INCREASING ENGLISH VOCABULARY THROUGH WORDWALL GAMES FOR GRADE 8 SMP NEGERI 2 SEMARANG

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Abstract

In conducting the learning process, teachers can choose and use several learning media in accordance with the characteristics of students and subject matter. Mastery of a large vocabulary can make it easier for students to learn English. The use of supporting media can help learners understand more new vocabulary. An educator must be able to adjust the learning material to the learners' vocabulary ability. This study aims to: (1) utilize Wordwall media that is suitable for the application of English learning (2) determine the success of using Wordwall learning media in an effort to increase vocabulary understanding in English subjects. This research is motivated by the low understanding and ability of students' vocabulary in English subjects. The data collection methods in this study were pre-test, treatment to the control group, pre-test to the experimental group, treatment to the experimental group by using Word Wall method and flash card and listing the scores of pre-test and post-test. The technique of data analysis this research used a statistical analysis of normality, homogeneity and t-test. Mastery of English for students today has become a very important and necessary thing. However, based on existing developments, students who still lack understanding of vocabulary in English. To increase English vocabulary, Wordwall is one of the web applications that is suitable for learners. Wordwall is a fun learning application for students, how to use it is fairly easy. In addition, the Wordwall application can be easily accessed by learners for free, and its use can be shared via a link. Wordwall media is expected to help students in understanding students' vocabulary without having to always depend on the use of dictionaries. The implication of the research is that English teachers are expected to use Wordwall learning media because it can improve vocabulary mastery in English learning.

Keywords – Wordwall, Vocabulary, Media, English

CHAPTER I

INTRODUCTION

In this chapter, the researcher will give the explanation about the introduction of the research. Consist of background of study, limitation of the study, statement of the problem, objective of the study, and the significances of the study.

A. Background of the study

Since English has become the most popular foreign language in Indonesia, every level of education offers English as a subject. In some cases, parents are willing to give extra class for their children to gain English skills. They want their children not only to be able to communicate in English but also to have a bright future by mastering English. Nowadays, many companies, either international or national, look for employees with a good English skill as their basic requirement (Handayani, 2016, p. 103&104). The use of technologies in some companies considered that requirement because the most language used in technologies is English.

Vocabulary is one of the elements of language and has important meaning for students. Especially for beginners, vocabulary mastery is the ability to learn English. If they master vocabulary, they will easily understand written material. Meanwhile, if they have a limited vocabulary, they will have difficulty understanding the text. In other words, if students have low vocabulary, it will be difficult for them to understand the purpose of the text. According to Jack C. Richards and Willy A. Renandya, Vocabulary is an important part of language proficiency since it determines how well students talk, listen, read, and write.1

Learning English becomes difficult without mastering vocabulary. This is a serious problem for students because to achieve fluency, they need to memorize a large amount of vocabulary. With a limited vocabulary, students cannot learn language skills well – listening, speaking, reading and writing. They are unable to express their feelings effectively both verbally and in writing. The more words students can remember, the higher their English proficiency is. When students know vocabulary, they will easily use many

different words in terms of how they communicate with others as they wish. In this case, teachers should use media-friendly instruction that can help students acquire vocabulary.

One of the effective support tools to improve students' vocabulary mastery is the word wall. By applying word wall, students can memorize vocabulary without feeling too serious about studying. Through the habit such as looking the word wall, indirectly they remember the vocabulary. Therefore, in this study, the researcher uses the word wall to teach vocabulary in reading skill at the eighth grade Junior High School. According to Franciska (2012) A word wall in a classroom is a powerful instructional tool to strengthen content vocabulary. A word wall is an organized collection of word (and sometimes phrases) displayed on a wall or other space in the classroom.

Besides that, it can be more enjoyable for the leaners because at the end of the game there will be launched score. Scores of all participants is displayed in the rating and it will attract learners to become winners as they try to answer more questions correctly. Therefore, learners have the opportunity to focus and learn independently through this website. The games are also very easy to understand, there are not many rules so the teacher does not need to tell the students complicated rules.

Based on the explanation above, the researcher wishes to study the effectiveness of using Worldwall.net as a web tool for students to acquire vocabulary. The researcher wants to do an experiment research to know how to Increasing English Vocabulary Through Wordwall Games In Learning English For Grade 8 SMP Negeri 2 Semarang

B. Identification of the problem

The problem of this research was identified as follow:

1) Students are difficult in memorizing a lot of new vocabulary

2) Students are need variation technique and media for mastering English vocabularies

3) Teachers teach vocabulary implicitly in conventional learning

C. Limitation of the Problem

To make this research easy to be understood, the researcher would focus on the students' vocabulary mastery using Wordwall.net website. The researcher did not focus on students' general vocabulary acquisition, but only focus on the students' vocabulary about pronoun, noun, adjective and verb. Then, this study was only conducted at SMP Negeri 2 Semarang. Therefore, the result of this study cannot be generalized to all of the schools in Indonesia.

D. Formulation of the problem

Based on the background of the study above, the statement of the problem statement is formulated into:

Is there any significant difference on vocabulary mastery for the students who are taught by word wall media at eighth grade at SMPN 2 Semarang?

E. Objective of the study

This research aims to investigate the effectiveness of Wordwall.net as a website tools, whether it is significance to increase the students' vocabulary mastery for eighth grade Junior High School students of SMP Negeri 2 Semarang in academic year 2023/2024.

F. Significance of the Study

From this research, the researcher expects that this study will give significances for:

1) The researcher

The researcher got a lot of experiences of teaching English. Besides that, she creates a method and teaching activity that effectively give a good result for the students' acquisition.

2) English teachers

English teachers will be more creative in rolling the classroom by using wordwall.net in their teaching strategies to reduce students' boredom in learning English.

3) English learners

Students will get a new media for practicing their vocabulary in simple way and no need worry to become boring while practicing. There will be any kind of practices from many other teachers in the world that can be access by the students anytime they want.

4) Future researchers

The future researchers, who will carry out and develop research in the same field, consider using this research as a reference to conduct their further research. Also, they will complete the similar research more comprehend than this research

CHAPTER II

LITERATURE REVIEW

In this chapter, the researcher gives the explanations in the several sub points. There are Theoritical framework, review of Previous Related study and Conceptual Framework.

A. **Theoretical Framework**

   1. **Learning Media**

      a. **Definition of Learning Media**

         The media used by teachers in the learning process is called learning media. Media is tools that can be used as a channel for messages to achieve teaching goals. While learning is a process, method, action that makes a person learn. So, learning media is the media used in the learning process as a channel of messages between teachers and students so that teaching goals are achieved.

         Learning media is a technology or physical means that can be used to deliver learning materials. Learning media is now able to provide a stimulus or development of the intellectual and emotional aspects of students. In a sense, learning media becomes a teacher's tool in delivering material to students in a more effective and fun way so that students become more active in teaching and learning activities.

         Learning media consists of two important elements, namely elements of equipment and elements of the message or material to be delivered. The message or learning material is the most important element because it becomes the learning goal. Therefore, a good learning media is not the best tool or media but how effective the media is in bringing messages or materials to students so that learning objectives can be achieved properly.

         Based on the opinions above it can be concluded that learning media is a means of conveying messages or information in teaching and learning activities physically that is able to stimulate students and facilitate teachers in a more creative and effective way so that learning objectives can be achieved very well.

      b. **Kinds of Learning Media**

Learning media are classified in several variations. According to Leshin, Pollock & Reigeluth, learning media can be classified into five types, including:

1. Media based on living things (both humans, animals, and plants), such as teachers, instructors, role-playing group activities, field trips, animal observations, plant observations in parks, and so on.

2. Print-based media, such as manuals, exercise books, worksheets, modules, bulletins, scientific magazines, comics, diaries, posters, and others.

3. Visual-based media, such as charts, graphs, maps, transparencies, slides, and so on.

4. Audio-visual-based media, such as videos, films, slide-tape programs, television, YouTube.

5. Computer-based media, such as interactive computer-assisted video learning, hypertext, web-based learning, learning support applications such as (GeGebra, Mathlap, SPSS, Autograph, and so on).

c. **Principles of learning Media**

To achieve optimal learning, a teacher must consider several principles in determining the learning media to be used in a class. The principles of learning media include:

1. Effectiveness

    Effectiveness means appropriate. So that in learning, teachers must try to make learning media according to the needs of students to achieve learning objectives optimally.

2. Relevance

    The learning media used must be in accordance with the objectives, characteristics of the learning materials, potential and development of students, and the time available.

3. Efficiency

    The learning media used are cost-effective, less laborious in their manufacture, and relatively easy to use, but most importantly, they can convey the essence of the message well.

4. Can be used

Learning media was chosen with the consideration that it can actually be

used in learning, so that it can improve the quality and understanding of students towards the material being taught.

5. Contextual

The selection of learning media must consider the environmental and cultural aspects of students so as not to complicate students and make them uncomfortable

d. The advantages of learning Media

The development of the systems approach and the usage of media are inextricably linked to the evolution of educational technology. The following are some of the advantages of learning media:

1) In the first paradigm, learning media are analogous to the audiovisual tools that teachers employ to carry out their responsibilities.

2) In the second paradigm, the media is viewed as a system that is expanding and according to communication standards.

3) In the third paradigm, the media is viewed as an intrinsic element of the learning system, and as a result, other aspects of the learning process are being changed.

4) In the fourth paradigm, the media is viewed as a source that is generated or used for learning with purpose.

In the teaching and learning process, learning media has a strategic role. Optimal use of learning media will have an impact on the success of quality learning objectives. The advantages of using learning media include:

1. As a tool in the learning process that is clarifying, facilitating, delivering material to students and providing stimulus to the material objects presented in learning.

2. As a component of the learning subsystem that helps achieve the success of the learning process.

3. As a material director to develop student competencies so that they can be more optimal.

4. As a game or arouse students' attention and motivation. With new, creative and innovative learning media, learning becomes more active and communicative.

5. Improve the quality of student learning outcomes.

6. Reduce the occurrence of verbalism. Fostering students' understanding of not only writing but also understanding the shape, form or characteristics of objects.

7. Overcoming the limitations of space, time, energy, and senses. Learning objects that are broad, large, narrow, small or dangerous can be overcome with efficient learning media.

Based on the advantages of learning media above, it can be concluded that learning media has the ability to facilitate students' comprehension of materials and attract students' attention in the process of teaching and learning. In addition, learning materials also make it easier for teachers and increase teachers' creativity in providing materials.

2. **Vocabulary Mastery**

   a. **Definition of Vocabulary**

   According to Richards (2002:255), vocabulary is the core component of language proficiency and provides much of the basis for how well learners speak, listen, read, and write. Vocabulary as a set of lexeme, including single words, compound words, and idiom lexeme is the smallest unit in the meaning system of the language that can be distinguished from other similar units. So, vocabulary consists of some compound words and idiom lexeme. Vocabulary is the stock of words in a language, or that is known or used by an individual, or that is associated with a particular activity. A list or collection of words or phrase usually alphabetically arranged and explained or defined.

   1. A sum or stock of words employed by a language, group, individual or work or in a field of knowledge a list or collection of term or codes available for use (as in an indexing system).

   2. A supply of expressive techniques or devices (as of an art form). Based on the definitions above, vocabulary is defined as the words that should be known and comprehended by students when they are reading.

Vocabulary learning is usually associated in reading activities. Students will meet the words when they are reading the text and they have to know the meaning of the words if they want to comprehend the text. Vocabulary is not just words. When we talk about vocabulary, we mean the word we know and our ability to use them. According to Harmer (2002) that there are four different ways to think words such as:

a. Meaning: When we meet a new word, the first thing we want to know is what it means. For example, you will find the word for a type of first – seldom. Only one kind of first is called seldom, so that is easy. If we do know the meaning of the word, we cannot understand what we read and listen. The meaning of unfamiliar word can be found by seeking them in dictionary.

b. Pronunciation: When we learn a new word, we have to make sure that we can say it. Make sure we know which syllable is stressed. It is important when we speak because the stress of the syllable can bring different meaning. If we are unsure, ask a teacher or use a dictionary with a CD-ROM which gives the pronunciation.

c. Collocation: Collocation is the way words combine with other words. Then are many particular words that have special combination in English. For example:

Take medicine, do homework, different from, and disappointed in, etc. It is incorrect if we say "I have to eat medicine" because the collocation of medicine in English is take.

d. Expression: Expression are group of two, three, four or more words which always go together. For example, if you are in a shop and an assistant approaches you, you can say, "I'm just looking." What do you do for a living?"

Learning vocabulary is a very important part of learning English, as Thornburry (2002) said that without grammar very little can be conveyed, without vocabulary nothing can be conveyed. "If you spend most of you learn more words and expressions. You can say very little with grammar, your English will not improve very much. You will see most improvement if you learn more words and expressions. you can buy you can say almost

anything with words. Based on the quotation above, it can be concluded that grammar and vocabulary are very important in communication. A lack of clear vocabulary creates greater difficulties than mastering grammar. This implies that if someone does not know the word of the language to be pronounced, he will certainly not be able to communicate, even if he knows more about the rules of sentence construction. All English words are English vocabulary. Word is the basic unit of language. As Johnson (2008) quoted by that for a student to know a word, it may mean the ability to:

1) Recognize it in its spoken or written from;
2) Recall it at will;
3) Relate it to an appropriate object;
4) Use it in the appropriate grammatical from;
5) To speech, pronounce it in recognizable way;
6) In writing, spell it correctly;
7) Use it which words it correctly goes with, i.e. in the correct collocation;
8) Use it at the appropriate level of formality.
9) Be aware of its connotations and associations

b. Kinds of Vocabulary

Vocabulary can be divided in to two types, active or productive vocabulary and passive or receptive. In addition, the vocabulary can be divided into two forms, namely oral and print vocabulary (Gairn & Redman: 2003).

1. Active (productive) vocabulary

Active or productive vocabulary to be language items which the learner can recall and use appropriately in speech and writing. In line with Gairns and Redman, also states that it is words that we use when we speak or write. Thus, it can be defined that active vocabulary is all the words we understand, plus all be the words that we can use ourselves. Our active vocabulary in English and Indonesia is probably much smaller than passive vocabulary. The more we work on learning a word, the more likely it is that it will become part of our active

vocabulary. This term is often called productive or expressive vocabulary.

2. Passive (receptive) vocabulary

Passive or receptive vocabulary to mean language items which can only be recognized in the context of reading and listening material. It is words that we recognized when we hear or read them. It can be defined that it contains all the words that we understand when we read or listen, but which we do not use (or can't remember) in our own writing and speaking. Most of receptive vocabulary can be gained only from experience and would not be greatly increased as a result of teaching. It can be concluded that receptive vocabulary is words that cannot be produced correctly but understood though reading and listening active and it requires a requires a reader to associate a specific meaning with a given label as in reading or listening.

In addition, to active (productive) and passive (receptive) vocabulary, vocabulary come in two forms, oral and print vocabulary. Oral vocabulary includes those words that we recognize and use in listening and speaking. It is the words that we can use in spoken form, print vocabulary includes those words that we recognize and use in reading and writing. We usually can find it in written form like the textbook

c. **Aspect of Vocabulary**

In learning vocabulary, there are some aspects that should be learnt by the learners. According to Lado as cited in Mardianawati (2012: 11), the aspects of vocabulary that can be learnt by the learners are follows:

1. Meaning

In learning foreign language, students should know the meaning of the word. Knowing the meaning of the word it will make easier for students to use it for written or oral communication.

2. Spelling

In learning vocabulary, spelling is very important since it can help in reading activity. It can tighten the connection between sound and letters. In learning English vocabulary, students can not spell the word well because there some words that have different from what is

written, for example the letter (I) is not always pronounced /I/. Thus, the English teacher should guide students to pronounce and spell English words correctly.

3. Pronouncing

Pronouncing the word make possible the students to recall and identify to more easy pronunciation is the way to say words or letters. Pronunciation is difficult to learn because there is no connection between word spelling and pronunciation. Some words have only one pronunciation and sometime a word has two pronunciation or more than two pronunciations.

4. Word classes

Word classes are categories of words such as nouns, verbs, adverb, adjective and preposition. Word class is an important feature in semantic analysis.

5. Word use

Word use is how a word, phase, or concept is used in a language. Lexicographers gather samples of written or spoken instances where a word is used and analyze them to determine patterns of regional or social usage as well as meaning.

d. **The way to Improve Vocabulary**

There were a number of ways to enhance vocabulary, including:

1) Read more.

When learning a new term, people of both genders try to deduce its meaning from the context of the phrase rather than searching for a definition in a dictionary.

2) Always have a dictionary and a thesaurus on hand.

The dictionary can handle word definitions as well as searching for pronunciation and meaning.

3) Keep track of your thoughts in a notebook.

Keeping a notebook of all new words might provide positive reinforcement for word acquisition.

4) Learn a new word every day.

Adding to your vocabulary may be as simple as making a list of words to study. It's a smart strategy.

5) Word families and roots

Studying Latin and Greek sources was one of the most powerful tools for learning new words and analyzing their meanings. Components was an important component of the English language and an excellent way to acquire new words.

6) Games.

Defiance words and the search for new meanings and terminology were a fun and useful method for expanding vocabulary.

7) Conversations.

To easily communicate with others might help the student discover new words.

3. Wordwall Application

a. Definition of Wordwall

Wordwall is an engaging, interactive and educational game application for the browser. This program aims to serve as a fun learning resource, media, and assessment tool for children. New users can get an idea of what creativity should look like by looking at examples of teacher creativity on the wordwall website. Wordwall is a web program that we use to generate entertaining quiz-based games. This online tool may be used to create and examine a learning evaluation.

