, the teacher should be aware of this. To make the language learning effective, the task should be not too easy or not too difficult for them.

5. Material: The teacher should prepare suitable material before the language learning process to make the aims of the process run well and achieved

The lack of vocabulary was bringing many troubles to the students in learning English because without good vocabulary mastery they will get difficulties to communicate their ideas. Therefore, the role of vocabulary is really essential in English learning because vocabulary will support the students in mastering English Skills. Hatch and Brown (1995) describe five essential steps in vocabulary learning based on research into learners' strategies:

1. Having sources for encountering new words: to enrich the new words, the students can learn it from many resources. Those resources are watching foreign language movie, listening target language song, talking with native speakers, textbooks, word lists, dictionaries, etc.

2. Getting a clear image: the students can create a picture in their mind when we learn a new word, it also called mental picture. Mental picture can be visual, auditory or both of them. We can make this mental picture relate with a new word with other foreign language or we can use phonetic script with similar sound.

3. Learning the meaning of words: We also can learn a word by recognize the meaning of the words and ask it to the native speaker, context guessing, or creating a mental image of meaning.

4. Making a strong memory connection between the forms and meaning of the words: Between word form and the meaning we can make a strong linkage in the memory, we can apply it become memory strategy usage – as long as it used.

5. Using the words; in example sentences, collocations, various contexts, conversations, etc.: of course, we have to often practice the words to make a sentence, collocation, text, conversation, etc. if we want the word stay longer in our brain storage. Learning of words is a process that continues, but that change in nature as it continues. Looking at the five steps, we can see that each 'steps' is in fact something that needs to happen over and over again, so each time something new is learnt or remembered.

2.2.3 The Purpose of Vocabulary

Vocabulary is a list of words and often phrase, usually arranged alphabetically. Vocabulary is important in case it could help student to enjoy their classes in learning language. Students who master enough vocabulary was face fewer difficulties than those who have less vocabulary. According to Read (2000) vocabulary is knowledge involves knowing the meanings of words and therefore the purpose of a vocabulary test into finds out whether the leaners can match each word with a synonym, a dictionary-tape definition, or an equivalent word in their own language. In learning vocabulary automatically, we have to know the meaning of words itself and can use it in sentences. Harmer (2007)) and Jo Ann Aeborsold (1998) distinguish two types of vocabulary; active vocabulary and passive vocabulary.

a) Active vocabulary is the words that have been learned and used by the students in their daily life to interact with others. The learners can use this appropriately in speaking or writing and it is also called as productive vocabulary. To use the productive vocabulary, the students must know how to pronounce it well, able

to use grammar of the target language and also must be familiar and understanding the meaning of the word. In fact, the active vocabulary is more difficult to practice. This type is often used in speaking and writing.

b) Passive vocabulary refers to all words that the students can be recognized and understood them when they interacted with others. The learners can use it appropriately in listening or reading and it is also called as receptive vocabulary. It means that passive vocabulary is all of the words heard or read by the students. Hearing the vocabulary used prompts the students to recall its meaning. In other words, you are being made to recall it.

2.2.4 Aspects of Vocabulary

In mastering vocabulary, we must know what aspects of vocabulary are. According to Kucan (2012) aspects of vocabulary consist of use, spelling, meaning, and pronunciation. These aspects are very important in mastering vocabulary.

a. Use

It is not enough to study one word separately. If you want to expand your vocabulary and be able to use words productively, in speaking or writing, you need to understand how they are used. This includes learning the prepositions associated with certain words (such as preparing for, benefiting for, skilled in, related to), or the verb forms that may follow the word (such as preparing to do, unwilling to do, considering doing). A related area of vocabulary study, which also considers how words combine, is collocation, which is considered next.

b. Spelling

Spelling is important if you want to use words in your writing. English spelling is notoriously difficult, with many words spelled differently than they sound.

This is seen when examining homonyms (words that sound the same but are spelled differently). Almost every phoneme (unit of sound) has more than one way to spell it. Some spelling errors occur frequently even among native speakers, such as confusion between them and there.

c. Meaning

Many words in English have several meanings. While some of the meanings of certain words may be similar, others can be very different. In general, when studying vocabulary, it is best to study words in context (for example in a reading or listening text), and to study meaning as used in that context, focusing on one meaning rather than all possible meanings.

