CHAPTER I

INTRODUCTION

A. The Background of Study

Vocabulary is a crucial factor if people share their ideas through communication and because of that it can be considered as one of the most important things when it comes to know and learn a certain language. Vocabulary holds a crucial part in English. It contributes as well as an essential meaning to comprehend the foreign language (Nuratika et al., 2019). According to Hornby (2010), vocabulary can be understood as the words that encompass all of what a person recognizes and uses. One of the linguistic aspects deemed important for language competence is vocabulary. Vocabulary is more essential than structure since words are the primary means of conveying a notion. One should hope that the students can speak successfully after understanding the vocabulary. Vocabulary has long been seen as an important aspect of linguistic ability.

Understanding vocabulary is important. The more vocabulary we know, the more we can interact with other people properly. As our vocabulary knowledge grows, we can describe and explain something more accurately. Each aspect of things that you want to describe will be understood by the listener with adequate vocabulary. Derin et al., (2020) stated that a lack of vocabulary knowledge impedes language comprehension and production. Learning vocabulary may help a student become a more successful speaker, listener, reader, and writer. In reality, students or learners frequently struggle with terminology in

daily classroom activities. As a result, both instructors and students must pay special attention to the teaching and acquisition of language.

It's already known that English has been considered as one among of the most practiced and learnt language by many students and learners. "Students of different ages learn to speak English all around the world," writes Harmer (2007), "but their motives for wanting to learn English might vary substantially." To interact with people from different countries, individuals must now master English as a worldwide way to communicate. Unfortunately, English was and is still a non-primary language or considered as foreign language in Indonesia. In Indonesia, Government has made some changes including making English subject become important subject to be taken in primary school, high school or university in order to make Indonesian can communicate by using English through people in the world.

A game is a thing that can be used as entertainment and in some context can be used to make the learner and the teacher can learn together by using the tool or method. According to Wright (2016), a game is a series of actions that can be used as entertaining method and usually with many obstacles, and a thing that students and teachers do to learn something together. Even if they are unfamiliar with the rules, most students like games. Games are an excellent tool for motivating and engaging students in the teaching and learning process. Games are associated with a feeling of happiness (Rizky, 2020). Students will be more engaged and less bored if they play games, which will make it easier for them to understand and expand their vocabulary.

Games are fun and engaging, usually difficult, activities in which students participate and often engage with one another. Game helps teachers maximize each students' learning potential (S, Sugar & K 2002). Teaching through games may be an effective alternative teaching method, especially for teaching vocabulary to junior high school students. It is also a fun pastime for the people who participate in them. Harmer (2001) states that games can make learners be more enthusiastic about learning vocabulary. If game and teaching are mixed together, it has possibility to be entertaining and at the same time one can learn from that as well (Troussas et al., 2020).

Wordscapes is a game with word-puzzle basis and it was made by PeopleFun and it can be download on devices such as Android (Tak, 2021). Overall. The game is a combination between Boggle and crossword puzzles (Hindy, 2022). To complete the problem, the player must locate each word using the letters in the circle at the bottom of the screen (as seen in figure 1.). Wordscapes' goal is to make words out of random letters to fill a crossword puzzle. As with an anagram, gamers swipe the letters in different ways to make a word. The purpose of Wordscapes differs from that of other types of word games in that it is not to create as many words as possible (Tak, 2021). Depending on the level, the circle contains anything from 3 to 7 letters. There are also bonus words that may be solved for extra coins. The game presently has 6,000 levels and an endless number of extra master levels that may be accessed after finishing the first 6,000. Every day, the game generates a new puzzle (Sobhika, 2022).
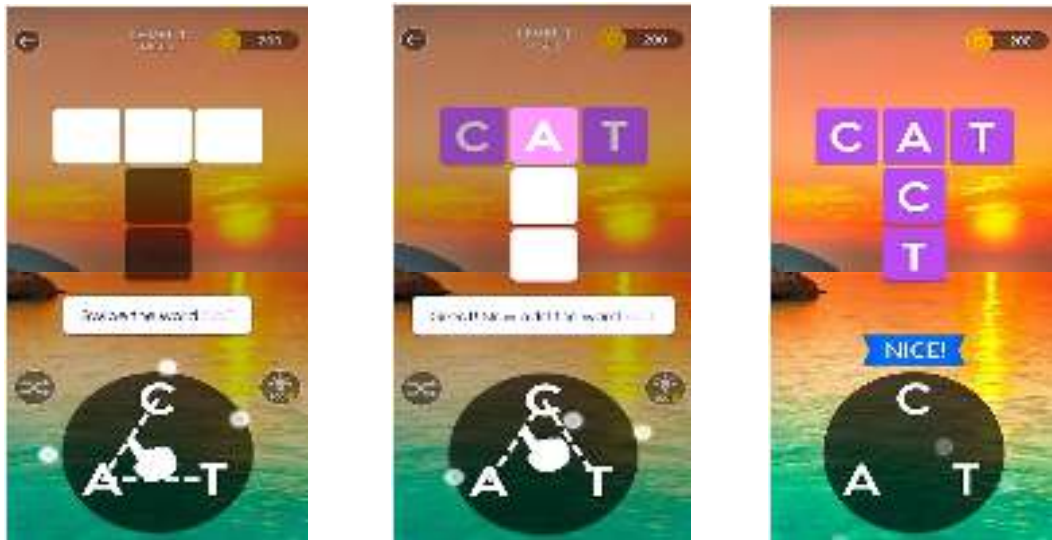
Figure 1. How to Play Wordscapes Game

This study revolves around word puzzle games since they are beneficial and helpful in vocabulary learning. Playing a game is seen not only as a pleasurable activity, but also as an educational tool for learning and strengthening certain abilities. Playing games when teaching English demands a lot of effort on the part of the instructor since the teacher must identify appropriate games to use in the classroom (Bendo & Erbas, 2019). Games offer a joyful and calm environment in which young learners may learn quickly and retain language more effectively. (Huyen & Nga, 2003). English teachers can encourage their students to learn English by using games and one of the examples is wordscapes. The purpose of the game is to locate and build words depending on the information presented in the circle.