Wordwall game app for browser is a fun, engaging and educational game. For students, this app can be a fun learning resource, media, and assessment tool. Wordwall displays examples of innovations from instructors to make it easier for new users to use and create media content. Wordwall is a web-based tool that allows users to create educational games wrapped in fun quizzes. This web application is ideal for creating a learning and evaluation tool.

From the explanation above, we can conclude that Wordwall is a game application from web browser that can used in educational process as a tool or learning media that bring many advantages. Wordwall quiz appropriate to evaluation students learning outcomes and in learning process with fun way.

b. Steps to Access the Wordwall

Students who use this wordwall for learning media can play this educational game with the following steps:

1. To take the quiz, students can open the link that has been shared by the teacher, by writing their name and then start.
2. The display before playing the game. Then students can click the start.
3. Tap each box in turn to open them up and reveal the item inside.
4. Select the correct answer.
5. Students can see the score obtained along with the timer and if students want to try to do it again, they can repeat it by clicking start again.
6. As a teacher, to see the recap of the students who did the work along with the score and timer, we can open the wordwall, click on my result. In there you will see who have done the game, the score and the time in doing it.

c. The Strengthness and the Weakness of Wordwall Aplication

The strength of wordwall games include more relevant, exciting, and easy-to-follow learning for students, as well as topics that can be customized to different learning styles. The wordwall application provides templates that can be accessed for free and users can change activity templates from one activity to another easily. Teachers can also make their own content a task. Moreover, the most intriguing aspect of wordwall is that created games may be printed and played offline.

Wordwall also facilitates sharing games on various social media platforms and embedding codes. The assignment mode may be added to the wordwall program so that students can access it on their own using their smartphone. The weakness of wordwall quiz is that the font size cannot be adjusted, the user's writing size cannot be changed.26 Wordwall is a test design application that helps teachers be more creative and create by different templates that can be selected and related to the document. But, teacher can't change font size in wordwall app, so teacher has to be smart to do the action in wordwall app.

B. Previous Study

The researcher takes some reviews of related literature from other thesis some research have conducted research on the use of variation techniques in teaching English, English vocabulary.

The first previous research is "The Use of Word Wall as technique Improve Students Speaking Ability", an Action Research at the first Year Students of SMPN 1 Temanggung in the academic year of 2009/2010" by Heni Purwo Astuti Cited by Setiyawati. The finding of the second research can be analyzed that mean score in pre-test 2.25, then increase in the first cycle test, 2.85. In the final test the mean score was 3.89. It means the implementation of word Wall technique is effective.

The difference between Heni's research and this research deals with the research design. Previous research used Action Research to improve students' speaking ability and in this research, the researcher used descriptive qualitative design to describe the implementation of Word Wall in teaching writing text. The research is aimed to describe the implementation of Word Wall in the teaching writing. This study is also proposed to explore students responses toward the implementation of word wall in teaching writing.

The second research was conducted by Fanny Mestyana Putri, entitled "The Effectiveness of Using the Wordwall Application in Online Mathematics Learning on Class 1 Count Numbers at MIN 2 South Tangerang". The findings of this study were that (1) counting numbers was very effective in the student response questionnaire using Wordwall media in the closing activities of online mathematics learning, with an average questionnaire value of 32,3 (2) the results of the tests carried out by the students resulted in a percentage completeness of 88,04 and 75 percent of the number of students, indicating that it was effective. The differences of this study with the previous study is focus on online mathematics learning. he similarities of this study to the previous study were; use the wordwall application in learning process as measured the effectiveness learning media based on technology in   their   thesis.

C. Theoritical Framework

Vocabulary is a crucial part of language for kids. Especially for beginners, knowing vocabulary knowledge may make it easier to grasp the topic. When

students have a restricted vocabulary, it might be difficult for them to grasp the information.

In this era of technological advancement, teachers can take advantage of existing technology to support the learning process to make it more interesting and fun for students. The media can also be used to support students' vocabulary mastery. so that in this study, the researcher intends to examine the effect of using the quiz wordwall learning media as a solution to increase student motivation and vocabulary mastery.

In use, it can be shared directly via the link. And attract students to learn and be able to do their work enthusiastically. In evaluating online learning, online learning is not a daily test activity, so it does not focus too much on the value obtained by students. With the category of playing using an online learning evaluation application is active play, namely the pleasure that arises from what students do.

