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Development of a Wordwall-Based Drag and Drop Game for Teaching Arabic Writing Skills

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Abstract

This study aims to develop and evaluate the effectiveness of a Wordwall-based drag-and-drop learning medium in improving students' (Arabic Writing Skills). The research employed a Research and Development (R&D) approach using the ADDIE development model (Analysis, Design, Development, Implementation, Evaluation). Data were collected through observation, interviews, questionnaires, pretests, and posttests. This study involved the entire student population of MTs Al-Hikmaturrohmaniyah for the 2024/2025 academic year, with the sample selected using cluster sampling, focusing on 7th-grade students as a representative cluster of the overall population. Quantitative data were collected through pretests and posttests to measure improvements in Arabic Writing Skills and analyzed using descriptive statistics and the Paired Sample t-test. Qualitative data from observations, interviews, and questionnaires were analyzed using Miles and Huberman's model, focusing on evaluating the effectiveness of Wordwall-based media from both teacher and student perspectives. Wordwall media significantly improved students' Arabic Writing Skills, increasing those meeting the KKM from 7 to 18. Statistical analysis confirmed a significant difference between pretest and posttest scores, indicating the media's effectiveness in enhancing learning outcomes and student motivation.

Keywords Arabic Writing Skills; Drag and Drop; Wordwall.

INTRODUCTION

One of the most essential skills for students in learning Arabic is Writing, or Writing, which must be mastered proficiently. Writing, or what is known as Writing, is an important aspect of learning Arabic in many Islamic educational institutions. This skill requires students to construct and express their ideas in written Arabic, ranging from simple texts to more complex compositions. However, in practice, many students at MTs Al-Hikmaturrohmaniyah struggle to master this skill. Several factors contribute to these difficulties, including unengaging teaching methods, limited use of relevant instructional media, and a lack of active interaction between students and the learning materials. These challenges indicate the need for improvements in teaching strategies and greater efforts to foster student engagement throughout the learning process (Dias et al., 2022a).

In education, Writing or Arabic Writing Skills is one of the four fundamental language competencies, particularly crucial in Arabic language learning. Arabic Writing Skills enable students to articulate their ideas and thoughts in written form and strengthen their understanding of linguistic structures, grammar, and vocabulary acquisition (Tobamba et al., 2019). At MTs Al-Hikmaturrohmaniyah, this skill remains underdeveloped among many students. Many learners struggle to write grammatically correct Arabic sentences, apply appropriate vocabulary and ensure semantic accuracy within written contexts (Dias et al., 2022b). However, at MTs Al-Hikmaturrohmaniyah, many students have difficulty mastering the Writing in Arabic. These difficulties are primarily attributed to unengaging teaching methods and the limited use of relevant instructional media.

To address this issue, innovation in instructional media is essential. Therefore, this study aims to develop and evaluate the effectiveness of Wordwall in teaching Arabic Writing Skills at the school. One potential solution is the use of educational game-based technology such as Wordwall (Adesfiana et al., 2022), which offers interactive features like Drag and Drop to enhance student engagement in the learning process (Wiguna & Drajati Ekaningtyas, 2021a). Despite its considerable potential, the use of such technology at MTs Al-Hikmaturrohmaniyah remains limited. Therefore, this study aims to develop and evaluate the effectiveness of Wordwall in teaching Arabic Writing Skills at school.

Previous research has explored the use of digital-based media in Arabic language instruction such as Kahoot, Quizizz, and Wordwall (Saleh et al., 2023). However, most of these studies have focused primarily on vocabulary introduction or general learning evaluation (Jannah & Syafryadin,

2022). Research that specifically develops interactive games using Wordwall's Drag and Drop feature to enhance Arabic Writing Skills remains very limited to date. Thus, this study offers a novelty by developing Wordwall-based media focused on structured writing activities through the ADDIE development model approach. Moreover, this research provides practical contributions in the form of instructional media designs that Arabic language teachers can directly implement to improve the effectiveness of Arabic Writing Skills learning (Deng, 2021).

In response to these challenges, teaching methods and instructional media innovation are required to facilitate students' understanding of the presented material. Engaging and enjoyable learning media can positively impact the learning process. Attractive media enhance students' motivation to learn and foster a more interactive and enjoyable learning environment. In this context, the integration of technology into the learning process serves as a reliable solution (Baharuddin et al., 2020). One form of instructional media innovation is using educational game-based technology. Educational games offer enjoyable learning experiences and enable students to learn through active interaction with game elements specifically designed to align with instructional objectives. In this regard, Wordwall is one of the most popular digital platforms widely used to create game-based learning media. Wordwall provides various features, including the Drag and Drop function, which can be used to organize instructional activities that engage students directly (Wiguna & Drajati Ekaningtyas, 2021b).

The use of Wordwall in teaching Arabic Writing Skills offers several advantages. First, Wordwall enables teachers to create interactive learning activities like word grouping, sentence matching, and text construction. These types of activities help students more easily comprehend Arabic language structures. Second, the drag-and-drop feature in Wordwall provides an intuitive learning experience, allowing students to focus on the instructional content without feeling overwhelmed. Third, Wordwall-based media is accessible across various devices, including computers, tablets, and smartphones, enabling students to learn anytime and anywhere (Firmansyah & Humaidi, 2022). This study employed the ADDIE model (Analysis, Design, Development, Implementation, Evaluation) (Branch, 2009) to use Wordwall in teaching Arabic Writing Skills. The ADDIE model was chosen for its systematic and flexible nature, allowing for continuous instructional development tailored to students' needs (Dick, W., Carey, L., & Carey, J. O, 2015). In the analysis stage, the advantages of Wordwall as a learning tool capable of generating interactive activities such as word grouping, sentence matching, and text construction were

evaluated to determine the extent to which the media could improve students' understanding of Arabic language structures.

Although several previous studies have confirmed the validity and importance of using Wordwall as an instructional medium aligned with teachers' needs, student characteristics, and curriculum integration (Aeni et al., 2022; Aini et al., 2024; Setiawan & Andrianto, 2024), research specifically examining the implementation of Wordwall in teaching Arabic Writing Skills remains very limited. This study aims to fill that gap by focusing on developing and implementing Wordwall-based instructional media tailored to the context and learning needs of Arabic language education at the MTs. Thus, this study not only examines the general effectiveness of Wordwall but also explores how the media can specifically enhance students' motivation and Arabic Writing Skills within an educational environment that has yet to adopt technological tools widely.

Based on this background, the researcher considers it essential to develop game-based instructional media using Wordwall, specifically its Drag and Drop feature, to improve students' Arabic Writing Skills at MTs Al-Hikmaturrohmaniyah. This study explores how the development of such instructional media can help students comprehend Arabic texts more effectively and enjoyable. Through this approach, Arabic language instruction, particularly in Arabic Writing Skills, is expected to become more interactive, engaging, and relevant to students' needs in the digital era. Based on the aforementioned explanation, the researcher is interested in conducting a study entitled "Development of Wordwall-Based Drag and Drop Game in Teaching Arabic Writing Skills at MTs Al-Hikmaturrohmaniyah."

METHOD

This study employs a Research and Development (R&D) method using the ADDIE development model. The ADDIE model was introduced in the 1990s and developed by Reiser and Mollenda as an efficient and generic development model. The ADDIE development model comprises five stages: Analysis, Design, Development, Implementation, and Evaluation (Sugiyono, 2017). The researcher uses the ADDIE model in this study because it is based on an effective and efficient approach and its interactive process between students and teachers. The evaluation results at each learning step can guide the development of the learning process to the next phase (Hidayat & Nizar, 2021). Therefore, it enables the systematic, structured, and flexible evaluation of the Wordwall media (Saidah, 2023).

The subjects of this study are students of MTs Al-Hikmaturrohmaniyah in the academic year 2024/2025, consisting of grades 7 through 9. The sample was selected using cluster sampling, focusing on grade 7 as a cluster representing the entire population. The types of data used in this learning media's research and development include qualitative and quantitative data. Quantitative data were obtained from pretests and posttests administered to 7th-grade students at MTs Al-Hikmaturrohmaniyah. Meanwhile, qualitative data were collected through teacher interviews and students' responses, feedback, suggestions, and test results. The data sources in this study consisted of observations, interviews, and closed-ended questionnaires. Observations were conducted at MTs Al-Hikmaturrohmaniyah to identify initial problems and findings related to the teaching and learning process of Arabic Arabic Writing Skills.

Data was collected using various instruments, including observations, interviews, closed questionnaires, pretests, and posttests, to measure student writing ability changes. These instruments were designed to obtain quantitative and qualitative data regarding the effectiveness of the developed learning media. The interview technique was employed to collect data from three categories of respondents: the Arabic language teacher, the head of the madrasah, and the students. The interview with the Arabic teacher focused on implementing classroom instruction, including the teaching methods and challenges faced in delivering Arabic writing (Arabic Writing Skills) lessons. The interview with the head of the madrasah aimed to obtain information regarding institutional policies on the use of digital-based instructional media, as well as the extent of institutional support for the development of interactive learning tools. Meanwhile, the student interviews were directed toward exploring their experiences in Arabic language learning, including their perceptions of the instructional media used during lessons, particularly about Arabic Writing Skills.

The observation was conducted directly on the physical environment and instructional activities at MTs Al-Hikmaturrohmaniyah. The observation period lasted five days, from February 12 to February 16, 2025. It focused on Arabic language classroom activities, with particular attention given to the use of instructional media and the interaction between the teacher and students while teaching Arabic Writing Skills. This observation aimed to obtain an in-depth understanding of the existing teaching conditions before implementing the Wordwall-based learning media. The test aimed to evaluate students' learning outcomes, particularly their proficiency in Arabic Writing Skills. The assessment focused on several aspects, including grammar, vocabulary, sentence

structure, and the relevance of the content to the given learning theme.

The data analysis techniques employed in this study are: The researcher will employ a quantitative approach to measure the effectiveness of Wordwall-based instructional media in enhancing students' ability to write Arabic scripts at the MTs Al-Hikmaturrohmaniyah. Quantitative data will be obtained by administering pre-tests and post-tests to the students. The pre-test is intended to assess students' initial writing ability before implementing the learning media. At the same time, the post-test will be conducted after the instructional intervention to evaluate improvements in learning outcomes. The pre-test and post-test scores will be analyzed using descriptive statistics to determine the minimum and maximum scores, mean values, and the percentage of students achieving learning mastery. The effectiveness of the instructional media will be determined based on the proportion of students who meet or exceed the Minimum Mastery Criteria (MMC). Following Aeni et al. (2022), the instructional media will be considered effective if at least 61% of the students score above the MMC threshold.

Inferential statistical analysis will be conducted using the Paired Sample t-test to determine the significance of improvement in learning outcomes. Before this, a normality test will be carried out using the Shapiro-Wilk method, as the number of participants in this study is fewer than 100. If the data are normally distributed, the Paired Sample t-test will be applied to test the hypothesis. The formula used to calculate the percentage of mastery is as follows:

$$Mastery\ Percentage = \left(\frac{Number\ of\ students\ achieving\ mastery}{Total\ number\ is\ student}\right) x\ 100\%$$

Through this analysis, the researcher expects to obtain valid and reliable data to assess the extent to which the Drag and Drop-based Wordwall media can improve students' Arabic Writing Skills while fostering values such as tolerance and appreciation of diversity. The results of this analysis will also serve as a foundation for evaluating the feasibility and potential broader implementation of this instructional approach.

The qualitative data collected through observations, interviews, and closed-ended questionnaires were analyzed by directly selecting field findings relevant to the objectives of developing the Wordwall-based drag-and-drop learning media, particularly its effectiveness in teaching Arabic Writing Skills. Data obtained from the teacher were analyzed to determine how the media supported the delivery of writing materials, while data from students were used to explore

their responses, engagement, and ease of use. All findings were organized into descriptive narratives to identify patterns in media usage and user perceptions, and conclusions were drawn gradually based on recurring responses and observable trends during teaching and learning. This analysis was carried out continuously during and after data collection to ensure the validity and consistency of the findings.

FINDINGS AND DISCUSSION

Findings

The development process using Wordwall media with the Drag and Drop method was conducted following the phases of the ADDIE research model, namely:

1. Analysis

Based on interviews with Arabic language teachers at MTs Al-Hikmaturrohmaniyah, it was found that students' characteristics in Writing (Arabic Writing Skills) instruction are highly diverse, influenced by their habits of reading the Qur'an, learning styles, as well as levels of motivation and diligence. Students accustomed to reading the Qur'an tend to more easily recognize the shapes of Arabic letters, while visual and kinesthetic learning styles also play a role in the comprehension process. However, many students still experience difficulty connecting Arabic letters due to the differences between the Arabic script system and the Latin alphabet. Therefore, varied and engaging teaching approaches are required to accommodate student characteristics in order to enhance the effectiveness of Arabic writing instruction.

2. Design

The researcher designed Wordwall-based games as engaging interactive media to enhance the effectiveness of Arabic writing instruction. In this study, the researcher employed the Drag and Drop method, which includes Match, Complete the Sentence and Anagram activities. According to Jannah in her work (Jannah & Syafryadin, 2022), Wordwall fosters learning motivation through challenges and competition, while Ustazah Siti emphasizes the importance of adjusting the game difficulty level to match students' abilities. In addition to increasing individual engagement, Wordwall supports group learning and integrating technology within the classroom. Implementing this media has improved students' interest, self-confidence, and participation in Arabic writing. The following is the design of the Wordwall-based games.

Table 1. Design of Wordwall Games in Writing Learning

No	Level	Game Type	Learning Objectives	Example Activities
1	Beginner	Letter Matching	To recognize and differentiate Arabic letter shapes	Students match letters with their sounds on the Wordwall website
2	Intermediate	Word Construction	To form simple words from Arabic letters	Students arrange letters to form correct words on the Wordwall website
3	Advanced	Word Puzzle	To write simple words or sentences	Students write words corresponding to images on the Wordwall website

At the design stage, several steps are taken to realize the Wordwall-based learning product. a) Selecting an appropriate template; in this case, the drag-and-drop template is used because it allows students to arrange Arabic sentences correctly. b) Inputting the content material, عنوان including vocabulary and sentence structures that have been previously prepared. c) Adding illustrative images relevant to the sentence context to make the material more engaging and easier for students to understand. d) Choosing a visual theme that suits the interests and characteristics of the students, such as a bright and interactive theme to create a pleasant and relaxed learning atmosphere.

Figure 1. Drag and Drop Interface with Match Up Model Based on Wordwall

Figure 2. Drag and Drop Interface with Anagram Model Based on Wordwall

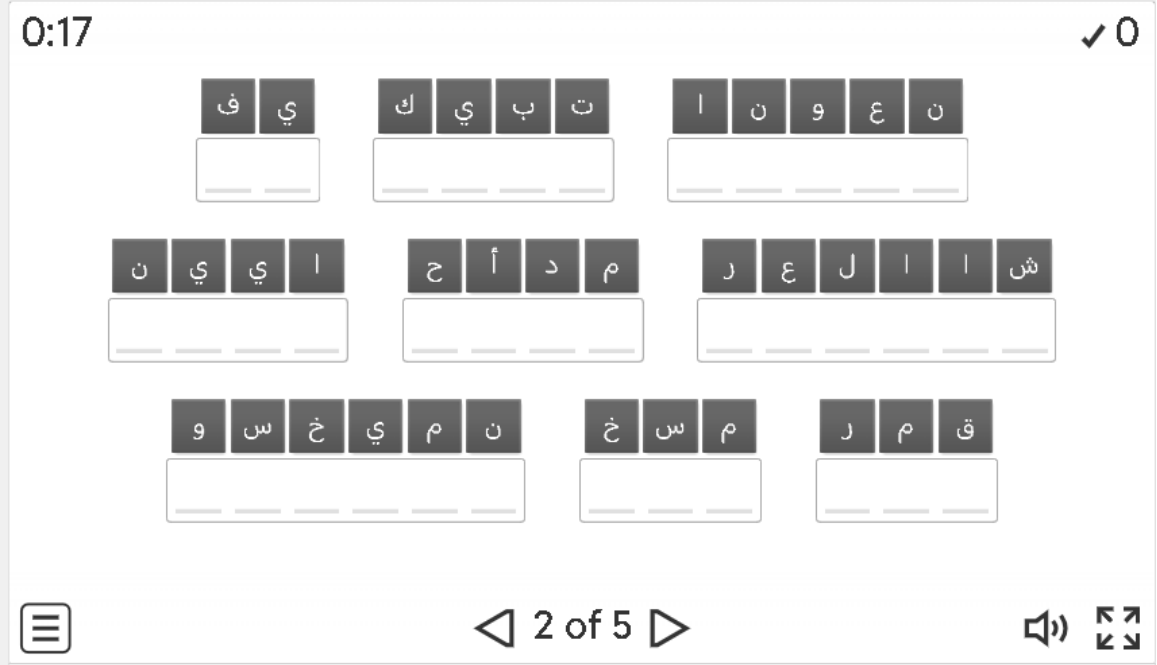

Figure 3. Drag and Drop Interface with Complete the Sentence Model Based on Wordwall

3. Development

Validation Results by Media Experts and Content Experts

The validation stage involved two professional evaluators: one media expert and one content (subject matter) expert. Their assessments were conducted using structured validation instruments

consisting of Likert-scale items and open-ended feedback.

Media Expert Validation Results

The media expert evaluated the Wordwall-based drag and drop media from aspects including visual appearance, user interface design, navigation, responsiveness, and interactivity. The results are as follows:

Table 2. Media Expert Validation Results

Indicator	Score (Max 5)
Visual design and layout	4.5
Navigation clarity	4.0
Responsiveness of drag and drop	3.8
Font readability and color contrast	4.2
Interactivity level	4.4
Average Score	**4.18**

The expert noted that while the visual design was engaging and age-appropriate, several navigation buttons were not responsive when accessed via touchscreen devices. It was recommended that touch sensitivity and drag-drop response time be optimized.

Based on the quantitative score (4.18 out of 5), the media was categorized as "Very Valid", but minor revisions were required for optimal functionality.

Content Expert Validation Results

The content expert assessed the media based on material accuracy, language use, cognitive alignment with learning objectives, and task design.

Table 3. Content Expert Validation Results

Indicator	Score (Max 5)
Content accuracy and relevance	4.6
Language clarity and sentence construction	4.3
Alignment with writing skill indicators	4.1
Task variation and difficulty level	3.9
Support for student writing development	4.4
Average Score	**4.26**

The expert advised modifying certain exercises to offer a greater challenge and better suit the students' language proficiency. Some anagram tasks were considered too simple and did not stimulate higher-order thinking.

With an average score of 4.26, the content aspect was deemed "Very Valid", with minor revisions needed to increase task complexity and alignment.

Summary of Product Revisions

Based on the expert validation:

a. Media Design Revisions:
   1) Improved button responsiveness for touchscreen devices
   2) Enhanced contrast in drag-and-drop zones for better visibility
b. Content Revisions:
   1) Replaced 2 of 5 anagram tasks with higher-level sentence formation tasks
   2) Adjusted vocabulary level to be more varied and contextually rich

The validation phase confirmed that the Wordwall-based drag and drop media was technically and pedagogically feasible for classroom use, achieving a combined mean expert validation score of 4.22. These findings served as the basis for further refinement before limited implementation with students in real classroom settings.

4. Implementation

The developed game was tested on seventh-grade students at MTs Al-Hikmaturrohmaniyah. The trial compared students' learning outcomes before and after using the game.

a. Students were given a pretest to assess their initial ability in Arabic writing. The pretest questions were completed in each student's worksheet (LKS).
b. The following session allowed them to play the drag-and-drop game based on Wordwall. The following are student activities using the Wordwall-based learning method.
c. After the game-based learning session, students were given a posttest to measure the improvement in their skills.
d. The results of the pretest and posttest were analyzed, and it was found that there was an increase in the students' average scores after using the game.

Figure 4. Wordwall Implementation Process

5. Evaluation

The evaluation test in this study was conducted through pretests and posttests to measure the effectiveness and feasibility of using it in Arabic writing instruction at the MTs (Islamic Junior High School) level. The pretest was used to assess students' initial understanding of values such as tolerance and mutual respect, while the posttest aimed to evaluate changes after the learning process was implemented. The results of this test served as the basis for determining the extent to which the multicultural approach enhanced students' attitudes of tolerance. The following presents the results of the pretest and posttest scores.

Table 4. Pretest and Posttest Scores

No	Students	Pretest Score	Posttest Score
1	Student 1	60	70
2	Student 2	80	90
3	Student 3	70	80
4	Student 4	60	85
5	Student 5	85	65
6	Student 6	75	75
7	Student 7	85	75
8	Student 8	60	80
9	Student 9	55	85
10	Student 10	55	90
11	Student 11	60	95
12	Student 12	75	95
13	Student 13	70	90
14	Student 14	80	90

15	Student 15	90	90
16	Student 16	65	75
17	Student 17	65	70
18	Student 18	70	85
19	Student 19	70	85
20	Student 20	75	90
21	Student 21	75	90
22	Student 22	85	95
23	Student 23	90	95
24	Student 24	75	90
25	Student 25	65	75

Based on the theoretical framework employed, the effectiveness of web-based learning media development can be analyzed through the increase in the number of students who meet the minimum passing score. Before calculating the percentage of students who achieved the minimum passing score, the researcher presents the SPSS results, including the minimum, maximum, and average scores from the pretest and post-test.

Table 5. The SPSS Results

N	**Valid**	**25**
	Missing	**25**
Mean		71.80000
Minimum		55.00
Maximum		90.00

N	**Valid**	**25**
	Missing	**25**
Mean		84.20000
Minimum		65.00
Maximum		99.00

Subsequently, only 7 students scored above the minimum passing score during the pretest stage, whereas in the posttest, the number increased to 18 students. To determine the effectiveness of the learning media, it is necessary to calculate the percentage of students who achieved the minimum passing score in the posttest:

$$Percentage = \frac{(Number\ of\ students\ above\ KKM)}{(Number\ of\ Students)}\ x\ 100\%$$

$$Percentage = \frac{(18)}{(25)}\ x\ 100\% = 72\%$$

Table 6. Normality Test Results

posttest1	**Kolmograv-Smirnov[a]**			**Shapiro-Wilk**		
	Statistic	df	Sig.	Statistic	df	Sig.
pretest postest1	.110	25	.200	.951	25	.261
postest	.224	25	.002	.899	25	.371

In this study, a normality test was performed before analyzing differences between pretest and posttest results to determine whether the obtained data were normally distributed. This is

important because parametric statistical tests such as the Paired Sample T-test assume the data being compared are normally distributed (Santoso, 2017). The normality test was conducted using the Shapiro-Wilk method because the sample size was less than 100 (<100), and both tests are provided in the SPSS output. In interpreting the normality test, the reference used is the significance value (Sig.) or p-value:

- If Sig. > 0,05 → Data are normally distributed
- If Sig. ≤ 0,05 → Data are not normally distributed

Based on the SPSS analysis results, the significance obtained were as follows: Pretest: Sig. = 0.261, Posttest: Sig. = 0.317. Both significance values are greater than 0.05, indicating that the pretest and posttest data are **normally distributed**.

Table 7. Paired Sample T-Test Results

	Paired Differences					**t**	**df**	**Sig. (2-tailed)**
	Mean	Std.Deviation	Std.Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pair 1 pretest-postest	-12.40000	12.42645	2.48529	-17.52939	-7.27061	-4.989	24	.000

Quantitative data analysis was conducted using the Paired Sample T-Test to determine the effectiveness of the developed learning media. Based on the SPSS calculation result, the t-value was 4.999. Meanwhile, the critical t-value at a 5% significance level (α = 0.05) with a sample size of 25 students (degrees of freedom/df = 24) was 2.064.

This result indicates that the calculated t-value is greater than the critical t-value (4.999 > 2.064), meaning a significant difference exists between the students' pretest and posttest scores after using the Drag and Drop game-based Wordwall media. Therefore, it can be concluded that the development of this learning media has a positive and significant impact on improving students' Arabic Writing Skills. The validity of this test result is also supported by the fulfillment of the normality assumption based on the previous normality test, making the use of the parametric paired t-test appropriate and reliable.

Discussion

The findings of this study indicate that the development of interactive drag-and-drop games through the Wordwall platform in Arabic Writing Skills, instruction was initiated in response to persistent challenges encountered in teaching Arabic writing at MTs Al-Hikmaturrohmaniyah. Based on observations and interviews, several key issues were identified: students struggled to distinguish Arabic letter forms based on their positions within words, lacked systematic writing practice, and were subjected to monotonous conventional teaching methods, This is also supported by the results of the research conducted (Al Hejaili & Newbury, 2023; Mars, 2015). This media development aligns with instructional media theory as proposed by the National Education Association (NEA) (Armando et al., 2023), which states that media serves as a tool that enhances instructional effectiveness by manipulating learning experiences through visual, auditory, and interactive elements (Wulandari et al., 2023). As a digital learning platform, Wordwall addresses these limitations by offering multisensory learning experiences and accommodating diverse student learning styles (Al-edris et al., 2023).

The game was designed using drag-and-drop, a graphical user interface (GUI) manipulation method that lets students intuitively arrange Arabic letters into words and sentences (Barendregt & Bekker, 2011). According to the drag-and-drop interface theory, this method involves selecting, moving, and placing elements into desired positions via mouse or touchscreen interaction (Abdul Ghani et al., 2022). This approach encourages active engagement and provides a safe exploratory space, particularly beneficial for students still familiarizing themselves with Arabic script and structure (Schulz et al., 2020). Wordwall, an educational platform, allows teachers to create interactive activities such as matching games, sorting exercises, crosswords, and anagrams (Gulo, B. L., & Harefa, H, 2022). This study used anagram and sentence-reordering games to train students in letter and sentence construction interactively. This supports the function of educational media as a tool to clarify message delivery, enhance learning motivation, and provide concrete learning experiences through repetitive practice (Septyana, R., Dewi, M. A., & Lestari, S, 2023).

The implementation of this game in classroom sessions demonstrated a noticeable increase in student interest and participation, This is also supported by the results of the research conducted (Idris et al., 2023). Ustaz Ahmad, the Arabic language teacher, observed that students appeared more enthusiastic and did not feel burdened as they did when copying texts from textbooks. This confirms that instructional designs involving digital media can foster a joyful, safe, and meaningful learning

environment conducive to exploration, This is also supported by the results of the research conducted (Nadeem et al., 2023). The effectiveness of this instructional media was evaluated using three main indicators: improvement in students' Arabic Writing Skills, learning motivation, and active participation in the learning process (Bakhsh et al., 2022). