

# The Effect of Teaching English Vocabulary on Junior High School Students By Using Wordwall.net

*by Friza Friza*

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# The Effect of Teaching English Vocabulary on Junior High School Students By Using Wordwall.net

Friza Brillianty Shabrina<sup>1)</sup>, Wahyu Taufiq<sup>2)</sup>

<sup>1)</sup> Program Studi Pendidikan Bahasa Inggris, Universitas Muhammadiyah Sidoarjo, Indonesia

<sup>2)</sup> Program Studi Pendidikan Bahasa Inggris, Universitas Muhammadiyah Sidoarjo, Indonesia

\*Corresponding Author: wahyutaufig1@umsida.ac.id

**Abstract.** The use of the web in the teaching and learning process is one of the fun and challenging learning innovations such as wordwall.net which are educational web games. Wordwall.net offers a variety of interesting and original vocabulary-building games. Through an interview with a teacher, the researchers discovered a problem: student scores are still low in one area of the assessment, so the purpose of this research was to determine whether or not there was an effect of using wordwall.net on students' English vocabulary in SMP Negeri 1 Wonoayu. This research used a true-experimental design with 35 students in the experimental group and 35 students in the control group. A vocabulary test was one of the research tools utilized in this study to gather data. The treatment was carried out for 3 weeks. The data analysis results revealed that there was difference between mean score of pre-test and post-test in both groups. The pre-test mean score was 65.00 (experimental group) and 57.73 (control group) and the post-test average score was 89.13 (experimental group) and 77.90 (control group). With SPSS version 26, an independent sample t-test was used to analyze the data. The result showed that the probability value of both groups is 0.001, so it indicates that wordwall influences students' vocabulary improvement. Therefore, it might be suggested that applying Wordwall.net was beneficial in increasing students' vocabulary knowledge.

**Keywords** – teaching English; vocabulary; wordwall.net

**Abstrak.** Pemanfaatan web dalam proses belajar mengajar merupakan salah satu inovasi pembelajaran yang menyenangkan dan menantang seperti wordwall.net yang merupakan web game edukatif. Wordwall.net menawarkan berbagai permainan membangun kosa kata yang menarik dan orisinal. Melalui wawancara dengan seorang guru, peneliti menemukan masalah: nilai siswa masih rendah di salah satu bidang penilaian, sehingga tujuan dari penelitian ini adalah untuk mengetahui ada tidaknya pengaruh penggunaan wordwall.net terhadap bahasa Inggris siswa kosakata di SMP Negeri 1 Wonoayu. Penelitian ini menggunakan desain true-experimental dengan 35 siswa kelompok eksperimen dan 35 siswa kelompok kontrol. Tes kosa kata adalah salah satu alat penelitian yang digunakan dalam penelitian ini untuk mengumpulkan data. Perlakuan dilakukan selama 3 minggu. Hasil analisis data menunjukkan bahwa ada perbedaan antara skor rata-rata pre-test dan post-test pada kedua kelompok. skor rata-rata pre-test adalah 65,00 (kelompok eksperimen) dan 57,73 (kelompok kontrol) dan skor rata-rata post-test adalah 89,13 (kelompok eksperimen) dan 77,90 (kelompok kontrol). Dengan SPSS versi 26, uji-t sampel independen digunakan untuk menganalisis data. Hasil penelitian menunjukkan bahwa nilai probabilitas kedua kelompok adalah 0,001, sehingga menunjukkan bahwa Wordwall berpengaruh terhadap peningkatan kosa kata siswa. Oleh karena itu, dapat disarankan bahwa penerapan Wordwall.net bermanfaat dalam meningkatkan pengetahuan kosa kata siswa.

**Kata Kunci** – pengajaran bahasa inggris; kosakata; wordwall.net

## I. INTRODUCTION

Teaching English to junior high school students is challenging as while the teacher explains the lesson, students generally shift from one chair to the next, bother friends, eat some snacks in the class, or make noise throughout the teaching-learning process [1]. This is why teachers must be able to establish a technique and a nice environment to stimulate students, keep their interest in varied activities, and ensure their success in learning [2]. Therefore, junior high school students are not new to studying English, but the reality reveals that they still experience certain challenges while using it. They speak Indonesian as their primary language, which differs from English in a variety of ways, including usage of grammar, pronunciation, vocabulary, etc. Students need to be able to speak very well to be able to converse effectively in English [3].

