

## Effectiveness of Using Wordwall Digital Learning Media in Improving Students' Understanding of History Learning

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### ABSTRACT

**Background:** The background of this research is based on students' low interest and understanding of history lessons due to the dominant conventional learning methods.

**Objectives:** To involve two 11th-grade classes at SMA Negeri 1 Cimarga, namely the experimental class using Wordwall and the control class using the lecture method.

**Method:** The research method used is quantitative with a quasi-experimental design, involving two 11th-grade classes at SMA Negeri 1 Cimarga, namely the experimental class using Wordwall and the control class using the lecture method.

**Result:** The research results showed a significant difference between student learning outcomes in the experimental class and the control class, with a significance value of  $0.006 < 0.05$ . Furthermore, the average N-Gain value in the experimental class of 57.08 is included in the quite effective category, while the control class only reached 33.74 (less effective). These findings indicate that Wordwall is effective in improving students' understanding of history learning.

**Conclusion:** Therefore, interactive digital media such as Wordwall are recommended for use in history learning to create a more engaging and meaningful learning atmosphere.

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### INTRODUCTION

Education is an activity carried out through various processes and struggles that are very important in improving human resources related to the environment; the environment is very closely related to the human resource process. According to Law No. 20 of 2003, education is a conscious and planned effort to create a learning atmosphere and learning process so that students actively develop their

potential to have religious spiritual strength, self-control, personality, intelligence, noble character, and skills needed by themselves, society, the nation, and the State. In the current digital era, the development of information and communication technology has had a significant impact on various aspects of life, including the world of education. Technology has become a very important tool in increasing the effectiveness of the teaching and learning process. According to Arsyad (2019), the use of digital learning media can help increase student involvement in learning and make the material easier to understand. Therefore, the utilization of technology in learning has become a necessity that cannot be ignored.

In the current learning process, the teacher writes and explains, and then students take notes on the material written by the teacher. Certainly, this will create an atmosphere that is less supportive for students during the teaching and learning process, so the understanding or mastery of the material obtained is not optimal (Usmaedi et al., 2020). According to Latuheru (1988: 14), media are materials, tools, and methods or techniques used for teaching and learning activities, with the intention that the process of educative communication interaction between teachers and students can take place appropriately and usefully. This is supported by Mudhofir's (1993: 81) opinion on learning media, where, according to him, learning media, apart from being a learning resource, can also be interpreted as humans, objects, or events that create conditions for students to be more likely to acquire attitudes and skills. (Hasan et al., 2021).

According to Anthonysamy (2020), digital experts highly recommend the use of digital technology in learning; the reason is to develop users' knowledge and skills in utilizing digital learning media. Learning using digital media can help educators innovate in packaging learning materials so they are not monotonous, thereby attracting students' interest in learning (Agustian and Salsabila, 2021).

History learning is often considered a less interesting subject by some students. This is caused by the delivery of material that is more textual and lacks interaction, making students tend to be passive in following the lesson. Sanjaya (2016) states that one of the challenges in history learning is how to make narrative and chronological material more interesting and easier for students to understand. The lecture method, which is still dominant in history learning, often makes students feel bored and less motivated in understanding the material taught. According to Sampurna (2019), in learning History, teachers should provide and also overcome students having strong motivation and learning problems by

discussing with peers (peer group). Considering good and efficient learning methods is another thing that can affect it.

According to Mayer (2020), the use of multimedia in learning has great potential for improving student understanding. Multimedia-based learning allows the presentation of information in various formats such as text, images, audio, and animation, which can help students with various learning styles. In this case, the use of digital learning media becomes an innovative solution to increase the effectiveness of history learning. One of the digital learning media that can be utilized in history learning is Wordwall. The Wordwall application can also be used as an interactive medium that teachers can use to clarify the provision of the material being taught; the Wordwall application can increase student learning motivation and help students improve their learning outcomes (Anggianna and Ishaq, 2022).

Wordwall is a digital platform that provides various kinds of educational and interactive games that can be used as teaching aids in learning. According to Munir (2017), Wordwall allows teachers to create quizzes, puzzles, and various other interactive activities that can help students understand the material better. This media can also increase student involvement in the learning process, due to its interactive and engaging nature. Based on research conducted by Depdiknas (2008), the use of technology-based learning media in the classroom can improve student learning outcomes by up to 30% higher compared to conventional methods. This shows that the integration of technology in learning can have a significant positive impact on student understanding.

By using digital learning media such as Wordwall, students not only passively receive information, but can also actively participate in the learning process. According to Sugiyono (2020), learning methods that involve interactivity and active student involvement can increase their learning motivation. High learning motivation will directly improve student learning outcomes. Therefore, learning media such as Wordwall, which have interactive features, can help create a more engaging and meaningful learning experience for students.

Based on previous research, the use of Wordwall digital learning media has proven effective in improving student learning outcomes and interest in various subjects, including history. Darmawan's (2022) research shows an increase in students' pretest and posttest scores in history learning but has not explored how Wordwall specifically affects the understanding of historical concepts. Several other studies, such as Suryadi (2022) and Mulyani (2022), examined the

effectiveness of Wordwall in learning other than history, so further studies are still needed regarding its effectiveness on various historical materials, such as local, national, and international events. Furthermore, most studies only focus on Wordwall without comparing it to other digital learning media, such as Kahoot, Quizizz, or Google Forms, so research is needed that compares its effectiveness in improving students' understanding of history.

Therefore, this study aims to fill this gap by specifically analyzing how the use of Wordwall in history learning can improve student understanding. This study will explore the effectiveness of learning activity design and its impact on student involvement and motivation. This research aims to analyze the effectiveness of using Wordwall digital learning media in improving students' understanding of history learning. By understanding the extent to which Wordwall can positively impact student understanding, it is hoped that the results of this research will serve as a reference for educators in designing more innovative and engaging learning strategies. In addition, this study also seeks to uncover the extent to which the use of Wordwall can improve student learning outcomes compared to conventional learning methods. Thus, the results of this study are expected to provide deeper insights into the application of digital learning media in education. Hopefully, the findings of this research can help teachers adopt technology more effectively to create a more engaging and productive learning experience for students.

Based on the thoughts above, using Wordwall as a learning medium to improve student understanding needs to be done by students and educators. This is done so that understanding is created in teaching and learning activities; this application is expected to be useful in the teaching and learning process in the classroom. From this description, the author chose the title "Effectiveness of Using Wordwall Digital Learning Media in Improving Students' Understanding of History Learning".

## **METHODS**

This research is a type of quantitative research with a quasi-experimental research method. Quantitative research is a type of research whose specifications are systematic, planned, and clearly structured from the beginning to the creation of the research design. According to Sugiyono (2024), quantitative methods can be interpreted as research methods based on the philosophy of positivism, used to examine certain populations or samples, data collection uses research instruments,

and data analysis is quantitative/statistical in nature, with the aim of describing and testing established hypotheses.

According to Sugiyono (2019:77), the Quasi-Experiment method is an experimental design that has a control group but does not fully function to control external variables that affect the experiment. The quasi-experimental research method or quasi-experimental approach is called pseudo (vague and abstract). Its nature is pretend, because it does not fully control the variables being studied; there are two references seen from the control and experimental classes, there is a comparison between those given the pre-test and post-test, the quasi-experimental design research is basically used because in reality, it is difficult to get a control group used for research.

This study involved two classes, where class XI 5 was used as the class that did not receive treatment (control class) and class XI 4 was used as the class that was given treatment (experimental class); both classes were given the same material. Where the class given treatment (experimental class) used Wordwall digital learning media, the class that did not receive treatment (control class) used conventional learning.

## **RESULTS AND DISCUSSION**

Problems related to students' understanding of learning are problems that tend to continue to occur, considering the abilities and needs of students in the learning process, which certainly differ from one another. This condition must certainly be handled through various solutions, one of which is by using effective learning media that can provide space for students to be able to build their knowledge independently, such as using Wordwall learning media in history subjects at SMA Negeri 1 Cimarga.

This study aims to determine the effectiveness of using digital learning media in improving students' history learning outcomes. The data obtained were analyzed using descriptive statistical tests and independent t-tests. Based on the descriptive analysis, it is known that the average posttest score of the experimental group was 77.28, while the control group had an average posttest of 66.00. This indicates a quite significant difference in scores between the two groups after the treatment was given

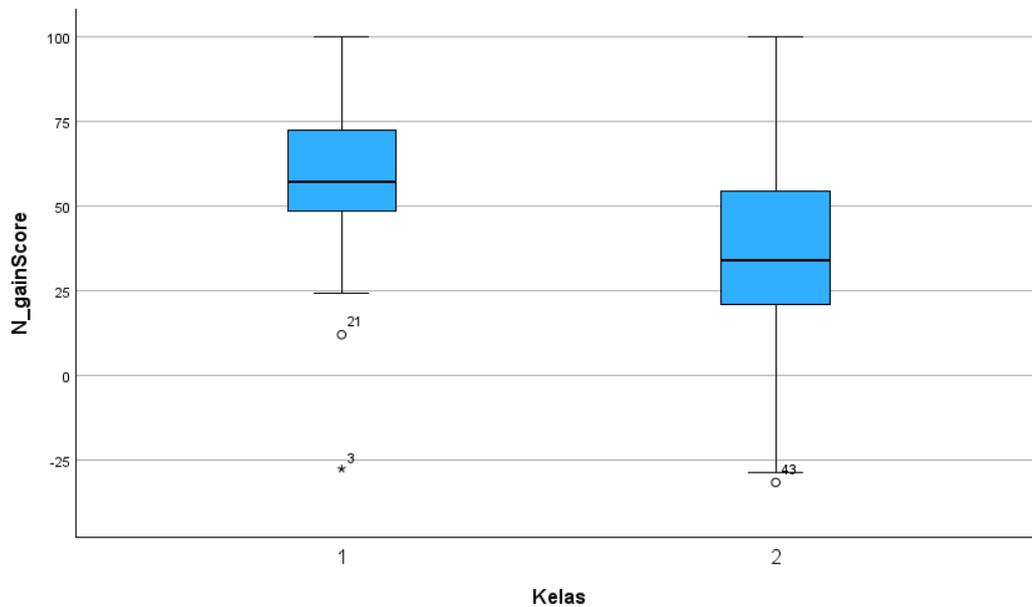
Independent Samples Test											
Levene's Test for Equality of Variances					t-test for Equality of Means						
		F	Sig.	t	df	Significance		Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
						One-Sided p	Two-Sided p			Lower	Upper
Hasil belajar Sejarah	Equal variances assumed	1,969	,167	-2,846	48	,003	,006	-11,280	3,964	-19,250	-3,310
	Equal variances not assumed			-2,846	44,248	,003	,007	-11,280	3,964	-19,267	-3,293

**Figure 1. Independent Samples Test Results Source: SPSS (2025)**

Furthermore, the independent t-test results show a significance value (Sig. 2-tailed) of 0.006, which is smaller than 0.05. This means there is a significant difference between the learning outcomes of the experimental group and the control group. The mean difference value of -11.280 indicates that the experimental group obtained higher scores than the control group.

The increase in student learning outcomes in the experimental group shows that the use of Wordwall media is effective in conveying historical material. Interactive Wordwall features, such as quizzes, games, and fun practice questions, make students more motivated and active in participating in learning. This finding is in line with the results of Nur Aini's (2022) research entitled "Effectiveness of Using Wordwall Media in Improving Student Learning Outcomes on Hindu-Buddhist Kingdom Material in Indonesia". In her research, Nur Aini found that students who learned using Wordwall experienced a significant increase in scores compared to students who did not use the media. Similar results were also obtained from the research of Ainishifa et al. (2023), which stated that the use of Wordwall in history learning has a significant influence of Wordwall-based interactive media on student learning outcomes in history subjects. These findings show consistency that Wordwall learning media makes a positive contribution to student learning outcomes, especially in history subjects. Therefore, the integration of digital technology such as Wordwall is highly recommended to support a more effective and interactive learning process.

The use of Wordwall digital learning media is one way to improve students' understanding of history subjects. This is proven by The results of the study showing that the use of Wordwall digital learning media significantly improves students' understanding of history learning. The average N-gain value in the experimental class (57.08) is higher than the control class (33.47), which practically indicates the effectiveness of the treatment. These results indicate that Wordwall provides a more meaningful learning experience compared to conventional methods.



**Figure 2. N-gain Test Results Source: SPSS (2025)**

This is also strengthened by the findings of Ainishifa et al. (2023) that Wordwall-based interactive media has effectiveness in improving student learning outcomes in the medium category. Theoretically, this is in line with the constructivist theory proposed by Piaget and Vygotsky, where students build their knowledge through active and interactive experiences. Wordwall, which is participatory and quiz-based, allows students to construct their understanding through play-while-learning activities (gamification), so that the process of internalizing material becomes more effective.

However, the use of interactive media based on Wordwall requires paying attention to various things, including the media. It must be designed correctly. The media must be used correctly, and the media must be evaluated periodically. This fact is supported by the fact that the use of Wordwall in interactive learning media can lead to learning outcomes (Maghfiroh, 2018). This shows that the improvement of learning outcomes is a sign of the goal. Learning is achieved. This means that

student outcomes will have progress made during the learning process (Mutiah et al., 2020). This is because the improvement of learning outcomes can be influenced by educational strategies. (D. Lestari, 2021).

In addition, the use of Wordwall is also suitable for the characteristics of Generation Z, who tend to be more responsive to digital technology and learning that is visual, interactive, and not monotonous. This can be seen from the increased student involvement during the learning process—they become more active, enthusiastic, and focused when completing the questions presented in the form of digital games. The high kurtosis value difference in the experimental class (4.136) indicates that most students achieved uniform learning outcomes in the moderate to high categories. This means that Wordwall is not only effective for students with high academic abilities, but also helps students with moderate abilities to achieve adequate learning outcomes. In addition to improving understanding, Wordwall also supports differentiated learning. Teachers can adjust the difficulty level of quizzes according to student needs. This reinforces the idea that digital media can accommodate individual learning needs, which is difficult to do in conventional learning.

## CONCLUSION

Based on the t-test results, there is a significant influence between the use of Wordwall learning media on students' history learning outcomes. This is indicated by a significance value of 0.006 ( $< 0.05$ ), which indicates that the use of Wordwall has a statistically positive effect in improving student learning outcomes. The N-Gain calculation results show that the increase in student understanding in the class using Wordwall media is in the quite effective category, with an average value of 57.08. Meanwhile, the class using conventional learning methods only showed effectiveness in the less effective category, with an average value of 33.74.

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