

IMPROVING STUDENTS' VOCABULARY BY USING WORD GAME APPLICATION

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Abstract : This study aims to prove whether the Word Game Application which is Wordscapes can help students to improve their vocabulary or not. In this study, the researcher employed the quantitative research method. The subject of this study is class X J at SMA N 1 Kotamobagu which consists of 30 students (13 are boys and 17 are girls with an average age of 15-17 years old). Data were collected using pre-test and post-test design in the form of matching tests. The result of this study proves that the mean scores of the post-test are higher than the mean scores of the pre-test. The mean scores of the pre-test is 63.16 and the mean scores of post-test is 85.83. Based on the results obtained, it can be concluded that the Word Game Application which is Wordscapes can help students to improve their vocabulary mastery and make students more enthusiastic in learning.

Keywords : *Vocabulary Mastery, Word Game Application, Wordscapes*

INTRODUCTION

Language is very important for our life in the world, because it is used as a tool of communication in all aspects of human beings. With language someone can transmit his or her idea, information and attitude with others. According to Hampp (2019), "Indonesian children should be taught English from an early age." In Indonesia, English is not considered as a second language but English is a foreign language (Deris & Shukor, 2019). Vocabulary plays a great role in language learning as learners would face difficulties in language learning if they have insufficient vocabulary knowledge (Susanto, 2017). Vocabulary is a crucial component of language. People can't communicate or express themselves properly if they lack of vocabulary. It's nearly hard to learn a language without words, even human communication is founded on them. Pupils must have a strong command of language in order to easily comprehend and generate such works (Mamaghe, Rombepajung, &

Hampp, 2020). "Vocabulary is the biggest component of any language. If you do not know enough vocabulary you will not be able to express yourself adequately". (McCarthy, 1990). In his work entitled *How to Teach Vocabulary*, Thornburry (2022) explains, "without grammar very little can be conveyed, without vocabulary nothing can be conveyed."

According to Douglas Brown (2001), "Teaching is guiding, facilitating learning, enabling the learner to learn, and setting the condition for learning". In relation to teaching English, instructional media such as games have very significant roles to motivate the students to learn vocabulary. A game is an activity with rules, a goal and element of fun, which is divided into two kinds; competitive games, in which players or teams race to be the first to reach the goal and cooperative games, in which players or teams work together towards a common goal (Hadfield 1998:4). Using games in teaching and learning English will not make students easily get bored. Therefore, to increase student's

ability in English the teacher has to think how to make students mastery English for their own purposes. There are so many approaches, methods and techniques that can be used by the teacher. According to Tahrin, Wowor & Liando (2018), "In practice, vocabulary is difficult for students to comprehend. They feel so hard to memorize that because the teacher still uses the old method for teaching it through only writing down on the white board and asked them to translate and memorize the words".

Electronic learning system is a term that can be defined as a form of information technology applied in the field of education, which can be in the form of a website that can be accessed anywhere. E-learning is the basis and logical consequence of the development of information and communication technology. Maru *et al* (2022) explain, E-learning provides an alternative to teaching techniques that empowers students to be more active learners. Nowadays, learning is very easy to do and can be done anywhere with technology, through online learning students can more easily to improve their language skill as said by Karisi, Pelenkahu & Maru (2021). The growing interest in education led to the emergence of many online learning materials and activities that were used to develop a variety of language skill. Moge (2019) states "English is an international language used all over the world, for education, technology, political, and commercial purpose." One technique that was used by the teacher to increase student's ability in English is games. Through games there are so many advantages for students and teacher in learning process. According to Nguyen & Nga (2003), "Games have been shown to have advantages and effectiveness in learning vocabulary in various ways. The student can be more motivated and challenged. One of the benefit educational

games is Educational games can stimulate children's mind and creativity (Ismail, 2009). There are several things that can be done in digital game-based learning include determining the game to be used, explaining the learning concept, explaining the rules of the game, playing the game, summarizing knowledge and reflecting (Firdaus, 2022).

In learning, the teacher must be more creative in choosing learning media so that students can develop according to the times, there are many technologies that teacher can use in their learning media, one of them is smart phone that can be used for students to learn online. Maru *et al* (2022) said the use of technology in this era makes teachers to adapt to platforms and media as the means of learning. The use of e-learning has penetrated Smart Phones which ultimately become a form of flexible learning media because it is integrated with the internet and all relevant applications.

According to (Sung, Chang, & Tzu, 2016) in their research suggested that the development of learning designs make more use of mobile devices to facilitate the achievement of learning objectives. This is in line with research conducted by Putrawangsa & Hasanah (2018) that technology plays a role in increasing students' conceptual understanding and students' intuition in subject matter. One way to develop learning media is by using gadgets. "Nowadays, the application of modern method in accomplishing all tasks is preferable in almost all sectors in modern life compared to a traditional method due to the rapid advance technology (Maru, Pikirang, Setiawan, Oroh, & Pelenkahu, 2021).

Based on the researcher experience of teaching practice at SMA N 1 Kotamobagu the researcher asked students to play guessing games by giving nouns that are in the class and verbs that are often used every day, but the researcher found out

that most of the senior high school students had very limited vocabulary because the students have difficulty guessing every word that the researcher gives.

RESEARCH METHODOLOGY

This study employed quantitative experimental design. Experimental studies are “those in which the investigator deliberately manipulates some factors or circumstances in order to test the effect on some other phenomenon,” (Butler, 1985). The study proposed here is Pre-experimental study because it attempts to describe a cause-effect relationship between the independent variable, the use of Wordscapes application and the dependent variable, student’s knowledge of vocabulary. This study used quantitative approach because it used numbers or statistics for data processing. The experimental study refers to is the one called Pre-experimental study using one group pre-test and post-test design.

The researchers calculate the results by using mean score formula to find the average of the results, so the researcher was provide the pre-test and post-test in the form of a work sheet. First of all, the pre-test was given to students before treatment is to give students a test containing 10 numbers and asked students to arrange the jumbled letters into 2 correct words in each number. Furthermore, treatment or learning materials was given by asked students to download the Wordscapes application and complete levels 1-10 in the game.

In the last step, the post-test was given to students a test containing 10 numbers and asked students to arrange the jumbled letters into 2 correct words in each number. So, the pre-test and post-test that was given are same. The data was collected through a test. There were consists of 10 numbers. There are 20 vocabularies that students have to get, each word is given a score of 5 and if they don’t

get 1 word they are given a score of 0. That means the total score when students can get all the vocabularies are 100.

FINDINGS AND DISCUSSION

The Result of the Pre-test and Post-test

After the researcher gave the pre-test, treatment and the post-test, below the researcher presented the results of the pre-test (T1) and post-test (T2) in tabular form and the name of students/subjects who participated in this study. Below is a data matrix table of pre-test and post-test which contains the number of subjects/students and the results of the pre-test and post-test that have been carried out.

Table 1. Data Matrix of the Pre-test and Post-test

Subject/ Students	Pre-test (T1)	Post-test (T2)
1	90	100
2	70	95
3	80	100
4	80	95
5	40	75
6	80	85
7	45	60
8	80	100
9	75	85
10	65	85
11	70	75
12	30	75
13	75	90
14	55	80
15	75	100
16	80	95
17	40	100
18	70	80
19	55	60
20	55	85
21	60	65
22	65	90
23	60	65
24	55	85
25	35	80

26	70	100
27	85	100
28	65	95
29	45	95
30	45	80
N = 30	1.895	2.575

From table 1, there are thirty (30) students who took a part in the test, we can see that all students can improve their score. Out of 30 students, there were five students increased (5) points, there were three students increased (10) points, there were five students increased (15) points, there were three students increased (20) points, there were four students increased (25) points, there were four students increased (30) points, there were two students increased (35) points, there was one student increased (45) points, there was one student increased (50) points, there was one students increased (55) points and student who increased (60) points is one.

So the result of this study indicates that the application of learning using learning media based on the Wordscapes game in improving students' vocabulary mastery, can change students' scores from the first test (pre-test) and second test (post-test).

The Mean Score of Pre-test

After the researcher gave the pre-test, below the researcher presented the results of the pre-test by using the mean score formula.

Table 2. The Mean Scores (\bar{x}) of Pre-Test (T1)

Subject	T1
1	90
2	70
3	80
4	80
5	40
6	80
7	45
8	80
9	75

10	65
11	70
12	30
13	75
14	55
15	75
16	80
17	40
18	70
19	55
20	55
21	60
22	65
23	60
24	55
25	35
26	70
27	85
28	65
29	45
30	45
N = 30	$\Sigma X = 1.895$
	\bar{x} (Mean) = 63.16

After calculating the results of all score of the sample ($\Sigma X = 1.895$) from the pre-test result and calculating the total number of students ($N = 30$), to get the mean score result, the all score of the sample ($\Sigma X = 1.895$) are divided by the number of students ($N = 30$). In this research, the researcher obtained the mean score of the pre-test is ($\bar{x} = 63.16$).

The Mean Score of Post-test

After the researcher gave the post-test, below the researcher presented the results of the post-test by using the mean score formula.

Table 3. The Mean Scores (\bar{x}) of Post-Test (T2)

Subject	T1
1	100
2	95
3	100
4	95
5	75

6	85
7	60
8	100
9	85
10	85
11	75
12	75
13	90
14	80
15	100
16	95
17	100
18	80
19	60
20	85
21	65
22	90
23	65
24	85
25	80
26	100
27	100
28	95
29	95
30	80
N = 30	$\Sigma X = 2.575$
	\bar{x} (Mean) = 85.83

After calculating the results of all score of the sample ($\Sigma X = 2.575$) from the pre-test result and calculating the total number of students ($N = 30$), to get the mean score result, the all score of the sample ($\Sigma X = 2.575$) are divided by the number of students ($N = 30$). In this research, the researcher obtained the mean score of the post-test is ($\bar{x} = 85.83$).

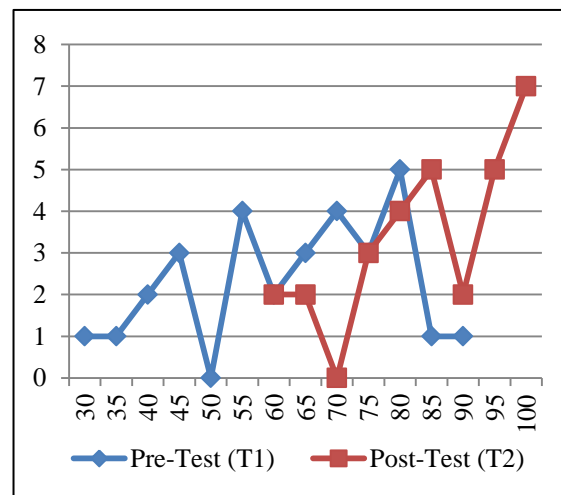
The Mean Score of Pre-test and Post-test

After getting the mean score results of computation from the pre-test and post-test, the researcher presents the mean score results from the pre-test an post-test in the form of one table.

Table 4. The Mean Scores (\bar{x}) of Pre-Test and Post-Test (T1 T2)

Pre-Test (T1)		Post-Test (T2)	
$\Sigma X(T1)$	1.895	$\Sigma X (T2)$	2.575
N	30	N	30
Mean Scores	63.16	Mean Scores	85.83

From table 4, there are the result of the Pre-test (T1) and Post-test (T2) with total number of students (N), 30 (thirty). Total number of student's score in Pre-test are 1.895 and got the mean scores 63.16, while the total number of student's score in Post-test are 2.575 and got the mean score 85.83. According to the result, the Wordscapes Application can improve students vocabulary.



Graph 1. Graphic Polygon of Pre-test (T1) and Post-test (T2)

The results of this study showed that all of the students score in post-test is higher than pre-test. There were thirty students who took the test and managed to improve their ability or knowledge. When the two tests were compared, in the second test or post-test there were seven students who got the highest score of one hundred (100) with a percentage of 23.33%, then five students got ninety-five (95) or 16.66%, then two students got ninety (90) or 6.66%, five students got eighty-five (85) or 16.66%, four students got eighty (80) or 13.33%, three students got seventy-five (75) or 10%, then two students got

sixty-five (65) or 6.66% and the last two students got the lowest score on the second test or post-test score of sixty (60) or 6.66%. The pre-test shows the mean value (T1 = 63.16) which is lower than the post-test where mean value (T2 = 85.83), from this results can be proven that students' vocabulary increases with a score (22.67). This means that the results of the post-test (T2) after the treatment are better than the pre-test (T1) carried out before treatment.

Based on previous research (Fahmiati, 2016) word games can increase students' vocabulary with pre-test results (T1 = 59.4) and post-test result (T2 = 78.3), from these results it can be proven that have been carried out students' vocabulary increases (18.9). The other research (Hidayat, 2016) presented the result of the effectiveness of the word game with pre-test (T1 = 57.6) and the post-test (T2 = 85.2) the students' vocabulary increases with a score (27.6). From these two studies, it can be seen that this study is in accordance with a previous study, it is proven that learning to use Wordscapes game media learning is very helpful in increasing students' vocabulary. Nowadays, there are so many students who have difficulty in increasing vocabulary, students are more interested in game than learning to use book.

When the researcher gave the pre-test the students were not enthusiastic about doing the test, but after the researcher asked the students to download the game application, the students very enthusiastic in playing the game. Even when the researcher asked them to complete the Wordscapes game up to level 10, the students very fast in completing it even though the students finished the game more than level 10. Must be wise and creative enough to create interesting teaching media to help our students understand as much vocabulary as possible to succeed in listening, speaking, reading, and writing (Andries, Hampp,

Rombepajung, & Lengkoan, 2019). Learning while playing is something that students like and interested. Before the researcher used the treatment using Wordscapes game application, students had difficulty doing the test (pre-test), but after the researcher given the treatment the students were very enthusiastic in completing the game. After researcher given the second test (post-test) the students completed the test faster because words the students found in the game almost all of them were memorized.

CONCLUSION

After analyzing the data, it found that all of the student's vocabulary in post-test is higher than pre-test. It means students can improve their vocabulary by applying Wordscapes Game Application. It can be seen from the data analyzed, the test score before treatment or pre-test (T1) is lower with a mean score of 63.16, compared to the score of the second test conducted after treatment or post-test (T2) with a mean score of 85.83. By using the Wordscapes game in learning, students are more enthusiastic and it is easier to learn to use something fun in competing to get the highest score. From the result that has been carried out at SMA N 1 Kotamobagu above, shows that students' vocabulary can improve by using Wordscapes Game Application.

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