The researcher chose to conduct the research in SMP GKPI Padang Bulan. It is found that the students in SMP GKPI Padang Bulan struggled with English especially, in vocabulary aspects. The student also cannot reply and answer the

question from the teacher properly because of inadequate vocabulary or the lack of knowing certain words. There are factors why students had difficulty in mastering vocabulary: (1) differences between written words and pronouncing in English; (2) seldom interacting in English; (3) writing the word or sound-spelling mismatches; and (4) some words with similar but distinct meanings; (5) Mispronunciations are frequently caused by a lack of resemblance between English and Indonesian sounds (Reskiawan et al., 2020). Based on that, the researcher conducted research based on vocabulary by using wordscapes application. The reason why wordscapes is used because the game is unique because it is based on a puzzle that can be solved by locating each word using the letters in the circle at the bottom of a screen. This game is fun to play since the goal is quite simple, the difficulty of the game also varies depending on the level of the game, the circle contains anything from 3 to 7 letters. By using this game, the students can see and realize that some letters can be built into various words. Based on the description above, the researcher would want to do research named "The Effect of Using Wordscapes Application on Students' Vocabulary Mastery at The Eighth Grade of SMP GKPI Padang Bulan"

Table 1.1 The Score of Vocabulary on the Final Semester Test in SMP GKPI Padang Bulan Medan

No.	Year of Study	The Scores Average	Standard Score
1	2019/2020	61,66	70
2	2020/2021	60,95	70

According to the table, the results of the student success in vocabulary are insufficient or cannot pass the passing mark. It is still below the standard English

score of 70 set by the academy. As the writer has also remarked, the student's vocabulary course grade is low. The vocabulary test scores are taken from the final semester test. The writer presents the vocabulary scores of eighth-grade students and the result is displayed in the table below.

Table 1.2 The Score of Vocabulary on the Final Semester in SMP GKPI Padang Bulan Medan

No	Vocabulary Scores	Year of Study 2019/2020		Year of Study 2020/2021	
		Amount of Students	%	Amount of Students	%
1	91-100	1	1,66	1	1,81
2	81-90	2	3,33	3	5,45
3	71-80	10	16,66	7	12,72
4	61-70	17	28,33	20	36,36
5	51-60	24	40	15	27,27
6	41-50	3	5	5	9,09
7	31-40	2	3,33	1	1,81
8	21-30	1	1,66	2	3,63
9	11-20	0	0	1	1,81
10	01-10	0	0	0	0
	Total	60	100%	55	100%

From the data above, we know that only 13 students (21,66%) in eight grade that can get score from 71-100 in 2019/2020 while eight grade students in the year of 2020/2021 have 11 students (20%) that can get score 71-100. Majority of the students can only get to score of 61-70 or below and based on that we can tell that the vocabulary mastery of eight grade students is still low.

There have been several types of research related to "word game" and "vocabulary mastery". First research is "The Gamifying Teaching Elementary English: Word Search Game to Reach Vocabulary Mastery". The differences between the previous research and current research are the previous research used

word search game while current research used wordscapes. The previous research conducted the research for students at fourth grade in SD Swasta Karya Tani Kandis while current research conducted the research for eighth grade in SMP GKPI Padang Bulan Medan. The problem in the previous research mainly focusses on significant effect of the word search game compared to the board game towards the students' vocabulary mastery at the fourth grade SD Swasta Karya Tani Kandis while the current research mainly focus on significant effect of using Wordscapes application on students' vocabulary mastery at the eighth grade of SMP GKPI Padang Bulan. The previous research used two medias to be implemented in class and it may cause the researcher more troubles because it is harder to handle. The implementation is also quite complicated since the researcher needs to provide both medias for the research.

The second research is "The Importance of Scrabble Game: An Experimental Analysis of the Eighth Graders' Vocabulary Mastery at SMP Eka Wijaya Cibinong". The differences between the previous research and recent research are the previous research used scrabble while current research used wordscapes. The previous research conducted the research for students at eighth grades at SMP Eka Wijaya Cibinong while current research conducted the research for students at eighth grade at SMP GKPI Padang Bulan Medan. The problem in the previous research mainly focuses on investigating whether Scrabble game has a significant effect on the eighth graders' vocabulary mastery while current research mainly focus on significant effect of using Wordscapes application on students' vocabulary mastery at the eighth grade of SMP GKPI

Padang Bulan. The previous research required a lot of preparation from the researcher and the scrabble game may be a fantastic alternate strategy for teaching vocabulary in a fun way. However, the instructor should think about the vocabulary goal that they want to reach. It is also necessary to avoid students misinterpreting the meaning of the vocabulary.

B. Identification Problem of the Study

The following problems have been identified based on the study's background:

1. Students don't have enough motivation to learn about the material regarding vocabulary.

2. Teacher has difficulties teaching vocabulary by using conventional way.

3. The students still has difficulty to answer and to identify questions regarding vocabulary.

C. The Problem of the Study

Based on the background of the study above, the writer formulates the research problem as follow:

Is there any significant effect of Using Wordscapes Application on Students' Vocabulary Mastery at The Eighth Grade of SMP GKPI Padang Bulan ?

D. The Objectives of the Study

The objective of the study is:

To find out the effect of Using Wordscapes Application on Students' Vocabulary Mastery at The Eighth Grade of SMP GKPI Padang Bulan.

E. Scope of the Study

There are several puzzle word games, for example, Wordscapes is a game developed by PeopleFun, one of the world's most popular developers of casual mobile word games. The goal of the game is to create words from random letters to fill a crossword puzzle. As in an anagram, you swipe the letters in different directions to form a word. (Tak, 2021). Wordle is a popular online word game created by Welsh software programmer Josh Wardle. It's easy to do, interesting, and, like a crossword puzzle, can only be done once each day. (Serrels, 2022) Scrabbles is a proprietary board game that involves the construction of words for a point score for two or more players (or teams) (Warner & Brown, 2005). Word connects is a puzzle game in which you have a set of letters and must create words out of them. The length of the missing words is shown at the top of the screen to help you figure out what to look for (Simmons, 2020). Hangman is a guessing game with a fixed number of dashes. The dashes were made up of unknown words and clues. It entails the incremental painting of a line for each wrong answer (Munikasari et al., 2021). Crossword is a sort of game that involves filling in a blank form with letters that create words in response to a query. (Melasari et al., 2019)

This study mainly focused on the use of wordscapes for vocabulary mastery at the Eighth Grade of SMP GKPI Padang Bulan.

F. The Significant of the Study

The results of this study is thought to be used theoretically and practically:

1. Theoretically

   1) The outcome of the research will inspire a new insight on how to teach vocabulary

   2) The outcome of the research will give a new understanding on how to teach vocabulary

2. Practically

   The findings of the study will be expected to be useful for:

   1) Teacher can apply a new media for teaching vocabulary

   2) The learners and students that come from English Department know the method how to research on subject about vocabulary

   3) Researcher can do further research on vocabulary

G. Hypothesis

The Hypothesis is formulated as follow:

Ha: There is a significant effect on student's vocabulary mastery at the eighth grade of SMP GKPI Padang Bulan taught by using wordscapes application.

Ho: There is no significant effect of student's vocabulary mastery at the eighth grade of SMP GKPI Padang Bulan taught by using wordscapes application.