d. Pronunciation

Knowing how a word is pronounced is very important if you want to use it in speaking, or understand it while listening. Pronunciation, like spelling, can be a tricky area, with some words that are spelled the same 10 way pronounced in different ways. The main difference here is the vowel sound. Indeed, english has a very large number of vowels sounds when compared to other languages, and this tends to be the most difficult area for learners to deal with, with relatively easy consonants. English vowels differ greatly between dialects, which is another source of the difficulty. An additional component to understanding how a word is pronounced is the position of stress in words with more than one syllable. This can sometimes change across different tenses, a phenomenon known as shifting stress, making pronunciation more difficult. Students was be tested one by one without being said to be wrong and right first. so that other students can try themselves to know how to pronounce the correct word

2.2.5 Crossword Puzzle Game

Crossword puzzle was first known published by Liverpool journalist, Arthur Wynne, he is usually credited as the investor of the popular game. On December 21 1931, crossword puzzle was appeared in Sunday newspaper, the New York World. Wynne Puzzle it has diamond shaped and contained no internal black squares. During early 1920's, other newspaper picked up the newly discovered pastime and within decade crossword puzzles were featured in almost all-American newspapers. It was in this period crossword begun to assume their familiar form. Ten years after it rebirth in the States, it crossed the Atlantic and re-conquered Europe. Meanwhile, the first appearance of a crossword in a British publication was in *Pearson's Magazine* in February 1922, and it the first *Times* crossword appeared in February 1 1930. British puzzles quickly develop their own style, being considerably more difficult than the American variety. In particular the cryptic crossword became established and rapidly gained popularity. The generally considered governing rules for cryptic puzzles were laid down by A. F. Ritchie and D. S Macnutt. They were gifted with the ability to *see* words puzzle together in given geometrical patterns and capable of twisting and turning words into word plays dancing on the wit of human minds, have since constructed millions of puzzles by hand and each of these puzzlers has developed personal styles knows and loved by his fans. These people have set the standard of what to expect from a quality crossword puzzle.

Crossword puzzle is an overview of Puzzle games according to Webster (1990) that crossword puzzle is a puzzle on which words are filled into a pattern of numbered squares in answer to correspondingly numbered. Crossword puzzle is one of vocabulary games. This kind of game is popular enough in Indonesia.

According to Argenti (2003), crossword puzzle is a popular game which is using words the children have learned and some pictures as clues. According to Munir (2005) (http: //www.cse.ohio.html) is a rectangular game consisting of black and white squares and 2 horizontal lines (box collection in the form one row and multiple columns) and decreases (single column and multiple rows). The crossword puzzle is a puzzle in which words that match the number hint can be found and written in the box in the puzzle, Collins (2006). Then, Crossword puzzle is one of interesting way to improve students' vocabulary mastery. By using crossword puzzle students can be easier in learning vocabulary because they were learning by playing puzzle game.

From those definition, the writer concludes that crossword puzzle is a kind of game to practice spelling and reading, and reinforce vocabulary that have been arranged horizontally and vertically so that each word crosses at least one other word at a common letter. Learning English vocabulary as a foreign language seems difficult for some Indonesian students to master because it is completely different from Indonesian language itself. They find difficulty to memorize new words and to enhance their vocabulary knowledge the students of that school face difficulty in memorizing English vocabulary that they have learnt. In learning English vocabulary, they usually only translate English words to Indonesian language. It is not interesting and challenging to them so that they easily forget the words that they have learnt before. Games can help and encourage the students to sustain their interest in learning and memorizing English vocabulary.

According to Wright et al (1984) Games also help the teacher to create contexts in which the language is useful and meaningful. The learners want to take part and

in order to do so must understand what others are saying or have written, and they must speak or write in order to express their own point of view or give information. It is easy to devise crossword to practice vocabulary teaching point (pronunciation, word formation, spelling, etc.) in fact the enterprising teacher could create a whole collection of such crossword, each one dealing with a particular problem area of a language. Crossword puzzle activities could be used as a follow up exercise to reinforce the learning of particular items and are suitable both for individual or group work.

a) Suggestion for Individual Practice Each crossword puzzle should be drawn neatly on a stiff card with the solution written on the reverse side. The card is then covered with transparent clear plastic to give it durability and to make it reusable. After checking his answer, the pupil can easy erase them with damp sponge of cloth, and the card is ready for use again.

b) Suggestion for Group Work The crossword grid can be displayed to the whole class by drawing it beforehand on a large chart, on the chalkboard or on the OHP transparency. The correct answers are recorded on the grid by the teacher. A competitive element can be added by dividing the class into two or more group and awarding points for correct answer.

In this part, the researcher would like to show you some examples of crossword puzzles game. These crosswords are using descriptive text.

