

The use of the Wordwall Website in Enhancing Students' Mastery of Arabic Vocabulary at Mts Negeri 2 Mataram

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ABSTRACT

This study aims to determine the effectiveness of the Wordwall media in enhancing students' mastery of Arabic vocabulary (mufrodat). The research employed a quantitative approach using a pre-experimental design with a one-group pretest-posttest model. The sample consisted of 32 eighth-grade students from class VIII-A in the academic year 2024/2025. The instrument used was a vocabulary test administered before and after the learning process using Wordwall media. The results of the study indicate a significant difference between the pretest and posttest scores. The average pretest score obtained before the use of Wordwall was 36.5, while the average posttest score after the intervention increased to 83.59. Based on the results of the paired sample t-test, the significance value (p-value) was 0.000. Since the p-value is less than 0.05, H_0 is rejected and H_a is accepted, indicating a significant difference between the pretest and posttest scores after the use of Wordwall media. Moreover, the average N-Gain score reached 72.98%, which falls into the high improvement category. These findings suggest that the Wordwall platform can be used as an effective and engaging learning medium to improve students' Arabic vocabulary acquisition.

INTRODUCTION

Arabic is a Central Semitic language that originated in northwestern Arabia during the Iron Age and is now the mother tongue of over 300 million people. It is one of the most widely spoken languages, especially in the Middle East and North Africa. More than just a communication tool, Arabic holds significant importance as a symbol of cultural identity and the Islamic religion. Its classical form, known as Classical Arabic or the language of the Qur'an, emerged in the 6th century CE and spread with the expansion of Islam in the 7th century. Over time, various regional dialects (Amiyyah) developed, differing in phonology and vocabulary but still considered part of the Arabic language. For formal and written communication, Modern Standard Arabic (Fusha) was developed between the 19th and 20th centuries and is now used in media, education, and government across the Arab world. (Versteegh K, 2014)

Arabic, as a linguistic system, is composed of fundamental elements such as letters, words (kalimah), and sentences (jumlah), which together form its complex structure. (Batubara H., 2021) The Arabic alphabet consists of 28 consonantal letters whose shapes change depending on their position in a word. Words in Arabic fall into three main categories: *ism* (nouns), *fi'l* (verbs), and *harf* (particles), each with distinct morphological and syntactic characteristics. Sentences are constructed based on grammatical rules (*nahwu*) and morphology (*sharaf*), which govern the structure and relationships between components to form meaningful expressions. (Hattab, Muhammad, 2023)

Vocabulary (*mufrodat*) plays a central role in Arabic language learning, serving as the foundation for all language skills. Adequate vocabulary knowledge enables learners to comprehend, speak, read, and write effectively. (Ibnu Samsul Huda, 2020) In this context, vocabulary is not merely instructional content but a key element in developing comprehensive linguistic competence. Hence, both the quantity and quality of vocabulary instruction deserve particular emphasis in the learning process. (Alqahtani M, 2015)

Arabic language learning is a systematic process that involves mastering the four core skills: listening (*istima'*), speaking (*kalam*), reading (*qira'ah*), and writing (*kitabah*). (Hermawan, Acep, 2014) In modern language education, communicative and contextual approaches are essential to enable learners to use Arabic actively in real-life situations. (Al-Dhafiri & Alshammari, 2021) Instruction should also be tailored to students' characteristics and the advancement of learning technologies, requiring teachers to apply innovative methods, media, and strategies. The integration of technology has proven effective in enhancing students' motivation and learning outcomes, especially in vocabulary acquisition and language skills. (Al-Jarf, 2019)

Instructional media play a vital role in Arabic language learning by serving as a channel for delivering messages from teachers to students, thus enhancing comprehension, motivation, and engagement. (A. Muri Yusuf, 2015) With technological advancement, learning media have evolved into more interactive and flexible digital formats. (Sadiman et al., 2019) In the Arabic language context, the use of digital media such as applications, educational games, and online platforms has been shown to significantly improve students'

language skills and learning interest.(Muslich, 2008) Therefore, the strategic selection of digital media is essential to the success of modern Arabic language instruction.(Al-Dhafiri & Alshammari, 2021)