H. Definition of Key Terms

Some definitions are provided to help understand the major words used in this study:

1. Effect is a result, consequence, or outcome of some action, event, agent, or cause; hence, the noun should be used when discussing trial and experiment findings. (Tetzner, 2022)

2. Student is a person who attend school to get or study some forms of education. (Sardiman, 2003)

3. Wordscape is a word puzzle video game developed by PeopleFun that is available on Android. (Tak, 2021)

4. Application is a software that performs the command processing processes required to fulfill user requests for a certain purpose. (Supriyanto, 2005)

5. Vocabulary mastery is the entire knowledge or significant talent to grasp and apply a stock of words from a language with their meanings that may be used by a person, class, or profession. (Gardner & Agnes, 2010)

CHAPTER II
REVIEW OF RELATED LITERATURE

A. Theoretical Framework

In this chapter, some terms need to be explained clearly. Those terms are including definition of vocabulary, the importance of vocabulary, vocabulary mastery, types of vocabulary, teaching of vocabulary, techniques of teaching vocabulary, definition of game, the benefit of using game, wordscapes, advantages of wordscapes game, disadvantages of wordscapes game, procedures of using wordscapes game and the role of wordscapes game to vocabulary.

B. Vocabulary

1. Definition of Vocabulary

Vocabulary is linguistic aspect that should be learned and taught. According to Finnochiario (2010) in Rachmawati et al. (2020), vocabulary refers to the content and function words of a language that have been completely mastered so that they may be employed in the execution of any communication act. It cannot be denied that mastering a language without mastering a specific number of vocabularies would be difficult. According to Hornby (2000) vocabulary is:

1. Words that are known by people

2. Compilation of words in certain languages

3. Languages which used by many people when talk about a particular thing.

4. A few words with its meanings, as in a certain source for linguistic education

   purposes.

2. The Importance of Vocabulary

Vocabulary is the most important component of learning a mother tongue or any other language. Language acquisition is impossible without learning its lexis, which is subject to endless variations in meaning due to a variety of contextual circumstances (Yang & Dai, 2012). Along with phonetics/pronunciation and grammar, vocabulary is one of the most important components of learning a foreign language (Pan & Xu, 2011). Furthermore, vocabulary serves as the foundation for all language abilities, including listening, speaking, reading, and writing. It is unlikely to attain linguistic competency without first acquiring the vocabulary. The foundation of learning a second language is vocabulary. According to Kher (2019), the following are some instances of how important and valuable vocabulary can be in a variety of parts of your life:

1. To do well in entrance examinations: Entrance tests are required for higher

   education regardless of the field of study. One of the fundamental abilities

   examined in all such tests is word power. This is because your vocabulary

   reflects how successfully you interact in various settings and with different

   individuals.

2. To understand what you read: Reading is an essential component of our daily

   life. Whether we like it or not. It is equally crucial to read online for our daily

   intake of knowledge. A excellent command of the English language may help

you enjoy the written word more, read between the lines, and grasp the literal and metaphorical connotations of words.

3. The ability to write effectively: A word bank at your disposal might help you write better in any situation. You will be better prepared as a student to compose coursework, exam essays, and entrance SOPs. The appropriate phrases in an email can help you communicate more successfully.

4. The ability to communicate well in general: Have the reader ever used the term "awesome" to describe something great? or 'hate' for everything the reader dislikes? Wouldn't it be amazing if one could select between terrific, fantastic, magnificent, outstanding, incredible, gorgeous, and breathtaking to fit the context? It's also noticed that individuals frequently use the word 'very' to convey the strength of a feeling — "I'm very very happy." How about expressing the level of happiness – pleased, thrilled, overjoyed, exuberant, energised, euphoric? That is the power of a well-developed vocabulary and because of that one may convey the sentiments in the proper way by using the right term.

5. Influence others: Whether in personal or professional life, the power of one's words will help tp convince and get things done your way. Persuasion is the ability to deliver your case clearly and rationally. And this becomes simpler when you improve your ability to communicate yourself and deliver your views clearly.

6. To boost one's self-esteem: Communication skills are essential for success in both personal and professional life. And knowing how to do it well increases one's self-esteem and personality. Coherent articulation enables us to boldly

present our thoughts and points of view. You will feel comfortable approaching individuals with your plans or standing up in a meeting to voice your reservations.

3. Vocabulary Mastery

Mastering vocabulary is critical for foreign language learners in order to acquire the four language abilities of speaking, listening, writing, and reading. According to Thornbury (2003), without grammar, little can be expressed clearly, but without vocabulary, nothing can be communicated. Vocabulary mastery is an action that involves mastering and comprehending a term so that everyone may learn, memorize, and communicate more effectively in daily activities. It is also the foundation of a language. Vocabulary is a known set of words that we commonly hear in a person's language. So, vocabulary is word storage that is used as a tool for communication. The more terminology in the brain that is familiar or frequently heard, the faster it will recall. Things that's always necessary for linguistic education in foreign language (like English) is vocabulary mastery. We can divide vocabulary mastery into four parts which are "pronunciation, spelling, grammar, and meaning."

1. Pronunciation

   One of the aspects that's essential on vocabulary is pronunciation. According to Wehmeler (2003), pronunciation is how one pronounce a certain word or phrase in a particular language.

2. Spelling

A person needs to know which letter and syllable that corresponds to the words, and it's known as spelling. According to Wehmeler (2003), spelling is the sequence of processes of how a person can build and make certain words precisely from one or more letter or how the word is spelled.

3. Grammar

According to Cameron (2001), grammatical knowledge is linked to words, and studying words may lead children to grammar. This implies that by giving vocabulary a high emphasis, we are not forsaking grammar.

4. Meaning

Nation in Cameron (2001) say that using things, figures, certain actions and performing activity, showing pictures on the media , and illustrate something from books can be considered as effective method to educate students the meaning of words

4. Types of Vocabulary

Vocabulary has two types and it is divided into two categories: active and passive. The term "active vocabulary" refers to the words that children are taught and may employ in speech or writing as spoken or written expressions. The terms that children identify and comprehend in context are referred to as passive vocabulary. This form of passive vocabulary is seen in listening or reading content (Harmmer, 2007). Furthermore, Webb (2009) proposes that students understand receptive vocabulary when it is utilized in context, i.e. when it is encountered in a reading text and cannot be created by students in written or spoken form. According to Neuman and Dwyer (2009), vocabulary refers to the

words that learners require for competent engagement in both spoken (expressive vocabulary) and hearing (receptive vocabulary) forms. According to Vollmer (2021) example of receptive language is a child's capacity to listen and follow directions (such as "put on your coat") is dependent on receptive language abilities and example of expressive vocabulary is children who are unable to tell you when they need to use the restroom or when they are hungry may have expressive language issues. According to Wallace (2022) strategies for improving children's receptive and expressive language abilities include:

1. Developing shared attention: If one or more people pay attention when the activity is held, they stay doing communication in that matter.

2. Playing together: it encourages youngsters to explore their world and discover new ways to utilize language by participating in various forms of play and play routines.