1. The Example of Crossword Puzzle Game

My Adorable

My Adorable Cat I have a very adorable cat named Brownie. I found her on roadside last year while I was going back from school. Since it was windy and the sky was getting dark, I took her home and decided to take care of her. My parents were also happy when I brought a new family member. I named my cat Brownie since she has brown fur. Brownie was a lonely stray cat back then, but now she looks healthy and happy.

Since I feed her three times a day, she is getting fat. Her eyes are bright and she looks so cute whenever she is looking at me. I always pat her back which is covered with thick fur when she sits or sleeps on my lap. She does not only like to sleep a lot but also plays a lot. She runs happily whenever I bring her outside. She also adorably moves her legs whenever I give her a piece of thread. Brownie always accompanies me when I feel tired or sad. She will come near me and give adorable look to make me smile. But sometimes, she also annoys me. She likes to sit on my laptop when I have to do my school assignments. However, I still love her so much and Brownie will be always my best friend ever.

Across:

1. Her eyes are….

2. The cat will be happy when taken….

3. Brownie always accompanies me when I feel… or sad

Down:

1. what is the cat's name?

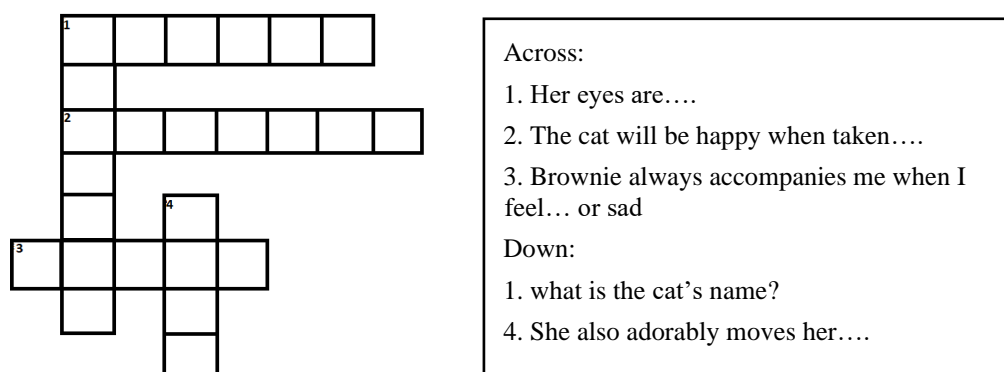4. She also adorably moves her….

Figure 2.1 example of crossword puzzle game

Mark Lee

I have a classmate at school. His name is Mark Lee. We met often to play and he was always nice to me. Mark's body was tall and well-proportioned. His slender body made his friends envious. Mark also has an actor-like face which many female students like.

He has straight hair with black color. His hobbies are running, swimming and writing a poem. Mark is not only handsome, but also very friendly to his friends and polite to his teachers. Mark always smiled for those who greeted him. Every morning, Mark and I used to go to school together.

At school, wherever I went, Mark was always with me. He is quite hyperactive and has a funny response. During the holidays, Mark often came to my house to play. Sometimes Mark would also stay at my house and come home in the morning. We often go outside to visit exciting places.
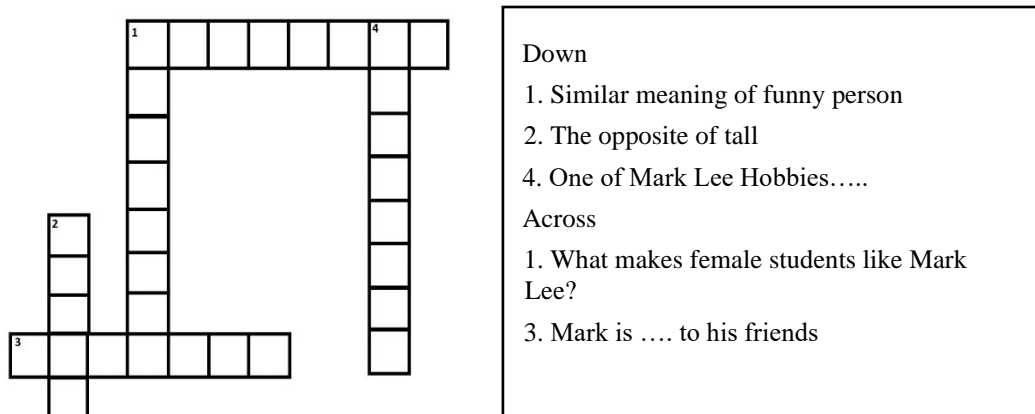
Down
1. Similar meaning of funny person
2. The opposite of tall
4. One of Mark Lee Hobbies…..
Across
1. What makes female students like Mark Lee?
3. Mark is …. to his friends