D. Action Hipothesis

Hypothesis is a temporary answer to the problem of theoretical research that is considered most likely and highest levels were correct. The hypothesis of this study can be seen as follows:

1. Null Hypothesis (HO) : there is no significant difference between using wordwall

   application in improving students' vocabulary mastery.

2. Alternative Hypothesis (Ha) : there is a significant difference between using wordwall application in improving students' vocabulary mastery.

CHAPTER III
RESEARCH METHODOLOGY

A.   Types of Research

The method of this research was quantitative research. This research was categorized as an experimental research design. Experimental research is one of the best research methodologies that writer can use. The writer used experimental research design to identify the effectiveness of using word wall strategy on students' vocabulary achievement. Here the experimental group and the controlled group were selected. Both group took a pre-test and post-test, which only the experimental group receives the treatment.

The design of this research was classified as quasi experimental research. The writer used quasi experimental research because they compared the group using word wall strategy and the conventional group. The conventional group means that the researcher will use the method that is usually used by the teacher. In this research, the writer focused on students' vocabulary mastery using word wall strategy.

B.   Subject of the Research

The subject of this research was ninth grade students of SMPN 02 Semarang at academic year 2023/2024. It consisted of 2 classes, namely: VIII-F with 33 students, and VIII- I with 33 students. So, the total of subject of this study were 66 students

C.   Setting of the Research

This research was conducted at SMPN 2 Semarang which is located at Brigjend Katamso street No. 14, Semarang. The place was chosen as a research location because it has problems in the form of low students' vocabulary mastery and less interest in learning English lesson.

D.   The Procedures of the Research

The instrument used in this research was a test divided into two parts based on the time when giving a test; pre-test and post-test. There were 45 questions of multiple choices that covered leaners understanding about pronoun, noun, adjective and verb. The questions of the test had various types, included fill-in-

the blank, word replace, translation, reading comprehension question, antonym and synonym. For the content of the test had been validated by Mrs. Setyo, as an English teacher, whether for the pre-test and post-test questions had been validated by class VIII-F and VIII-I of SMP Negeri 02 Semarang which consisted of students in total.

E. Technique of Collecting Data

In collecting the data, some steps were applied as follows:

1. Giving pre-test to the control group.
2. Giving treatment to the control group by using lecturing method
3. Giving pre-test to the experimental group
4. Giving treatment to the experimental group by using Word Wall method and flash card.
5. Listing the scores of pre-test and post-test into table for the experimental group and control group.

F. Technique of Analyzing data

The technique of data analysis this research used a statistical analysis of normality, homogeneity and t-test. These statistical analyses did in steps, which firstly the data calculated in normality test, then homogeneity test and last t-test that purpose to highlight the difference result between pre-test and post-test of each group; control and experiment class. It was calculated by using SPSS software.

1. Test of Normality

   Normality test is a test to find out the data already distributed normal (Enterprise, 2018, p. 49). The analysis were using Kolmogrov-Sminorv and Shapiro-Wilk table. In SPSS software, the researcher did analysis by clicking analyze menu – descriptive statistics – explore. In conclusion as a decision, there are two principles; if value of Sig. more than 0.05 means data distributed normal while value of Sig. less than 0.05 means data distributed not normal.

2. Test of Homogeneity

   Homogeneity test used to know the variance from two classes whether same or not. This test, also normality test, becomes the requirement to do T-test. In SPSS software, the researcher did analysis by clicking analyze menu – descriptive statistics – explore. To take the final decision, there also two

principles; if value of Sig. more than 0.05 means data have homogeneity while value of Sig. less than 0.05 means data have not homogeneity.

3. T-test

T-test is a type of statistical analysis used to determine if there is a significance difference between the means of test result from two groups (Hayes, 2021). Based on the samples, t-test divided into three categories; independent sample T-test, paired sample t-test and one sample T-test. Moreover, this research conducted independent sample T-test because it measures the difference of means test from two unpaired sample. In SPSS software, the researcher did analysis by clicking analyze menu – compare means – independent samples T Test. For taking the final decision, there are two principles;

1. If value of Sig. (2-tailed) less than 0.05 means there is any significance effect

2. While if value of Sig. (2-tailed) more than 0.05 means there is not any significance effect

4. Effect size

Effect size is a type of statistical analysis to measure how far the test measurement effect in which level the significance whether low, medium or high. Mostly determining the effect size used a formula Cohen. The researcher calculated it through Microsoft Excel.

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