Instructional media play a crucial role in enhancing the effectiveness of Arabic language teaching and learning. Media not only help visualize abstract concepts but also boost students' motivation and comprehension efficiently.(Asrori, 2010) A variety of media types can be used, including print materials, audiovisual tools, and interactive technology-based platforms such as apps and online learning systems.(Yasin M., 2023) Selecting appropriate media strengthens student engagement and enriches the Arabic language learning experience in modern classrooms.

Wordwall is one of the widely used interactive digital platforms in today's education. It was developed by a group of teachers led by Josh Smith, a former TV producer who transitioned into teaching. The platform began as a tool to input word lists with random selection features, inspired by game show formats.(Josh, n.d.) Officially launched in 2016 using HTML5, Wordwall offers customizable templates such as quizzes, matching activities, and word searches.(Wordwall.net., 2025) With its user-friendly and visually engaging design, Wordwall serves as an effective medium to enhance students' motivation and participation in the learning process.

This study utilized Wordwall's interactive features—Spin the Wheel, Quiz, and Matching Pairs—to present Arabic vocabulary (mufrodat). The Spin the Wheel feature applies a gamification approach that enhances students' motivation in learning new words, while Quiz and Matching Pairs strengthen vocabulary comprehension through engaging and interactive exercises.(*About Us*, 2023) Delivering vocabulary content via Wordwall not only boosts student engagement but also allows teachers to adapt materials to the learners' themes and proficiency levels.(Mel., 2009) These findings indicate that Wordwall holds strong potential as an effective tool in teaching Arabic vocabulary.

Madrasah Tsanawiyah Negeri 2 Mataram is an educational institution that incorporates Arabic language instruction, emphasizing mufrodat (vocabulary) as a key component of language skills. Observations and interviews with Arabic language teachers reveal that students' vocabulary mastery remains basic, with an average of 5–10 active words commonly used in daily learning. The learning process predominantly relies on printed materials such as student worksheets, along with lecture-based instruction and written exercises. Digital learning tools such as Wordwall have not yet been utilized, primarily due to limited teacher training in digital media. Nevertheless, teachers acknowledge the potential of technology-based media to enhance student motivation and comprehension in vocabulary acquisition.

LITERATURE REVIEW

Maryam Nurchasanah and Ari Khairurrijal Fahmi (2024)

This study, conducted at MTs Al Muddatsiriyah Jakarta, aimed to examine the effect of using the Wordwall website on the Arabic learning interest of eighth-grade students, particularly in vocabulary (mufrodat) learning. The

research employed a quantitative correlational method. The results showed that the use of Wordwall had a significant impact on increasing students' learning motivation. This was supported by a 2-tailed significance value of 0.015, which is lower than the alpha value of 0.05, leading to the acceptance of the alternative hypothesis (H1) and the rejection of the null hypothesis (H0). Based on responses from 72 students, it was concluded that Wordwall is an effective digital media tool for enhancing students' interest in learning Arabic vocabulary.

Syahidatil Maghfirah (2022)

This study aimed to investigate the influence of the web-based Wordwall platform on students' learning interest. The research was conducted in Grade X TJKT at SMK Negeri 2 Padang using a quantitative approach with a pre-experimental one-shot case study design. The t-test results showed that $t_{count} (5.666) > t_{table} (2.03951)$ with a significance value of $0.000 < 0.05$, indicating that the alternative hypothesis (H1) was accepted. The F-test further revealed that $F_{count} (32.106) > F_{table} (4.16)$, meaning the independent variable (Wordwall platform) significantly influenced the dependent variable (learning interest). The simple linear regression analysis resulted in the equation $Y = 17.830 - 1.225X$, confirming that the use of Wordwall as a learning medium has a positive impact on increasing students' interest, particularly in vocabulary mastery.