Understanding the meanings of words is a component of vocabulary, which is an important component of language learning and teaching [4]. We can not learn a language without vocabulary since it is one of the language aspects that have direct contribution on the acquisition four language skills of speaking, listening, reading and writing. The ability to communicate and convey our needs in teaching and learning is built on having a large vocabulary [5]. If students lack a vocabulary, they cannot translate the meaning of words and so cannot respond to people. A large vocabulary helps people understand and learn new terms. As the foundation for all language learning, vocabulary learning lays the groundwork for students to learn English vocabulary and use various English learning methodologies rationally [6]. In teaching vocabulary, a language classroom essentially needs educational material that supports English teaching and learning.

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Media has an essential role in motivating students to learn more about the content because it is one of the supporting aspects to the effectiveness of the teaching and learning process [7]. According to The Use of the Media in English Language Teaching Book [8], media in the learning process are communication methods that include visual, auditory, and audio-visual components. The purpose of every kind of media is to increase the students ability to understand the material [9]. The use of web-based learning can give students a new learning environment where they can receive feedback, discover new scientific concepts, and interact with a large group of other participants [10]. This is a new innovation of teaching-learning environment. In online learning, the entire educational process including the course materials, exams, and exercises is web-based learning, whereas in offline learning, web-based learning are replicated to support in-person instruction [11]. The teacher can make good use of using the web-based learning either in online classes or offline classes. Teaching vocabulary using technology offers a fun and challenging chance to be used in the classroom while teaching English as a second language. Utilizing online language games is one tactic. As a crucial skill to develop in language learning, vocabulary has a number of specialized websites, such as wordwall.net, quizizz, and kahoot [12].

Many researches have been completed connected to quizizz and kahoot in recent years. According to Liong's findings and discussions [13], Quizizz enhanced the achievement scores of forty secondary school suburban students acquiring English language idioms in Malaysia. The ease of use of Quizizz made it beneficial to study idioms. Quizizz can also be attempted several times. As a result, students may track their progress and seek to better their existing score. More recent findings Guaqueta and Castro-Graces [14] revealed that the use of kahoot and duolingo has increased students' vocabulary knowledge in Columbia. Furthermore, in the final survey, when students expressed their opinions on the use of technology as a support for language learning, all students gave good responses. Finally, the usage of web-based learning in learning settings has been shown to be effective in both improving students' attitudes and achievement.

Despite the fact that numerous research studies have analyzed the usage of commonly used web-based learning such as quizizz and kahoot, there are also very few researches that have been completed connected to Wordwall.net. Wordwall.net is an educational website that provides a range of interactive and unique activities for vocabulary development, such as information and picture matching, a wheel of fortune, quizzes, and riddles [15]. Teachers may use Wordwall.net to develop interactive games and printed materials for their students. A template system is used to develop wordwall.net activities [16]. The participants in the young age, between 12 to 14 years old are easily attracted to online video games since digital technologies have grown in their daily lives [17]. As a result, students who participated in this study were improved in studying English using the wordwall.net platform since they were familiar with the digital world and had become used to it as a result of their online learning during the Covid-19 pandemic.

The role of the teachers in this web to input content; the rest is handled by the program. Depending on the sort of lesson to be covered, this program offers a variety of topics and game styles. This function enables for activity diversification and saves time for the teacher. A teacher can also modify any current activities to match the sort of class and teaching style.

Additionally, because a score will be released at the conclusion of the game, it may be more entertaining for the students. Scores from all participants were displayed on each section's leaderboard, which encouraged learners to try to win by correctly answering a lot more questions. Therefore, using this website, learners have the opportunity to concentrate and learn on their own. Teachers do not need to explain the complicated game rules to students because the games are simple to understand and lack many rules. I Wayan and Mahfud [18] stated that according to expert assessment, the learning evaluation instrument based on the produced wordwall web application is easy to use, has a positive impact and can improve the performance of students in class X IPS MA As'adiyah, Banyuwangi. Debbie, et. al [19] found that there was a significant influence of Wordwall in teaching the literary component, and game-based learning could improve student results at SMK Sungai Merah in Sibul, Malaysia.

