



Word Find Games for Learning Vocabulary in Junior High School

Robi'atul Addawiyah¹, Yuyu Heryatun², Rohman³
^{1,2,3} Universitas Islam Negeri Sultan Maulana Hasanuddin Banten
robiatuladdawiyah@gmail.com

Submitted: March 29, 2023

Revised: August 12, 2023

Accepted: September 22, 2023

Abstract

This research discussed learning vocabulary in 8th grade junior high school through mobile games (Word Find). To get the results, researchers used the pre-experimental research design which was carried out to 8th junior high school at MTsN 5 Tangerang. The population used is 35 students in one class. The researchers used purposive sampling. Researchers used tests in the research. There are two tests, namely pre-test and post-test. Pre-test and post-test were conducted to compare whether the implementation of mobile games was effective or not in this research. The data were collected using pre-test and post-test. The result showed that the average pre-test result is 5.22 and the average post-test result is 8.1. According to the data, the value of t_{count} is bigger than t_{table} , $t_{count} = 0,046 > t_{table} = -2,032$. So, H_0 is rejected and H_a is accepted. It means this application is effective and the teachers can use a Word Find application as vocabulary learning media.

Keywords: learning vocabulary, vocabulary, word find

Introduction

Vocabulary refers to a person's understanding of words and their meanings. Vocabulary, on the other hand, is more complicated than this definition suggests (Lehr, et al., 2000). Vocabulary is about words - where they come from, how they change, how they relate to catch others and how we use them to view the world. You have been using words since before your second birthday to understand the wishes of others and to make your own wishes and feelings known (Bauer, 1998). Vocabulary teaching in schools is generally carried out through (1) teaching vocabulary and its meaning through its use in context, (2) a process of analysis and synthesis of vocabulary when elements of word meanings are taught, (3) direct teaching of word

meanings from word lists (Syamsi, 1998). The researcher feels that the method is too ordinary and boring for children. Therefore the researchers see many game applications that can be applied to vocabulary learning so students don't get bored learning vocabulary.

The researchers saw many game applications but are only interested in one application, namely Word Find. Word Find is an application developed by Tao Lin in Fantasy Word Games and launched on November 16, 2018. This game has been downloaded by almost 10 million people and has a rating of 4.6 out of 183.000 followers. It has a storage capacity of 53 megabytes and only available in the Google Play store; it is only available to Android users.

Word Find is a word game application in English. Players will arrange the letters



provided into a word. The higher the level passed, the more difficult it is to compose words. Word Find is almost the same as the Scrabble game.

Scrabble is a word-building game in which players use small tiles with letters of varied point values to form words. It can be played with two to four people in a family setting. Scrabble is a game of incomplete data (Sheppard, 2002).

It can be seen from the explanations of the two vocabulary games, the comparison is if each letter unit Scrabble has a score, while Word Find after the game is finished will only be notified of the score. The difficulty level of Scrabble and Word Find is also quite different, Scrabble has a level of difficulty in reaching the score because you have to adjust each letter you have to play, while Word Find has difficulty in each level, the higher the level the more difficult it is.

This research was applied to 8th grade students at MTsN 5 Tangerang in 8.1 class with a total of 35 students who are quite lacking in English skills and lack a lot of knowledge about English vocabulary. This deficiency is caused because students are not interested in boring English lessons.

According to Tambaritji & Atmawidjaja's research (2020), learning with games makes students happy and crossword puzzles are suitable for helping students remember and increase their knowledge of English. According to Nova research (2019), mobile games are teaching that has a positive

impact on students. Students can develop their abilities in a fun way through mobile games. From previous studies, researchers took interesting things and problems that could be researched, namely learning vocabulary with mobile phones. All of this is also seen from the sophistication of technology and almost all students use gadgets all the time, so researcher wants to make these gadgets the positive thing for students.