Alfia Damayanti (2022)

This thesis aims to describe the development procedure, assess the level of attractiveness, and examine the effectiveness of Wordwall-based educational game media in enhancing Arabic vocabulary mastery among third-grade students at MI Almaarif 02 Singosari. The study employed a one-group pre-test and post-test design using both quantitative and qualitative methods. The developed media was packaged into a website that included usage instructions, an introductory video, a vocabulary poster, and several types of games such as flashcards, matching pairs, card matching, and airplane game. Validation was conducted by three experts: a media design expert (score: 98), a content expert (score: 90), and a learning expert (score: 92). Student responses toward the attractiveness of the media yielded a high score of 95. The results of the pre-test and post-test showed an increase in the average score from 64 to 89, with an N-Gain score of 0.7, classified as moderate. These findings demonstrate that the Wordwall-based media is both effective and engaging in supporting Arabic vocabulary learning.

METHODOLOGY

This study employed a quantitative approach with a Pre-Experimental Design model as outlined. (Sugiyono, 2021) Specifically, the research adopted the One-Group Pretest-Posttest Design, an experimental framework involving a single group of participants who received the treatment without a control group for comparison. (Arikunto, 2019) In this design, measurements were taken twice: before the treatment (pretest) and after the treatment (posttest), in order to determine the extent of the treatment's impact on the variables being studied. (Creswell, J. W., & Creswell, 2018)

The population of this study comprised all students of Madrasah Tsanawiyah Negeri 2 Mataram in the 2025/2026 academic year. The sample was

the VIII-A class, consisting of 32 students. Sampling was conducted using purposive sampling, a non-random technique in which participants are selected based on specific criteria relevant to the research objectives. (Lenaini, 2021) This method enables the researcher to select participants with particular characteristics aligned with the study's focus, ensuring that the collected data provides in-depth and relevant insights. (Fraenkel, J. R., & Wallen, 2009)

The research instrument was an objective multiple-choice test designed to measure students' cognitive learning outcomes, particularly in Arabic vocabulary (mufrodat) mastery. The test consisted of 30 items covering three main categories: isim (nouns), fi'l (verbs), and ħarf (particles), as well as simple idiomatic expressions relevant to the learning material. (Mukhid A, 2021) Prior to implementation, the test underwent validity analysis, difficulty index assessment, discrimination index measurement, and reliability testing to ensure the appropriateness of the items as a measurement tool. Validity testing results indicated that 21 out of 30 items were deemed valid. (Azwar, 2017) The difficulty index analysis revealed a proportional distribution of items across easy, moderate, and difficult levels, ensuring representativeness for various ability levels. (Sukardi, 2020) Furthermore, the discrimination index confirmed that the test items could distinguish between high- and low-performing students, while the reliability test indicated sufficient internal consistency for measuring the research variables. (Nurgiantoro, 2018)

Data collection was conducted through three primary techniques: observation, interviews, and documentation. Observation was carried out directly by the researcher to monitor students' responses during the learning process using the Wordwall media, with particular attention to their engagement in interactive digital activities. Interviews were conducted with the Arabic language teacher as a key informant to obtain additional information regarding prior teaching practices and the teacher's experience with instructional media. Documentation was used to complement the data, including school profiles, student numbers, and teaching materials used during the study. (Moleong, 2018)

The collected data were analyzed using two main techniques: paired-sample t-test and N-Gain analysis. The analysis began with the Shapiro-Wilk normality test to verify whether the data followed a normal distribution. (Imam, 2013) The paired-sample t-test was then employed to examine significant differences between pretest and posttest scores. A significance value (p-value) < 0.05 was taken to indicate a statistically significant effect of using the Wordwall media on students' vocabulary mastery. (Putri, N., Hartono, R., & Mulyani, 2023) Additionally, N-Gain analysis was applied to measure the level of improvement in learning outcomes, with the scores categorized into high (N-Gain > 70%), medium (30% < N-Gain ≤ 70%), and low (N-Gain ≤ 30%) levels. (Hake, 1999) This technique was useful in evaluating the effectiveness of the treatment for both individuals and the group as a whole.