3. Social interaction: Interacting with diverse people teaches social standards, exposes children to language in a naturalistic setting, and teaches them how to speak correctly with others.

4. Daily routines: Consistent patterns throughout the day give children with a predictable schedule, allowing them to better learn and employ situational language. It exposes kids to a consistent collection of words in a comfortable setting.

5. Teaching of Vocabulary

Because languages are made up of words, teaching vocabulary is an essential part of learning a language (Alqahtani, 2015). It is very hard to pick up a

language without words; even human communication is founded on words. In vocabulary , one thing that's often discussed among people is about how to teach vocabulary. During teaching, problems would often appear when teacher do learning process with students. They are struggling with how to instruct students in order to get satisfactory outcomes. Teachers should be aware that teaching vocabulary is something new and distinct from what the students are used to. They must also consider how teaching English to young learners differs from teaching English to adults. The instructor should plan ahead of time and research acceptable approaches to use with the children. According to Bauer and Nation in Jannah et al. (2020), the degree of learning vocabulary is split into three groups:

1. The first level is beginner. At this level, making vocabulary cards is the most successful method. A little card has been divided into two halves. The first section is the English vocabulary, while the second is for translation. However, it should be emphasized that at this level, it would be preferable to choose a library that contains phrases or new words that are easy to grasp and not too complex. The usage of such cards must be done as a keyword strategy, or as an analysis for the section of the word where the card is employed.

2. The second level is intermediate; at this level, games focus more on the meaning of vocabulary that has previously been highlighted in a word that comprises of numerous contexts in a phrase. Investigating vocabulary based on their presence, such as exploring the definitions of terms like head, fork,

or agree, will be more appropriate at this stage. This sort of action can be carried out deductively.

3. The last level is advanced. This level is more geared at high school and college students in terms of employing language in academic writing. Students at this level require a specialized method for using vocabulary in accordance with its difficulty level and in accordance with the context of the sentence. Vocabulary acquisition strategies must be used, such as breaking down or matching words based on context, utilizing word components to retain word meanings, and employing mnemonic techniques. The primary focus of instruction should be on development strategy.

6. Techniques of Teaching Vocabulary

According to Susanto (2017) there are several techniques for teaching vocabulary:

a. Using Objects to Teach Vocabulary

Things such as objects and pictures are really reliable, and strategies that can be seen can be regarded as tools for reminding words, this helps learners to remember language properly. Working on this method can be used as medium for helping the process in teaching (Takač & Singleton, 2008).

b. Developing vocabulary through drills, spelling, and active participation

Drilling is used to help students become familiar to the word form, particularly how it sounds. Drilling should be straightforward and natural in order to increase learners' familiarity with the term (Thorbury, 2002). The fundamental method of spelling is to memorize words (Reed, 2012). Because spelling forms of

English words are not usually deduced from sound, word spelling must be examined. Drilling has long been employed in the second language classroom. It was a fundamental component of the audio-lingual approach, which emphasized the repetition of structural patterns through oral drill.

c. Using drawing and pictures to teach vocabulary

Vocabulary can be taught with media that can connect the teacher with student by using visual tools. There's a part of vocabularies that can be learnt by visual tools. It can be regarded as fascinating idea to teach the meaning of unknown words or phrases. They can assist young students in quickly understanding and remembering the important topics that they have learnt in the classroom. Using visuals to teach vocabulary connects students' past knowledge to a new tale and helps them learn new words. There are several vocabularies that may be introduced via the use of drawings or visuals. They are a fantastic way to clarify the meaning of unfamiliar terms. They should be utilized as frequently as feasible.

According to Harmer (2001), pictures are plainly vital for the language instructor since they may be employed in so many ways. We can simply teach vocabulary using visuals. A picture isn't just worth a thousand words; it's also worth a thousand years or a thousand kilometers.

d. Using mime, emotions, and gestures to teach vocabulary

If the phrase "mime or gesture" stresses the importance of gestures and facial expressions in communicating, it is beneficial. 2015; Alqahtani). In essence, it may be utilized not only to communicate the meaning of a word discovered in a

reading passage, but also in speaking activities, since it focuses primarily on communication. Mime, emotions, and gestures can be used to introduce several words.

e. Using enumeration and comparison to teach vocabulary

An enumeration is a collection of objects that is a comprehensive, ordered listing of every item in that collection. It can be used to convey information. In other words, this strategy is useful for explaining a term graphically. We can say "clothing" and then enumerate or list other items to illustrate.

Some words, such as "good" vs. "bad," are simply presented to learners by contrasting them with their complete opposites. Some terms, however, are not. It is nearly tough to contrast terms whose inverse is gradable. When the words "white" and "red" are compared, there is a "in between" term "pink.". Many research have demonstrated that learning vocabulary is most effective when it is linked to prior knowledge

f. Using Contextual Guessing to Teach Vocabulary

According to Alqahtani (2015), there are two sorts of contexts. The first is the context inside the text, which comprises morphological, semantic, and syntactic information in a single text, while the second is the general context, or non-textual context, which is the reader's prior knowledge of the subjects being read. According to Alqahtani (2015), the particular context is "the other words and phrases that surround that term..... it follows that other words in the context of the unknown word frequently 'shed light on' its meaning." These other words can be

found in the sentence that contains the unknown word or in sentences that follow the sentence that contains the unknown item.

C. Game

1. Definition of Game

A game is a systematic kind of play that is generally done for pleasure or fun, but may also be utilized for educational purposes. According to Von Ahn (2006), a game is an activity with rules, a goal, and a sense of enjoyment. According to Dawang (2005), a game can be played with certain rules such that there is a victor and a loser, and the objective is just to refresh. Furthermore, according to Salen and Zimmerman (2003), "a game is a system in which participants participate in an artificial conflict, specified by rules, that yields quantifiable consequences." Games are played for a variety of reasons, including sheer fun, achievement, and reward. They can be played by beginners or professionals, alone, in groups, or online. Goals, rules, difficulty, and engagement are all important aspects of games. Games often involve some type of mental or physical stimulation, or both in certain circumstances. Many games aid in the development of practical skills, serve as a kind of exercise, or have an educational, simulational, or psychological function.