The researches mentioned above are used as an outline to fill the gaps in this study where the researchers used a different method and target participants. In the light of this, The research question of this research aims to find out an answer to "Is there an effect of using wordwall.net in teaching English vocabulary to junior high school students?"

## II. METHODOLOGY

This research required a method that examines the impact of teaching English using wordwall.net which is directly carried out by the researchers. The most effective quantitative research approach for determining a cause and effect link between two or more variables is an experiment, which may be used to examine the impact of different teaching methods on academic attainment in students. There are two types of quantitative research. They are both experimental and non-experimental in design [20]. This research used quantitative research with a true-experimental design. The research framework was shown below.

Table 1. Research framework

GROUP	PRE-TEST	TREATMENT	POST-TEST
Experimental	O1	with wordwall.net	O2
Control	O3	without wordwall.net	O4

This research conducted at 8th grade in SMP Negeri 1 Wonoayu because the researchers previously conducted preliminary observation and found a problem through an interview with a teacher that student scores are still lacking in one aspect of the assessment, namely the assessment of knowledge where vocabulary included in that assessment. There is a lack of tools to assist students enhance their English vocabulary. The sample for this study is 70 eighth-grade students from a population of 288 8th grade students in the 2022–2023 academic year, with 35 students in control group and 35 students the experimental group. Those groups were chosen using random sampling because each member of the population had an equal chance of being chosen. Random sampling is a term that applies to a number of selection strategies in which sample members are chosen at random but with a known probability of selection [21].

The researchers used the tested learning model for conducting the research. The following evaluates were done throughout the research's implementation: (1) delivering a pretest to both groups. (2) Treating the experimental group with learning media and the control group with traditional school learning for acquiring English vocabulary. (3) Giving both groups a posttest [22]. The pretest was carried out before to the treatment. There were 15 minutes allowed. In the treatment, subjects in the experimental group were taught vocabulary using wordwall.net media, which included showing target language vocabulary items in source language context with interesting and exciting games. Subjects in the control group were taught the traditional method without any website media. Both groups had the same learning conditions. Following the teaching of new vocabulary, the researchers asked comprehension questions to evaluate the students' understanding of the words in order to increase their ability to create the words in question. Treatment is carried out for 3 x 40 minutes in one session with the material kinds of sports and sports equipment according to the school curriculum. The researchers prepared the test with 25 items. The form of the test is a multiple-choice and fill-in test since it is familiar to students, easy to administer, and can be scored quickly. Then the researchers gave both groups the posttest.

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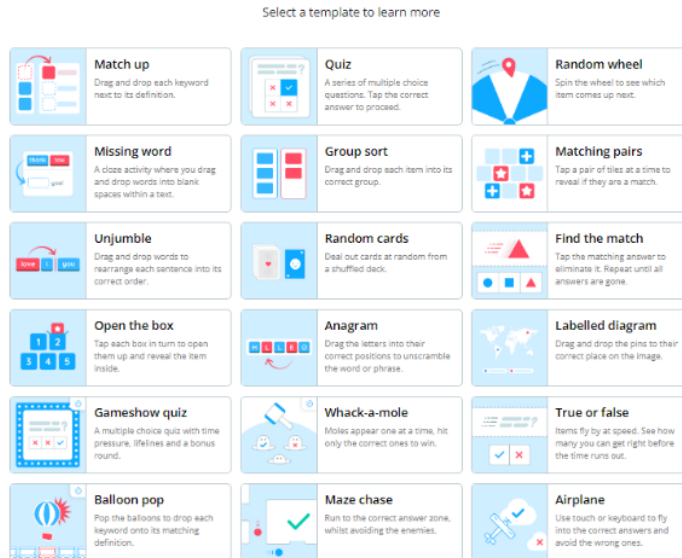


Figure 1. Wordwall.net Appearance

In this study, the main instrument for collecting statistical data was vocabulary tests. In this research, validated and reliable vocabulary tests were used before being test on students. Ensuring the test's content validity involves

looking at the test's material and how it relates to the construct being measured [23]. Expert validators were selected because they have extensive teaching experience in English. Two validators have master's and doctoral degrees in English teaching. It could be assumed that they knew how to assess the validity of the vocabulary test developed for this study. As a result, the vocabulary tests were evaluated and an average score of 3.70 was achieved, indicating that it may be utilized without revision. Furthermore, the Borich formula, specifically Percentage of Agreement (PA), may be used to assess the reliability of expert validation [24]. the Borich technique with the Percentage of Agreement (PA) formula was used to perform the reliability test in this research. The percentage value achieved was 92%, indicating that the vocabulary test in this study is reliable since the proportion of agreement (R) is above 75%.