Based on the problem, the statement of the problem could be formulated as follows: how is the implementation of Word Find to develop students' vocabulary learning. The purpose of this research is to provide a fun learning method by learning to use game applications and see whether Word Find is successful or not as a learning medium.

A hypothesis is a statement regarding a particular condition or parameter (such a mean or difference) that may be investigated using a population sample. A hypothesis might be a claim concerning the difference between two sample parameters (for example, the mean consumption of males and females are differs). It can also be used as a criterion for making a decision (e.g., teenagers spend an average of four hours per day on the Internet). The data from the sample is required to acquire evidence for or against the statement (Sarstedt & Mooi, 2019). The hypothesis of study could be stated as follow: (H_a) means that the implementation of mobile games (Word



Find) for learning vocabulary in 8th grade junior high school can affect students' vocabulary knowledge; (Ho) means that the implementation of mobile games (Word Find) for learning vocabulary in 8th grade junior high school cannot affect students' vocabulary knowledge.

Theoretical Review

Vocabulary is defined as the knowledge of words and their meanings. Someone else might define vocabulary as a set of terms with definitions sorted alphabetically. The meaning, register, association, collocation, grammatical behavior, written form (spelling), spoken form (pronunciation), and frequency of a word are all described as qualities or features in most linguistic analyses (Alizadeh, 2016). There are kinds of vocabulary that the readers need to know, the kinds of vocabulary based on language skill/performance and language knowledge/competence to have knowledge based skill. Two productive skills, speaking and writing, and two receptive skills, listening and reading, are included in the language performance. These abilities are dependent on their medium, which includes the mouth and voice (for speaking) as well as the hand, pen, paper, board-marker, and board (for writing) (Said, 2021). The steps in teaching vocabulary can be classified into three categories: presenting, practicing, and revising. The most important step in teaching

vocabulary is the presentation stage. These are some techniques used in the presentation of new vocabulary items: visual techniques, verbal techniques, context building, and translation, (Phung, 2021).

Mobile games are games that are played on mobile devices with wireless communication capabilities, such as cell phones and tablets. Mobile games are games that are designed to be played on small mobile computing devices like smartphones and tablets (Nguyen, 2015). Mobile games typically fall into two broad categories: casual games and hardcore games, with multiplatform games providing a bridge between mobile games and play on other platforms (Chehimi, et al., 2018). Word Find or word search is like a game of hide-and-seek: we hide the words; you go seek them. Each puzzle has two main parts: a grid and a word list. The grid looks like a meaningless jumble of letters, but it actually hides all the words and phrases in the word list in most books, magazines, and newspapers, word search grids are rectangular or square in shape (Danna, 2003). In this statement, the researchers conclude that Word Find is a word game application in English. Players will arrange the letters provided into a word. The higher the level passed, the more difficult it is to compose words.

In educational contexts, games have been discovered to be a serious and widespread aspect for giving stimulation and simulation. Since gaming is a crucial activity



in children's off-school practices, and most interactive games provide learners with communication activities as they play games, games have frequently been associated with children's leisure activities in informal situations. Vocabulary instruction might take a long time. The learners' interest will grow if the games are enjoyable, calming, motivating, and confidence-building. To ensure that learning continues, it is necessary to determine whether the games give learners an ongoing incentive. Although excitement is beneficial in driving learners to return to a game, it is critical to ensure that the excitement factor does not interfere with the learning objectives. In particular, the level of excitement created by game play is primarily linked to game skills. However, requiring advanced game abilities to play instructional games may be excessive (Ashraf, et al., 2014).

Tambaritji & Atmawidjaja (2020) explained that one way to make learning fun is to use games as a teaching method so that students feel happy learning in class. They use word games in the teaching and learning process in class to improve students' vocabulary mastery. Crosswords can train students to remember words and their meanings, because crosswords are a type of game that is related to the formation and discovery of words. Crossword puzzles are one method that can be used in learning English specifically in improving students' vocabulary mastery.

According to Nova (2019), she explained that mobile games can be one of the alternatives in the teaching process in the class that can have a positive impact on students, with the advantages of easy to use, simple does not require cables, or electricity so it is more effective and efficient. The use of mobile games can be one of the strategies and media that can be used to improve students' vocabulary mastery skills in a more fun and effective way to achieve maximum learning outcomes. Thus, it can be concluded that learning vocabulary using mobile games and Word Find can improve students' ability to learn English, especially learning vocabulary.

Method

The method used in this research is pre-experimental. There are at least four major experimental research designs: pre-experimental, single-case, randomized experimental and quasi-experimental designs (Phakiti, 2014). Pre-experimental designs are more exploratory than confirmatory in regard to making inferences about the relationship between an independent variable and a dependent variable. Usually pre-experimental research is carried out in an intact or existing class. The three most common pre-experimental designs are: a one-group posttest-only design, a one-group pretest-posttest design, and a posttest-only with non-equivalent groups. The researchers focus on a one-group pretest-posttest, researchers focus



on this method because the research instrument also focuses on pre-test and post-test, and researchers only need one group for their research. This pre-test and post-test were compared to find out whether mobile games were effective for vocabulary learning.

This research was conducted at the 8th grade of junior high school at MTsN 5 Tangerang. The population that is, the group of cases, meeting particular criteria, to which the researcher intends to generalize the study's results (Andrew, et al., 2011). This research took the population of the 8th grade students in the second semester of junior high school at MTsN 5 Tangerang and the students who will be researched are around 35 students from 8.1 class. In this research, the researcher used purposive sampling. The researcher took this sampling since there were clear considerations and requirements, namely 8th grade students in the second semester of junior high school who attended MTsN 5 Tangerang.

The instrument of this research is a test. There are two kinds of tests carried out by researchers, namely pre-test and post-test. The pre-test was conducted to determine the students' scores before starting the research, namely the implementation of mobile games as vocabulary learning. The post-test was carried out after the implementation of mobile games as vocabulary learning. Pre-test and post-test were conducted to compare whether the implementation of mobile games

was effective or not in this research. The type of test that will be carried out is in the form of a word search or crossword puzzle. The researcher chose the test as a data collection technique, because in accordance with the statements of the problem the researcher found that mobile games can be effective or not in learning vocabulary, and mobile games can be used as learning media for the long term or not.

The one group pre-test and post-test design could be formulated as follows (Cohen, et al., 2007).

Table 1. One Group Pre-test Post-test Design

Pre-test	Treatment	Post-test
<i>Opre</i>	X	<i>Opost</i>

Note:

Opre : Pre-testing is the first step in determining a student's language competence before the researcher gives the treatment.

X : Treatment done in two times. the treatment is that students play word find after the pre-test is done. After students play word find students write new vocabulary they know from playing Word Find.

Opost : Post-test is the second test that is used to measured students' vocabulary achievement after the researcher giving the treatment (Chesy, 2018).

The following is a notion for collecting student data from the scores that will be obtained through tests based on knowledge of vocabulary (Webb, 2012).



Table 2. The Elements in Vocabulary

The Elements in Vocabulary	Description
Written	In this written assessment, students will be assessed on the spelling of a vocabulary.
Meaning	In the assessment of meaning, students will be assessed based on knowledge of the meaning and expression of a vocabulary.
Grammar	The constraints of a language influence whether words are created and arranged into sentences.

Result

The aim of this research is to find out whether fun learning using the mobile game Word Find is successful or not as a learning medium for learning vocabulary. Accordingly, the researchers used the pre-experimental method with test instruments and the tests included pre-test and post-test. The test is in the form of a crossword puzzle. The pre-test is carried out before students play word find and the post is carried out after students learn using word find media. So researchers can see the results of this research from the instrument test.

The researchers had conducted the research for about four weeks which consisted of pre-test on 4 on March 4, 2022, the first treatment in learning English using Word Find on March 11, 2022 and the second treatment on March 18, 2022, and the last week is the treatment to do post-test on March 25, 2022.