Figure 2.2 example of crossword puzzle game

2.2.6 The Procedure of Crossword Puzzle Game in Teaching English

The implementation of using crossword puzzle game during the English teaching and learning covers the stages below:

a. The first step is brainstorming

The teacher was introducing himself and then conduct a question-and-answer session, after that ask the students what they think about learning vocabulary mastery.

b. The second step is giving example

The teacher was giving examples of multiple-choice questions and examples of crossword puzzle games to students.

c. The Third step is Giving exercise (gave a worksheet)

The teacher was giving questions in the form of 30 multiple choice questions to students

d. The last is Practicing.

The students were work on the crossword puzzle game that is given and then work on 30 multiple choice questions.

2.2.7 The Advantages and Disadvantages of Crossword Puzzle Game

1. The Advantages

In using vocabulary toward crossword puzzle game has some advantages. According to Jones (2007) the advantages of crossword puzzle as a media of teaching learning process would be as follows:

a) Crossword puzzle solving involves several useful skills including vocabulary, reasoning, spelling, and word attack skills.

b) Crossword puzzle is a good way to teach and enrich vocabulary because the definitions or synonyms of the word's clues are right there to provide reinforcement.

c) Crossword puzzles can also be used to encourage the use of a dictionary or thesaurus or to learn terminology used in particular subject. They can be used as a quiz.

d) Crossword puzzle in the classroom is that they are associated with recreation, and can be less intimidating for students as review tools.

e) Puzzle solving is a much more active type of learning, and was engage students with the material more than passive types of review techniques do.

f) Crossword puzzle also has the advantages of appealing to different learning styles.

g) Visual learners often have strong puzzle-solving skills, and feel great satisfaction when they complete one.

h) Auditory learners enjoy step-by-step reasoning, so they also benefit from the sequential steps of completing a crossword.

i) kinesthetic learners enjoy the multi-task strategies required to solve a crossword

2. The Disadvantages

There are the disadvantages of crossword puzzle game.

a) Crosswords can distract you from important tasks and focuses.

Once the crossword puzzle bites, someone can expect to be doing them all the time. This first hand getting so caught up in crossword puzzle that completely

forget that there are other things to do and focus on. Sometimes hours can pass by, and all have been able to do is focus on crossword puzzle.

b) Not knowing the answer to a clue could lead to frustration.

There have been times when spent hours trying to figure out a clue and just been unable to fathom it. This, too, could happen. Even pro crossword puzzlers have been stumped a few times in their puzzling careers. The process of puzzling can become so intense that it leads to extreme frustration when a clue can't be solved. the more frustrated the further from figuring out the clue, so it is a vicious cycle.

c) You could become addicted to crossword puzzles.

It did not take long become addicted to crossword puzzles, so from the experience when that they are quite addictive. Once someone get good at solving the clues, the sense of accomplishment can become a highly sought after and enjoyed reward. Might even experience a rush of dopamine or serotonin when you solve clues successfully. If someone does not want to become addicted to an activity, crossword puzzles might not be for you.

d) Some people cheat at crosswords, making it unfair for you.

If someone is doing a crossword puzzle for a competition to win a prize or even for mere recognition in your local newspaper chances are that someone is going to put the best into it and not cheat. Many people will do the crossword puzzle just for the prize, using the internet to find the answers to the clues. This could leave someone at an unfair disadvantage, which can lead to frustration, of course. It can be particularly frustrating when someone wins the prize, and someone know that he/she has cheated.

e) Incomplete crossword puzzles can lead to frustration and anxiety.

there is nothing worse than not being able to complete a crossword puzzle.
someone can sit for hours trying to puzzle it out, but if someone cannot come
to the right conclusion, there is nothing left but a sense of frustration and
anxiety. often felt this very frustration and anxiety, and it can really ruin
someone day.

2.3 Research Hypothesis

The hypothesis serves as a framework for researcher, provides work direction,
and facilitates the preparation of research reports. There are 2 kinds of hypotheses,
namely the working hypothesis, which is also called the alternative hypothesis (Ha)
and the null hypothesis (Ho) (null hypothesis) which is also called the statistical
hypothesis.

1. Ho (Null hypothesis) = There is no improvement in students' vocabulary
   mastery after being taught through crossword puzzle game.
2. Ha (Alternative hypothesis) = There is an improvement in students'
   vocabulary mastery after being taught through crossword puzzle game.