2. The Benefit of Using Game

According to Octaberlina, L. R., & Rofiki, I. (2021) in terms of teaching and learning assessment, games are seen as practical models that may be applied in both formal and informal learning environments. Since games have been

viewed as a fantastic component in language acquisition, they have consistently been used in language teaching to enhance motivation and justify educational techniques. They create a gorgeous environment in which understudies and also the teacher become more aware of what additional, encouraging measures are available. According to Ismail (2009), an educational game can be a pleasant exercise or a piece of media that is educational. Furthermore, Edward (2009) adds that game as an effective media in teaching that includes essential learning and effectiveness in structure in difficulty levels. Furthermore, Eva (2009) claims that educational games may be used to enhance mind set and concentrate in problem solving. According to Adair, C. (2022), the following are the main benefits of playing video games:

1. Enhanced Cognitive Capabilities
2. Improved Logic and Problem Solving
1. Improved Hand-Eye Coordination
2. Increased Multitasking Capability
3. Decision-Making that is both faster and more accurate
4. Improved Prosocial Behaviors .
5. Improved Vision
6. Increased Accuracy and Task Completion
7. Some video games encourage collaboration.
8. Increased Physical Activity
9. Other Advantages

When played in moderation, gaming can be a good and productive experience. It might be beneficial to discover your reason to play in order to enjoy

the good impacts of video games. You may get several benefits if you play games in moderation, for amusement and relaxation.

D. Wordscapes

Wordscapes is a PeopleFun word puzzle video game that is available on Android and iOS and the gameplay is straightforward. You must create words using the alphabets provided. On one level, you must create a large number of words using the same letters. Swipe your fingertips from one letter to the next to form words. If you make a proper word, it will automatically fill the puzzle boxes, and you will then have to build another word. PeopleFun is a leading producer of casual mobile games in the globe, with titles such as Wordscapes, Wordscapes Search, Word Stacks, and Word Chums and it is established in 2011. Wordscape have been downloaded more than 50 million time with approximately 1 million reviews. The size of the game is about 125 MB and the rating star is 4,5. The motto of PeopleFun is "making fun games people love to play" in which indicate that all of the games (including wordscapes) are designed for all ages. According to Thorp in Saleh (2019) Wordscapes is played by many users and it is loved by audiences aged 8 and above, with some comments reading. "This is a fantastic game for getting students to think about vocabulary and spelling." According to Bryan, C. (2020) wordscapes is not a collaborative game. You can't even communicate with other players inside the app. That doesn't mean you can play it socially, though, at least with the other people around you.

1. Advantages of Wordscapes Game

Wordscapes is a free-to-play games so all players can download it without having to purchase it. This game is also simple to be played by the players and since wordscapes resembles popular game like crossword so people may already get familiar with the concept of the gameplay. The difference is that wordscapes played based on the option or available alphabets that are provided in the circle while crossword doesn't have such limit when it comes to composing the words but it's played based on the instruction given on the game. Challenges on wordscapes can make players get excited to find out the solutions. According to studies, when certain tablet software is utilized in a controlled setting, academic achievement improves in a relatively short period of time (Schacter & Jo, 2016). Furthermore, educational computer apps have a good influence on learning and self-esteem by providing the youngster with the chance to grasp technology and become more self-directed (Wartella & Jennings, 2000). Overall, skill and mastery of electronic games produce more favorable results than trying to complete the game or progress from one level to the next (Ryan, Rigby, & Przybylski, 2006). Saleh (2019) stated that games like "Wordscape Game" can help to establish an effective learning environment, particularly for vocabulary development.

2. Disadvantages of Wordscapes Game

Wordscapes has ads and it's usually played every time we clear each stage of the game but you can also get ads when you switch to other application. Sometimes the ads can't be closed and it also can take minutes for the ads to play. According to Hindy (2022), the game contains some fairly irritating advertising,

making it less appealing to free gamers. In this game, they usually offer their items with up-selling which means they offer you to buy additional items that you might not need in one package but you also can earn items and coin for purchasing hints or helps in the game. Players surely can play this game without having to play any ads for getting coin but in certain or higher level you might need some additional helps since the game becomes more complicated and every attempt to clear the stage by making only guesses can be frustrated since it often just comes with bad outcomes and possibly defeat the purpose of wordscapes as educational games.

Wordscapes also can be considered repetitive game. The gameplay is quite the same for each stage and the different is located on how much word we need to fill to clear the stage. This aspect can make players become bored and reluctant to continue the game and if they get stuck in certain stage, the only option for players is to make any blind guesses and hoping that it will match and complete the stage. The process of making blind guesses can be so tiring and making players feel dull since it can take so many times before it actually clears the stage if the players are lucky. Considering all of these aspects, playing this game has possibility of making players or students become stressful. In recent years, there has been an increase in study on the impact of video games on stress. According to certain research findings, video games cause stress (Hasan et al., 2013; Hasan, 2015; Ferguson et al., 2016).

3. Procedures of Using Wordscapes Game

How to install wordscapes on your device:

Step 1: Install Wordscapes.apk to your smartphone.

You may do this right now by utilizing Google Play or another mirror from a website that offers it.

Step 2 : Enable Third-Party Apps on your smartphone.

To install Wordscapes, you must first ensure that third-party programs are currently enabled as an installation source. Simply go to Menu > Settings > Security > Unknown Sources and select the box to enable your phone to install apps from sources other than the Google Play Store.

Step 3 : Go to the location of your file manager or web browser.

You must now locate the Wordscapes.apk file that you downloaded earlier. When you've found the Wordscapes application, and you need to click it to start the installation process. Select "Yes" whenever you are asked for something. Make sure, however, that you read all of the on-screen instructions.

Step 4: You're ready to play

You can enjoy playing wordscapes now

Wordscapes is a crossword puzzle with no clues. When you start a game, you'll see the following:

1. Intersecting lines of empty spaces, similar to a crossword puzzle

2. A letter-wheel, as opposed to a crossword puzzle

3. A shuffle button that changes the order of the letters on the wheel.

4. A star counter that displays the amount of bonus words you have.

5. A slew of useful power-ups

How to play Wordscapes :

1. Spell words using the letters supplied to you.

2. Link letters together by swiping between them in a single continuous motion.

3. If the word you create occurs in the puzzle, it will fill in the gaps on your screen.

4. A bonus word is formed if you produce a legitimate word that does not fit in the problem. Wordscapes Coins are awarded for additional words. Wordscapes Coins can be used to purchase extra power-ups.

5. There is no penalty for attempting to play incorrect words.

6. Complete a level by filling in all of the blanks in the puzzle

This information will help the reader to install the application into the device the properly and the reader also will know how wordscapes function and the roles of each option in the display and how to play wordscapes to pass each level in the game.

4. The Role of Wordscapes Game to Vocabulary

According to Sandford et.al, in Saleh (2019) Wordscapes is a fascinating brain-challenging game that combines word search and crossword puzzles. The purpose of Wordscapes differs from that of other types of word games in that it is not to create as many words as possible. Instead, the crossword puzzle's blank areas serve as a guide to help you finish the words. If the word is correct and matches the puzzle, you can go to the next round. Wordscapes can be used by teachers to provide a fun, gap-filling experience for children who need a little extra motivation to improve spelling and vocabulary. There are hundreds of levels to choose from, with lots of options for whatever number of students in your class.

It's easy for kids to get into a trial-and-error approach, so encourage them to slow down and think before they act. Teachers may also direct students to study the meanings of the words they spelt after they complete a level. This is a subtle feature (it's a little symbol on one screen). As a result, teachers should demonstrate appropriate app usage, including how to access the dictionary.

Playing word games like wordscapes is a brain stimulating task that puts one's creativity to the test. These games boost brain power, making them an excellent choice for educational objectives in addition to simply amusement. They teach, enhance your intellect proportion, your cognitive capacity, your focus, your motor abilities, your problem-solving skills, your productivity, and your social skills. It gives learners with enjoyment and desire to play the game again and again. It develops and improves learners' social and communication skills since it is novel and interesting. Wordscape is a game that combines literacy instruction, physical activity, and language. It helps with the teaching of phonics, alliteration, visual/sound cues, and repetition Saleh (2019).

Considering all of these, it can be said that wordscapes can give positive impact for students in learning vocabulary.

E. Previous Researches

Several studies on word game and vocabulary mastery have been conducted.

First, it was "The Effectiveness of Using Crossword Puzzle Games Through Student's Vocabulary Mastery". The differences between the previous research and current research are the previous research used crossword puzzle while the

current research uses Wordscapes. The previous research conducted the research for eleventh students of Vocational High School 1 Banyuputih while the current research conducts the research for eighth grade of SMP GKPI Padang Bulan. The problem in the previous research mainly focusses on the significant differences before and after using crossword puzzle games through students' vocabulary mastery while the current research mainly focuses on significant effect of using Wordscapes application on students' vocabulary mastery at the eighth grade of SMP GKPI Padang Bulan

In the previous research, the population of the study was eleventh grade students from Vocational High School 1 Banyuputih, with XI AKL as the experimental class of 25 students. Purposive sampling was utilized by the researcher as a sample strategy. Data was collected via questionnaires filled out by students as well as tests separated into pre-test and post-test. As the study's research design, this study employed quantitative research methodologies and a pre-experimental design, with data testing using SPSS 16.

The second previous research is "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". The differences between the previous research and current research are the games used to teach vocabularies. The previous research used crossword puzzle while the current research uses Wordscapes. The previous research conducted the research for the second-grade students of SMA Muhammadiyah 2 Bandar Lampung and current research conducts the research for eighth grade of SMP GKPI Padang

Bulan. The problem in the previous research mainly focused on improving students' vocabulary mastery while the current research mainly focuses on significant effect of using Wordscapes application on students' vocabulary mastery at the eighth grade of SMP GKPI Padang Bulan.

This previous study employed an experimental strategy in which the research samples were evaluated both before and after an experimental treatment. The research group consisted of 68 students who were separated into experimental and control groups. The tools utilized to gather data were tests, which included a pretest and a post-test. The results showed that the post-test mean scores of the experimental and control groups were considerably different. It was discovered that the t-count was more than the t-table (4.454 > 1.9966) and the sig. 2-tailed value was less than the sig. Level (0.000 > 0.05). The null hypothesis (Ho) was thus rejected, whereas the alternative hypothesis (Ha) was accepted. It meant that using crossword puzzles had a positive influence on students' vocabulary mastery.

The third previous research is "The Effect of Boggle Games on the Vocabulary Mastery of the Seventh Grade Students' at MTs. Nurul Hikmah". The differences between the previous research and current research are the previous research used Boggle while the currect research uses Wordscapes. The previous research conducted the research for seventh-grade students of MTs Nurul Hikmah while current research conducts the research for eighth grade of SMP GKPI Padang Bulan. The problem in the previous research mainly focuses on effect of the Boggle game on vocabulary mastery of seventh-grade students at MTs. Nurul Hikmah and the current research mainly focus on significant effect of using

Wordscapes application on students' vocabulary mastery at the eighth grade of SMP GKPI Padang Bulan.

The population studied in this study is seventh-grade students of MTs Nurul Hikmah. This study's sample size was 60 students, who were divided into 30 experimental students and 30 control students. The research instrument was used to gather data in the form of a test, which included a pre-test and a post-test. According to the findings of this study, using Boggle games to acquire vocabulary had an effect on students' vocabulary competence.

F. Conceptual Framework

The most crucial aspect of learning a mother tongue or any other language is vocabulary. As our language expands, we can more precisely describe and explain something. With proper terminology, the audience will understand each element of what you intend to express. Vocabulary knowledge serves as a foundation for both the following stages of language learning and real-world communication, allowing learners to communicate effectively and perform well in the related abilities to listen, speaking, reading, and writing. A game is a type of organized play that is usually done for pleasure or entertainment, but it may also be used for educational reasons. Games frequently entail some form of mental or physical stimulation, or both in certain cases. Many games help to acquire practical skills, operate as a kind of exercise, or have an educational, simulational, or psychological role. Games can help students improve their communicative talents. Because of games, students feel more at ease and confident when learning language. Furthermore, because students are unable to memorize new words and

expressions in a language that is not their mother tongue, games might help them maintain their attention for a prolonged amount of time. Wordscapes is a well-known word puzzle video game that is accessible for both iOS and Android smartphones. It is a free game that is among the most popular on the App Store and Google Play. Teachers may utilize wordscapes to create a pleasant, gap-filling experience for students who need a little additional motivation to improve their spelling and vocabulary.
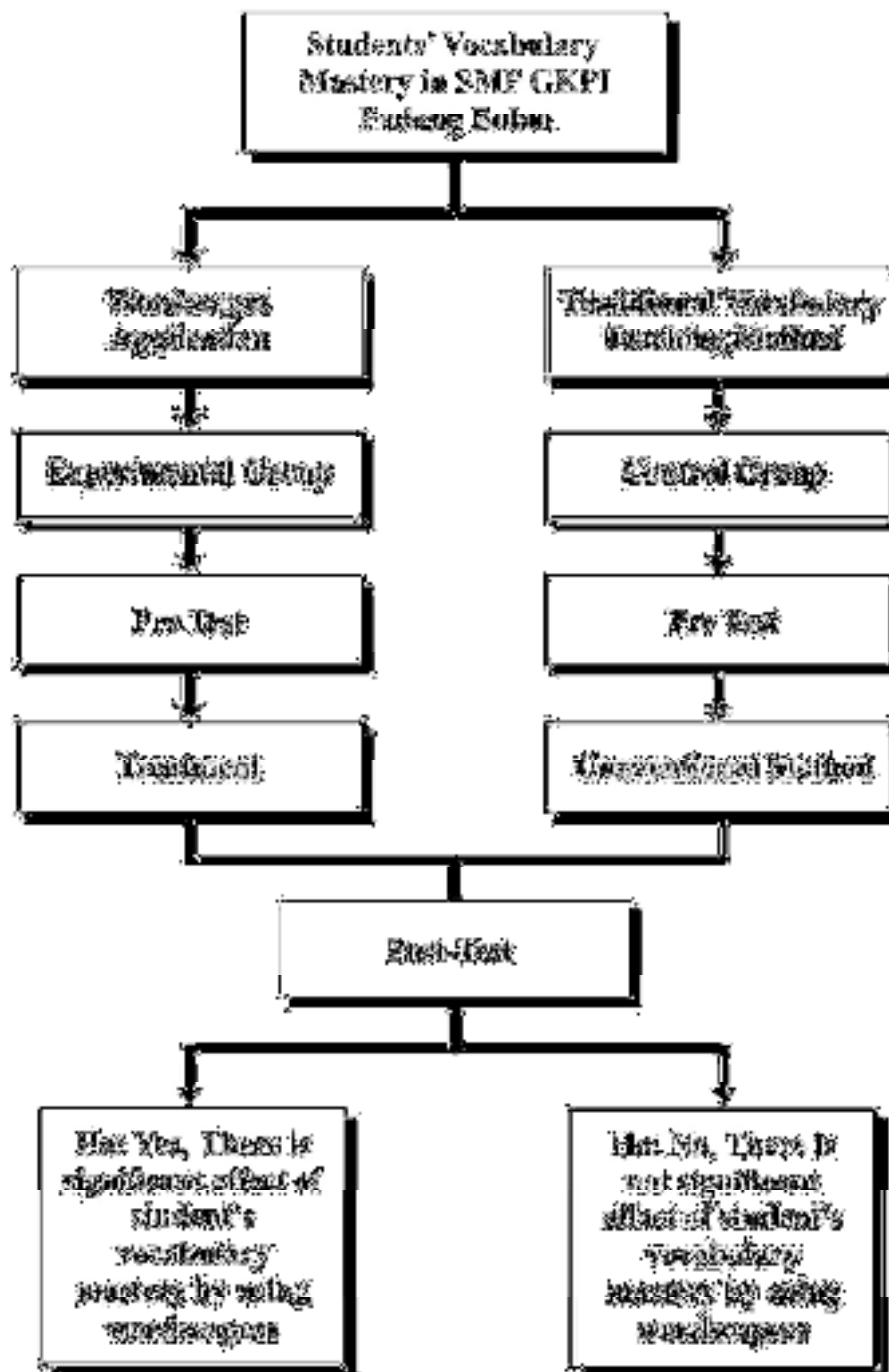
Students' Vocabulary Mastery in SMP GKPI Pabatu Bubu.

Wordscapes Application

Traditional Vocabulary Teaching Method

Experimental Group

Control Group

Pre Test

Pre Test

Treatment

Conventional Method

Post-Test

Has Yes, There is significant effect of student's vocabulary mastery by using wordscapes

Has No, There is not significant effect of student's vocabulary mastery by using wordscapes

Figure 2. Conceptual Framework:
The Effect of Wordscapes to Student's Vocabulary Mastery

CHAPTER III

RESEARCH METHODOLOGY

A. Research Design

The analysis that will be used on this research is true experimental quantitative methods and the research is about vocabulary mastery students of SMP Swasta GKPI Padang Bulan on wordscapes application. Ary (2010) defines research design as "the researcher's approach for how to proceed in order to gain knowledge of some group or phenomenon in its environment." The true experimental quantitative research method is used by the researcher. Since this research require two classes or groups, the students will be categorized and divided into two classes or groups. The experimental class will get treatment by using the application of wordscapes while the control class will also receive conventional method or learning process without wordscapes. Both test (pre-test and post-test) will be given to all students. The layout can be seen as follows:

Table 3.1 Research Design

Group	Pre-Test	Treatment	Post-Test
Experimental Class	√	Using Wordscapes	√
Control Class	√	Using Conventional Method	√

B. Population and Sample

1. Population

Based on Arikunto's statement in 2010 that the population is a set of the elements processing or more attributes processing. Based on that statement, the researcher draws a conclusion that population is a group of people who have similar characteristics and are subject to the research. The population of the research is the eighth grader students of SMP GKPI Padang Bulan Medan. The researcher uses a sample of 40 eight grade students from SMP GKPI Padang Bulan Medan.

Table 3.2. Table of Population

SMP GKPI Padang Bulan Medan	Population
Eight Grader	50 Students

2. Sample

The sample is a part of or can be considered something that can be thought as representation in the research (Arikunto, 2010). This research uses purposive sampling. According to the explanation, the researcher decides to take the sample in the experimental group consists of 20 students from VIII-1 and 20 students from VIII-2.

Table 3.3. Table of Sample

SMP GKPI Padang Bulan Medan	Class	Sample
Eight Grader	VIII-1	20 students
	VIII-2	20 students

C. The Instrument of Collecting Data

The data is gathered through the use of quantitative data. The score of the vocabulary exam will be used to obtain quantitative data. The writer will be administered a vocabulary test to the students in order to acquire quantitative data. The students will be given 20 questions that relates to vocabulary to answer. The questions will be given about vocabulary content that

consist of 5 questions about filling the blanks and 15 questions about completing the wordscapes (as it can be seen in appendix). The exam will take 50 minutes to complete. The researcher will do the Pre-Test, Treatment, and Post-Test.

D. The Procedure of Collecting Data

The way to do it is by splitting the classes into two groups, once the classes are separated into two groups, the first group is the experimental class, which is taught using wordscapes, and the second group is the control class, which is taught using the conventional way or method. To collect data, the researcher will administer pre-test, treatment, and post-test to the experimental group, as well as pre-test and post-test to the control group but without treatment.

- Pre-Test

The pre-test is used to determine the students' vocabulary knowledge before the researcher moves on to the treatment stage. Before starting the test, the researcher will greet the students about their situations and after that the researcher will give brief instruction to students about what will be given in the test. The experimental and control classes are given a pre-test to determine the quality of the student's vocabulary mastery. The students are given the test about vocabulary test without given any prior knowledge about wordscapes to get maximal and reliable results from both groups. The experimental group and the control group will be tested with 20 questions about filling the blanks (5 questions) and completing the wordscapes (15 questions). And after that, the researcher will collect the test from the students.

- Treatment

After the pre-test, the researcher conducts the treatment to the experimental group. As usual, the teacher will greet and give brief explanation about what needs to be done. The

experimental group will be treated with wordscapes application, while the control group does not get wordscapes application or is used the conventional method. First, the researcher will give explanation about what vocabulary is and after that the experimental group will be taught with wordscapes and the teacher will instruct the students to apply the application of wordscapes on their devices. The researcher will teach how to use and solve problems in wordscapes by arranging the words. After that, the researcher will ask students some questions about vocabulary that is provided in wordscapes to the test the understanding of students about the vocabulary and if students make mistakes, the researcher will correct and give the true answer. And after all that, the teacher and students together discuss what they have learnt. The control group will get treatment but without wordscapes. First the researcher will give explanation about what vocabulary is. After that, the researcher will ask students to find vocabulary that they don't know in the text book and try to find its meanings and after that the researcher will ask the students to read their answers and if mistakes are found, the researcher will give corrections. And after all that, the teacher and students together discuss what they have learnt. The treatment that will be given for experimental group and control group are for two meetings.