Before using Word Find as the learning method, the researcher did a pre-test. The pre-test was carried out in the form of a crossword puzzle. The pre-test is carried out

before students do the learning by using word find. The pre-test was conducted to determine students' abilities before learning by using the word find application. Students' pre-test results were poor, many students did not have much knowledge of English vocabulary, those who could not spell vocabulary correctly and students had difficulty in making sentences from the vocabulary.

After the pre-test was carried out, there were only two students who got quite good grades with scores of 9.3 and 10. However, there was also one student who got the lowest score that is 0.8. Therefore the students' mean score of pre-test is

$$\bar{X} = \frac{\sum X}{n}$$

$$\bar{X} = \frac{182,7}{35}$$

$$\bar{X} = 5.22$$

Before the researchers carried out teaching and learning, the researchers asked students to download the application on their cellphones after carrying out the pre-test and teach students how to play word find app.

At the next meeting the researchers conducted teaching and learning, the researcher gave material about the announcement after finishing giving the material and the students understood the material. Students are asked to play the word find application and find the vocabulary from the word find. Students are asked to play from level 1-5. After finishing playing the

students were asked to look at the collection of vocabulary that had been found while playing. Then, the researcher asked students to write the vocabulary that had been found on the notebook and translated. When finished, the researcher gave assignments to students to make an announcement using the vocabulary that had been found while playing the word find application.

The next meeting, the researchers provided short letter material. After providing the material, students were asked to play the word find application from level 6-10, the same as the previous meeting. Students wrote the vocabulary they had found and translated it. Then the researcher gave them an assignment in the form of making a short letter using the vocabulary the students had found. At this meeting students are more familiar with vocabulary that has previously been played in the Word Find game, students can also translate well and make sentences well, although there are some words that students cannot make into sentences.

On the last day students were asked to play the word find application level 11-15 then students were given a post-test. This post-test is to inform the results of learning using the Word Find application whether it was successful or not in increasing students' knowledge of vocabulary. After the treatment had been carried out the researcher gave a post-test to the students and the results showed that the students had quite an

increase. The student with the lowest score increases by getting a score of 6. The following is the mean post-test results of students.

$$\bar{Y} = \frac{\sum Y}{n}$$

$$\bar{Y} = \frac{285,4}{35}$$

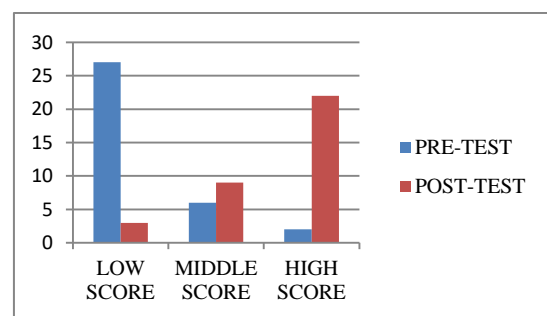
$$\bar{Y} = 8.15$$

The students' different score was calculated by subtracting the students' mean post-test score from their mean pre-test score. In this study, the difference between the students' pre-test and post-test scores was $X_d = 1,039$. The pre-test and post-test scores of the students were different:

$$X_d = \bar{Y} - \bar{X}$$

$$X_d = 8.15 - 5,22$$

$$X_d = 2.93$$



Graphic 1. Pre-test and Post-test Scores

Graphic above explains that there is a significant comparison between pre-test and post-test, this explains that the results from before and after treatment have differences, namely, students have increased in their assessments.