RESEARCH RESULT

Based on the results of the Paired Sample t-test analysis, it was found that the mean difference between the pretest and posttest scores was -10.56, with a standard deviation of 2.56 and a standard error mean of 0.45. The calculated t-value was -23.29 with 31 degrees of freedom (df). The significance value (Sig. 2-tailed) was 0.000. Since the significance value was less than 0.05, it can be concluded that H_0 is rejected and H_a is accepted. This means that there is a significant difference between the pretest and posttest scores after the use of the Wordwall media. Therefore, Wordwall media is effective in improving the vocabulary mastery (mufrodad) of Grade 8A students at MTs Negeri 2 Mataram.

Based on the calculations performed using SPSS, the average N-Gain score was found to be 72.98%, which falls into the high category according to Hake's (1999) classification of learning effectiveness. This category indicates that learning through the use of Wordwall media had a significant positive impact on improving students' vocabulary (mufrodad) mastery. Of the 32 students who participated as respondents in this study, 19 students (59.38%) achieved a high category, while 13 students (40.62%) were in the medium category, and no students fell into the low category. These findings indicate that the majority of students experienced a relatively optimal improvement in their abilities after participating in lessons supported by Wordwall. Therefore, it can be concluded that the use of Wordwall media in Arabic language learning has proven to be effective in enhancing vocabulary mastery.

DISCUSSION

The purpose of this study was to evaluate the effectiveness of the Wordwall media in improving the vocabulary mastery of Grade VIII-A students at MTs Negeri 2 Mataram. The data were obtained from pretest results (before the use of Wordwall) and posttest results (after the use of Wordwall). Prior to hypothesis testing, a normality test was conducted to ensure that the data were normally distributed. Subsequently, the Paired Sample t-test was applied to determine whether there was a statistically significant difference between the pretest and posttest scores. In addition, an N-Gain analysis was performed to assess the level of improvement in students' learning outcomes based on the classification of learning effectiveness.

Paired Sample T-Test

Before conducting the hypothesis test, a normality test was first performed. The normality test was carried out to determine whether the pretest and posttest data were normally distributed. The Shapiro-Wilk test was applied to the pretest and posttest scores of Grade VIII-A students at MTs Negeri 2 Mataram, with a significance level of 5%.

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
PreTest	.170	32	.019	.940	32	.074
PostTest	.196	32	.003	.957	32	.222

Lilliefors Significance Correction

Based on the results of the normality test using the Shapiro-Wilk test on the pretest and posttest data of Grade VIII-A students at MTs Negeri 2 Mataram, the significance value was found to be 0.074 for the pretest and 0.222 for the posttest. Since both significance values were greater than 0.05, it can be concluded that the data were normally distributed. Therefore, the data met the normality assumption, and the analysis could be continued using a parametric statistical test, namely the Paired Sample t-test.

Based on the output of the paired sample t-test using SPSS, the following results were obtained:

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	PreTest	14.3125	32	2.52008	.44549
	PostTest	24.8750	32	2.19604	.38821

Based on the results of the Paired Samples Statistics analysis, it was found that the mean pretest score of the students was 14.31, with a standard deviation of 2.52 and a standard error mean of 0.44. In the posttest stage, the mean score increased markedly to 24.87, with a standard deviation of 2.19 and a standard error mean of 0.38.

The comparison between the mean pretest and posttest scores (14.31 < 24.87) indicates a substantial difference, suggesting the potential influence of the implemented learning intervention. However, to determine whether this mean difference was statistically significant and not merely the result of random data fluctuations, the researcher referred to the results of the Paired Samples t-test presented in the Paired Samples Test table. This analysis was employed to test the hypothesis regarding the effectiveness of the applied treatment, thereby establishing whether the observed score improvement was truly statistically meaningful.

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	PreTest - PostTest	-10.56250	2.56449	.45334	-11.48710	-9.63790	-23.299	31	.000

Based on the results of the Paired Samples t-test analysis, it was found that the mean difference between the pretest and posttest scores was -10.56, with a standard deviation of 2.56 and a standard error mean of 0.45. The calculated t-value was -23.29 with 31 degrees of freedom (df). The significance value (Sig. 2-tailed) was 0.000. Since the significance value was less than 0.05, it can be concluded that H_0 is rejected and H_a is accepted. This indicates that there is a significant difference between the pretest and posttest scores after the use of the Wordwall media. Therefore, Wordwall is effective in improving the vocabulary mastery of Grade 8A students at MTs Negeri 2 Mataram.

N-Gain

The N-Gain test was employed to measure the extent of improvement in students' mufrodat mastery after receiving instruction through the Wordwall learning media. This calculation was conducted by comparing each student's pretest and posttest scores to determine the effectiveness of the media in enhancing Arabic vocabulary acquisition. The results of the N-Gain test are presented in the following table as an overview of the improvement level experienced by the students.

Descriptives

		Statistic	Std. Error
NGain_persen	Mean	72.9811	2.15902
	95% Confidence Interval Lower Bound for Mean	68.5778	
	Upper Bound	77.3844	
	5% Trimmed Mean	73.4541	
	Median	75.5930	
	Variance	149.163	
	Std. Deviation	12.21324	
	Minimum	43.40	
	Maximum	95.52	
	Range	52.13	
	Interquartile Range	18.35	
	Skewness	-.542	.414
	Kurtosis	.197	.809

Based on the calculations carried out using SPSS, the average N-Gain score obtained was 72.98%, which falls into the high category according to (Hake, 1999) classification of learning effectiveness. This category indicates that learning through the use of the Wordwall media has a significant positive impact on

improving students' mastery of vocabulary (mufrodat). Of the 32 students who participated as respondents in this study, 19 students (59.38%) achieved the high category, while 13 students (40.62%) were in the medium category, and no students were classified in the low category. These findings indicate that the majority of students experienced an optimal improvement in their abilities after participating in learning activities supported by Wordwall. Therefore, it can be concluded that the use of Wordwall media in Arabic language learning is proven to be effective in significantly and sustainably enhancing students' vocabulary mastery.

Based on the statistical analysis, the average post-test score was higher than the pre-test score. The Paired Sample T-Test analysis revealed a mean difference of -10.56 with a standard deviation of 2.56 and a standard error mean of 0.45. The calculated t-value was -23.29 with 31 degrees of freedom (df) and a significance value (Sig. 2-tailed) of 0.000. A significance value lower than 0.05 indicates that H_0 is rejected and H_a is accepted, showing a significant difference between pre-test and post-test scores after using the Wordwall media. This confirms that Wordwall is effective in improving students' vocabulary mastery.

Azhar Arsyad's theory emphasizes that technology-based media can increase students' attention, clarify learning material, and create more active interaction in the learning process.(Arsyad Azhar, 2020) Wordwall, as an interactive web-based media, offers various formats such as quizzes, spin the wheel, matching games, and other interactive types that strengthen students' vocabulary retention.

Research by Maryam Nurchasanah revealed a significant relationship between the use of Wordwall and students' interest in learning Arabic. The correlation found was classified as weak ($r = 0.286$) but still statistically significant, indicating that Wordwall contributes to enhancing learning motivation.(Maryam Nurchasanah, 2024)

A study by Alfia Damayanti showed an improvement in Arabic vocabulary mastery, with an average pre-test score of 64 and an average post-test score of 89. The N-Gain test resulted in an average of 0.7 in the moderate category, consisting of 58.6% in the high category, 34.4% in the moderate category, and 6.89% in the low category. The average post-test score increased significantly compared to the pre-test, and expert validation confirmed that this media is highly valid and engaging for learning.(Damayanti, 2022)

Richard Mayer's Multimedia Learning theory states that learning becomes more effective when the material is presented both visually and verbally at the same time.(Mayer, 2009) Wordwall meets this principle by delivering content in the form of text, color, and interactivity that enhances students' information absorption.

The study conducted by Dwichandra Setyorini demonstrates that the use of Wordwall is more effective than conventional methods. The Wordwall learning media improved the Arabic learning outcomes of Grade VIII A students. Student learning activity in Cycle I reached 74.70% with a good category, while in Cycle II it increased to 87.15% with a good category, representing a 12.45% improvement. The average learning score in Cycle I was 66.25, which increased

to 85.31 in Cycle II. The percentage of learning mastery in Cycle I was 40.62% and increased to 87.5% in Cycle II. The improvement in learning outcomes over two learning cycles, along with a significant increase in student activity, proves that this media not only enhances comprehension but also improves the efficiency of the learning process.(Setyorini, 2024)

The use of Wordwall as a learning medium has been proven effective in improving students' mastery of mufrodat. It serves as an innovative alternative in developing Arabic learning that is more engaging and interactive. Brown's theory of language learning emphasizes that language learning is more effective when conducted in an active and participatory environment.(Douglas, 2001) Students acquire language more quickly when directly involved in a communicative and enjoyable learning process. This finding aligns with the results of the present study, in which the use of Wordwall significantly enhanced mufrodat mastery through engaging interactive activities.

Research by Siti Mahmudah shows that Wordwall has a significant effect on improving students' Arabic vocabulary. The N-Gain test result reached 0.73 (high category) and the significance value was $0.000 < 0.05$, indicating a significant difference between pretest and posttest scores.(Mahmudah, 2023) Digital media such as Wordwall are effective in creating active and meaningful learning.

Research by Ardiansyah at MTs Muhammadiyah 2 Al-Munawwarah Malang in 2023 also confirmed the effectiveness of Wordwall in improving mufrodat mastery. The students' average score increased from 55.75 (pretest) to 84.65 (posttest), with an N-Gain value of 0.65 (medium-high category). The paired sample t-test resulted in a significance value of 0.000, indicating a significant difference before and after the intervention.(Ardiansyah M. A., 2023) Interactive features such as quizzes and matching games in Wordwall encourage direct student engagement and strengthen memory through repeated practice.

Thus, the Wordwall learning media functions not only as an interactive assessment tool but also as an effective learning medium for teaching Arabic, particularly in vocabulary (mufrodat) acquisition. The use of this media is highly relevant for today's generation of students, who are more familiar with digital technology and interactive visual-based learning.

CONCLUSIONS AND RECOMMENDATIONS

The use of Wordwall as a learning medium to enhance students' Arabic vocabulary mastery at MTs Negeri 2 Mataram in the 2024/2025 academic year has proven to be effective. This effectiveness is evidenced by the results of a paired sample t-test, which showed a significance value of $0.000 (< 0.05)$, thus accepting the alternative hypothesis (H_a). The acceptance of H_a is supported by the significant difference between students' pretest and posttest scores, which is attributed to Wordwall's ability to provide interactive, varied vocabulary exercises that motivate students to engage more actively in learning.

The improvement in students' vocabulary mastery was also found to be significant. This is demonstrated by the N-Gain analysis, which yielded an average score of 72.98%, classified as high. This improvement occurs because

Wordwall presents vocabulary in an engaging and easily comprehensible format, complemented by evaluation features that provide students with immediate feedback, thereby making the learning process more effective.

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