- Post-Test

Before starting the post-test, the researcher will greet the students about their situations and after that the researcher will give brief instruction to students about what will be given in the test. The writer does a post-test to the students using the same test as the pre-test to determine whether there is any effect from utilizing the Wordscapes application. The students are given the test about vocabulary test. The experimental group and the control group will be tested with 20 questions about filling the blanks which are 5 questions and completing the wordscapes which

are 15 questions (as it can be seen in appendix). And after that, the researcher will collect the test from the students (the test and lesson plan can be seen in appendix).

E. Scoring the Test

The researcher calculates the students' scores after completing the preceding stages. The method will be used by the writer to score the test. Using this formula and counting the right answer scoring, the overall score range for the test is 0-100.

$$S = \frac{R}{N} x100\%$$

Where:

S = Score number of the test

R = Number of the correct answer(s)

N = Number of the question

F. The Validity and Reliability of The Test

  1. The Validity of The Test

According to Arikunto (2014), validity is defined as a measurement that demonstrates the degrees of an instrument's validity. Validity can be understood as a mean to measure validity of an instrument. It can be said that an instrument is successful to be valid if it measures accurately the thing that it needs to be measured and because of using content validity, the research knows if the test is already valid or not. It's known that the validity of a test extends to the degree to which the test measures what it meant to measure. Validity is classified into three types: (1) content validity, (2) criterion validity, and (3) construct validity. The content validity is going to be used in this investigation. The amount to which a test evaluates a representative sample of the

subject matter or behavioral changes under examination is referred to as content validity. It refers to how well the exam measures the subject matter and learning outcomes throughout the instruction time.

Table 3.4 Content of Validity

No	Content	Test Item	Kinds of test	Score
1	Vocabulary Test	5	Filling the blanks	5 x 5 = 25
		15	Completing the wordscapes	15 x 5 = 75
Total		20		100

To calculation the total of validity, the writer using the following formula:

$$Rxy = \frac{N\sum XY - (\sum X)(\sum Y)}{\sqrt{\{N\sum X^2 - (\sum X)^2\}\{N\sum Y^2 - (\sum Y)^2\}}}$$

Where:

Rxy : Correlation coefficient between variables

N : Number of respondents

$\sum XY$: The result of multiplication from total score of X and total score of Y

$\sum X$: Total score of X

$\sum Y$: Total score of Y

$\sum X^2$: Quadratic of total score of X

$\sum Y^2$: Quadratic of total score of Y

2. The Reliability of The Test

Reliability can be understood as an instrument that can be trusted to gather data since it is of high quality (Arikunto, 2014). The exam is utilized in this research as a vocabulary test. The exam is utilized in this research as a vocabulary test. The researcher employs a formula:

KR_{21} = Reliability of the test

M = Mean of test

K = Number of items in the test

$$KR_{21} = \frac{K}{K-1}\left[1 - \frac{M(K-M)}{K(S)^2}\right]$$

The categorization reliability, according to Arikunto, is as follows:

Reliability Test	Category
0.00 - 0.20	The reliability is extremely low
0.21 - 0.40	The reliability is poor.
0.41 - 0.60	Good reliability
0.61 - 0.80	High reliability
0.81 – higher	Very high reliability

G. The Techniques of Analyzing Data

Quantitative data is a method of evaluating and counting information. It indicates that the process of converting data into numbers is referred to as quantitative data analysis approach. After teaching vocabulary with Wordscapes, the researcher applies statistical analysis data. The researcher uses the following techniques for analyzing data:

1. Mean

Mean (M) is the average value calculated by how to add up all the existing values and divide the total value with the number of samples. The mean (M) of variables is calculated by the researcher using the following formula:

$$\bar{X} = \frac{\sum F_i X_i}{\sum F_i}$$

(Sudjana, 2005: 67)

2. Standard Deviation

The standard deviation is a value that is used to determine the distribution of data in a sample and how near the data is to the mean value. Because it describes the amount of the spread of each unit of observation, the standard deviation is the best measure of spread. The standard deviation is the square root of a variation that is used to calculate the average or anticipated value. The

standard deviation or standard deviation of the data collected in the frequency table. The standard deviation is a number that is used to determine the distribution of data in a sample and how near the data is to the mean value. The following formula is used:

$$S^2 = \frac{N \sum F_i X_i^2 - (\sum F_i X_i)^2}{N(N-1)}$$ (Sudjana, 2005: 95)

3. Normality

The normality test is carried out parametrically by using the average estimator on the standard deviation. For example, let's say we have a random sample with observations X_1, X_2........X_n Based on this sample, zero hypertension will be tested that the sample comes from a normally distributed population against the hypothesis that the hypothesis is not normal. We can test the null hypothesis with the following procedure:

Normality test by using Liliefors test, the steps consist of :

a. Observing X_1, X_2,......,X_n should be raw numbers Z_1, by using this formula :

$$Z_i = \frac{X_i - \bar{X}}{S}$$ (Sudjana, 2005: 466)

b. Calculate the opportunity $F(Z_i) = P(Z \leq Z_i)$ by using list of the standart

normal distribution

c. Calculate Z_1, Z_2,....., Z_n that stated with $S(Z_i)$

d. Calculate $F(Z_i) - S(Z_i)$ and determine the absolute cost.

f. To receive and reject the normal distribution in this research, it can be compared with L_o

and critism L that taken from table of Liliefors test with $\alpha 0,05$ and the criterium of

testing $L_o < L$

4. Homogeneity

Homogeneity aims to calculate whether the data has a homogeneous variance or not. The formula used is (Sudjana, 2005: 250) as follows:

$$F = \frac{varians\ terbesar}{varians\ terkecil}$$

Criteria of testing :

If $F_{count} < F_{table}$ so the sample before and after doing treatment has same varians.

5. Hypothesis testing , uses T-test formula by Sunjoyo, dkk, 2013.

   T-test formula :

$$t = \frac{\overline{X}_1 - \overline{X}_2}{\sqrt{\frac{(n_1-1)S_1^2 + (n_2-1)S_2^2}{n_1+n_2-2}\left(\frac{1}{n_1}+\frac{1}{n_2}\right)}}$$

Where : $\overline{X}_1$ and $\overline{X}_2$ = average value of each set of samples

   S_1^2 and S_2^2 = variance of each set of samples

   n_1 and n_2 = number of records in each set (samples size)

The formula above can be tested at significant level 5% or $\alpha = 0,05$ from the list of distribution t, df = n_1+n_2 -2, with the rule $t_{hitung} > t_{tabel}$ H_a is accepted and H_o is rejected.