2 The data consist of pre- and post-tests. The data is analysed using independent sample t-test to determine whether there are significant differences between experimental and control group after the treatment. The researchers used SPSS version 26 to analyze the data. At a level of significance of 0.05, data were analyzed using a paired sample t-test comparison between the groups' test results. The findings of the experimental and control groups' tests are statistically analyzed using the t-test for a two group design [25]. The t-test is used to determine the impact of using wordwall.net on two scores from the pre-test and post-test of teaching vocabulary.

### III. FINDING AND DISCUSSION

2 The study was conducted from 2nd – 17th February 2023 by starting pre-test, treatment, and post-test. The test was administered to evaluate the students' development of vocabulary. Students were given instructions to practice their English vocabulary concerning kinds of sports and sports equipment. After that, the researchers assessed the students' work as research data. After conducting the research and collecting the data, the researchers calculated the data and discovered some results. The researchers obtained the data result through pre- and post-tests in both groups. The most economical way of dealing with data is to reduce its volume from hundreds of sheets of paper to a score group and then to a graph [26]. As a result, the table below displays the means and standard deviations of test results for two groups.

Table 2. Descriptive Statistic Analysis

	N	Minimum	Maximum	Mean	Std. Deviation
Pre-Test Experimental	35	25	85	65,00	13,720
Post-Test Experimental	35	50	100	89,13	13,154
Pre-Test Control	35	25	88	57,73	18,741
Post-Test Control	35	45	98	77,90	15,152
Valid N (listwise)	35				

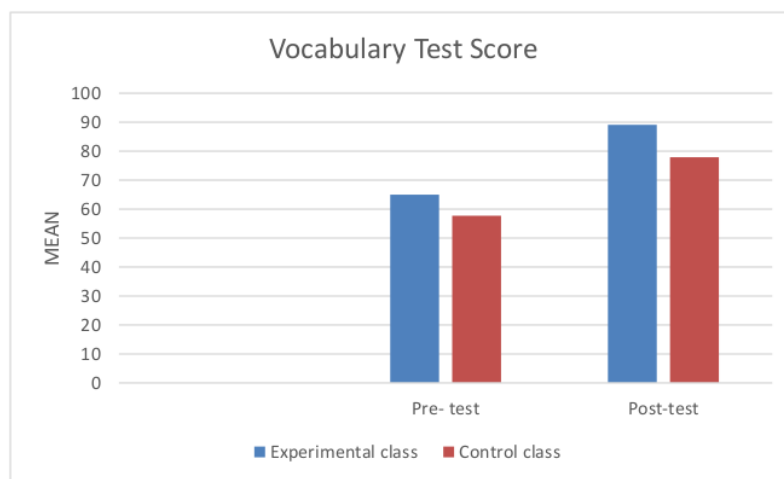


Figure 2. Vocabulary Test Score

2 Table 2 and Figure 2 showed that the experimental group's mean score increased from the pre-test (65.00) to

the post-test (89.13), whereas the control group's mean score improved from the pre-test (57.73) to the post-test (77.90), but not as much as the experimental group's. The independent sample t-test was utilized, which both need a normal distribution of data as a requirement. After students' pre- and post-test results were acquired, the researcher conducted a normality test. So, initially, we examine the normal distribution using the Kolmogorov-Smirnov test, as shown in the table below:

Table 3. The Result of Normality Test

	Group	Sig. (P-Value)
Score	Experimental	0,087
	Control	0,200

The result was found that the normality test significance value of the experimental group was  $0.087 > 0.05$  and control group was  $0.200 > 0.05$ . In the statistical analysis, the level of significance for both groups exceeded 0.05. So it can be concluded that the data of both groups had a normal distribution. After determining that the data distribution was normal, the homogeneity was calculated to determine that both groups were from the same variance. The significance result for the Levene test was 0.101 which significance value were more than 0.05.