Calculating correlation (r)

$$r = \frac{n(\sum XY) - (\sum X)(\sum Y)}{\sqrt{[n(\sum X^2) - (\sum X)^2][n(\sum Y^2) - (\sum Y)^2]}}$$

$$r = \frac{35(1548,005) - (182,7)(285,4)}{\sqrt{[35(1080,13) - (182,7)^2][35(2371,65) - (285,4)^2]}}$$

$$r = \frac{2037,59}{2622,87} = 0.7768$$

If it is concluded in the t-test formula, specifically for the correlated sample test, the "r" or correlation score is obtained to complete the t-test score calculation. The "r" score is used to analyze correlated data. It means that the data or sample being compared is similar. The research includes analyzing and comparing the treatment results to the same group, in order to see if there is an effect after receiving the treatment in one group. In this study with two correlated samples, the "r" score must be calculated.

Calculate the value of t_{count}

$$t_{count} = \frac{\bar{X} - \bar{Y}}{\sqrt{\frac{S_X^2}{n_1} + \frac{S_Y^2}{n_2} - 2r\left(\frac{S_X}{\sqrt{n_1}}\right)\left(\frac{S_Y}{\sqrt{n_2}}\right)}}$$

$$t_{count} = \frac{5,22 - 8,15}{\sqrt{\frac{3,718}{35} + \frac{1,306}{35} - 2,0,7768\left(\frac{1,928}{\sqrt{35}}\right)\left(\frac{1,142}{\sqrt{35}}\right)}}$$

$$t_{count} = \frac{-2,93}{\sqrt{\frac{5,024}{35} - 1,553(0,325)(0,193)}}$$

$$= 0.046$$

The t-count is used to continue the effect size calculation. The t-count resulted in a score of 0,046. Following the t-count, the t-

table was determined in order to compare both the t-count and the t-table whether the t-count is higher than the t-table or the t-table is higher than the t-count, so that the null hypothesis or alternative hypothesis could be accepted or rejected.

The researchers used the significant standard of $\alpha = 0.05$ because the study is two-sided, so $\alpha/2 = 0.05/2 = 0,025$ as a result of the computation above. Then, by using determination, to get the t-table at the t distribution: db = n-1, db = 35-1 = 34, so that $t(\alpha/2, db) = t(0.025, 34) = 2.032$ as a result. T-count and t-table were compared by the researchers because the t-count value is 0.046 and the table t-table value is 2.032.

If: $-t_{table} \leq t_{count} \leq t_{table}(\alpha/2) =$
there is a difference.

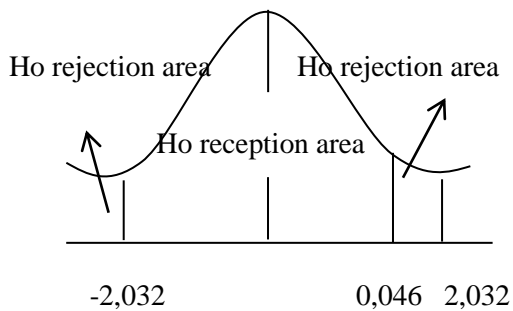
If: $t_{count} > t_{table}(\alpha/2) =$
no difference.

If: $-2,032 \leq 0,046 \leq 2,032 =$

The result: $-2,032 < 0,046 =$

Ho rejected.

It signifies that Ha's conclusion there is no significant difference in vocabulary mastery between pre-test and post-test after utilizing Word Find is accepted. Look at the picture 4.1 below for a better understanding of these findings. The t-count = 0,046 is in the null hypothesis (Ho) rejection area, according to the graph. This indicates that the alternative hypothesis (Ha) has been accepted.



Picture 1. Determination of Ho

After getting the research results, the researchers confirm that studying with mobile phones brings positive results and students can remember and develop their vocabulary in a fun way. The differences that can be seen from previous researchers with this research are in the form of game applications and mobile phones as vocabulary learning media. The results of the pre-test and post-test can be seen that the highest pre-test score is 10 and the lowest score is 0.8, while after the learning treatment through Word Find the highest post-test score is 10 and the lowest is 1.8.

Before deciding on the hypothesis's conclusion, the researcher suggests the following approach for interpretation: (Ha) means that the implementation of mobile games (Word Find) for learning vocabulary in 8th grade junior high school can affect students' vocabulary knowledge; (Ho) means that the implementation of mobile games (Word Find) for learning vocabulary in 8th grade junior high school cannot affect students' vocabulary knowledge.

According to the data, the value of t_{count} is bigger than t_{table} . $t_{count} = 0.046 > t_{table} = -2.032$, so Ho is rejected and Ha is accepted. The study concludes that there is an effect of vocabulary learning with the Word Find game as seen by the students receiving good scores after the vocabulary learning treatment with the Word Find game.

Conclusion

Learning using word find helps students to find out more about vocabulary. Makes students not confused when the teacher gives assignments in the form of stories or other texts. The teacher can also ask students to memorize the vocabulary that students have found while playing word find. With this learning while playing method students also have a new atmosphere in learning English.

Based on the data, the pre-test and post-test can be seen that the highest pre-test score is 10 and the lowest score is 0.8, while after the learning treatment through Word Find the highest post-test score is 10 and the lowest is 1.8., so the value of t_{count} is bigger than t_{table} . $t_{count} = 0.046 > t_{table} = -2.032$, so Ho is rejected and Ha is accepted.

Based on the explanation from the conclusions above, the researchers hope that the teachers can use this word find application as a learning medium and develop learning and teaching or collaboration with other learning methods. The students can also continue and enjoy



learning English and have a lot of knowledge about vocabulary.

References

- Alizadeh, I. (2016). Vocabulary teaching techniques: A review of common practices. *International Journal of Research in English Education*, 1 (1), pp. 22–30.
- Andrew, D.P., Pedersen, P., & McEvoy, C.D. (2011). *Research methods and design in sport management*. Champaign: Human Kinetics.
- Ashraf, H., Motlagh, G., & Salami, M. (2014). The impact of online games on learning english vocabulary by iranian (low-intermediate) EFL learners. *Procedia-social and behavioral sciences*, 98, pp. 287–88.
- Bauer, L. (1998). *Vocabulary*. New York: Routledge.
- Cehimi, F., Clarke, L., & Coffey, M., et al. (2018). *Games on symbian os a handbook for mobile development*. Chichester: John Wiley & Sons.
- Chesy, L. 2018. *The use of word search puzzles to teach students' vocabulary mastery (a survey at english education study program, FKIP Untan Pontianak, Pontianak - West kalimantan)*.
- Cohen, L., Manion, L., & Morrison, K. (2007). *Research methods in education*. New York: Routledge Taylor & Francis Group.
- Danna, M. (2003). *Awesome word search puzzles for kids*. New York: Sterling Publishing Co., Inc.
- Lehr, F., Osborn, J., & Hiebert, E.H. (2000). A focus on vocabulary. *Pacific Resources for Education and Learning*, pp. 1–23.
- Nguyen, D. (2015). *Understanding perceived enjoyment and continuance intention in mobile games (a survey at school of business, Aalto University, Otakaari - Espoo)*.
- Phakiti, A. (2014). *Experimental research methods in language learning*. London: Bloomsboory Publishing.
- Phung, H. (2021). A study on the techniques of presenting vocabulary to increase students' motivation. *Journal of English Language Teaching and Applied Linguistics*, 3 (5), pp. 45–54.
- Said, M.M. (2021). *English vocabulary*. Bandung: Media Sains Indonesia.
- Sarstedt, M., & Mooi, E. (2019). Hypothesis testing and ANOVA. https://doi.org/10.1007/978-3-662-56707-4_6 (Accessed at May 29, 2022).
- Sheppard, B. (2002). World-championship caliber scrabble. *Artificial Intelligence*, 134 (1–2), pp. 241–75.
- Syamsi, K. (1998). Metode pembelajaran kosakata. *Cakrawala Pendidikan*, 1 (2), pp. 15–21.
- Webb, S. (2012). *Depth of vocabulary knowledge*. Oxford: Blackwell Publishing Ltd.