Table 4. The Result of Homogeneity Test

	Levene Statistic	df1	df2	Sig.
The Data	2,765	1	68	0.101

It can be concluded that the data was homogeneous. The post-test variances in both groups that correspond to the sample compared in the study should be equivalent or homogeneous [27]. After determining the normality and homogeneity of data distribution, the t-test of the outcome study is calculated to test the hypothesis. With the use of wordwall.net, this measurement aimed to ensure a noticeable improvement in students' vocabulary. The researcher used IBM SPSS version 26 to perform the t-test calculations in addition to the previous calculations. The calculation of independent sample t-test was based on the experimental group's post-test score in table 3 below:

Table 5. The Result of Independent sample T-Test

Levene's Test for Equality of Variances		t-test for equality of means							
								95% Confidence interval of the Difference	
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Equal Variances Assumed	2,765	,101	3,311	68	,001	11,229	3,392	4,461	17,997
Equal Variances not Assumed			3,311	66,684	,002	11,229	3,392	4,458	17,999

The researchers concentrated on producing row equal variances assumed and utilized the significant value of  $\text{sig} = 0.05$ , as the post-test data were homogeneous. According to table 5 above, the result of  $t_{\text{value}}$  for both group was 3.311 with the  $\text{sig. (2-tailed)} = 0.001$  and  $t_{\text{table}}$  of 0.05 (5%) as significance level is 1.99. It can be determined that  $t_{\text{value}} = 3.311 > t_{\text{table}} = 1.995$  and the  $\text{sig. (2-tailed)}$  is  $0.001 < 0.05$ , which means that the null hypothesis ( $H_0$ ) is rejected whereas the alternative hypothesis ( $H_a$ ) is accepted. So there was an effect of wordwall.net in teaching English vocabulary to 8th grade students of SMP Negeri 1 Wonoayu academic year 2022-2023.

In this research, it was determined how well an web tool improved the eighth-grade students' english vocabulary. Participants were selected from two groups with students who had the same language levels and received the same amount of English teaching. The first group was taught vocabulary using textbook activities, whereas the second group practiced vocabulary with the web application Wordwall.net. A pre-test before treatment and a post-test after treatment were used to compare the scores of the groups. The research indicated differences in each group's exams before and after treatment. This research is carried out face-to-face using wordwall.net media in the form of educational games that show English vocabulary. In this study, LCD was used as a tool that helped in the process of getting English vocabulary.

The result of this research is in line with Esra Çil [15] that the use of wordwall.net enhanced vocabulary knowledge of the students where there was significant differences between both of groups before and after the treatment. This is consistent with the findings of Fakhruddin et al. [16] that the result also proved increasing the students' vocabulary. This web contributes to students applying vocabulary mastery and students' impressions of using the web to teach vocabulary. This web tool is likely to be utilized in other areas learning. The wordwall.net is a medium that increases student interest in the learning process, allowing them to be actively involved in the learning process and understand the content offered.

#### IV. CONCLUSION

Based on the results of this study, it can be interpreted that learning techniques using the web tool, wordwall.net are effective in increasing students' English vocabulary of 8th grade students of SMP Negeri 1 Wonoayu. This can be proven by comparing the pre- and post-test mean scores, which show that wordwall.net has a positive impact on teaching English vocabulary. It can also be proven in the result of the independent sample t-test, in which the sig. value of both groups was 0,001.

The findings of this study are expected to contribute to future researchers. They ought to examine at the components that influence the success of web-based learning techniques and look into wordwall.net in other vocabulary or English language fields that are more comprehensible than this research. Furthermore the headmaster of SMP Negeri 1 Wonoayu can motivate the teachers to instruct students as effectively as possible by utilizing the best instructional techniques feasible for each skills, such as teaching vocabulary mastery through the use of wordwall.net. This study may be used as a reference for teachers who want to try applying wordwall.net to increase English vocabulary and it will be a great resource to improve their vocabulary assessment.

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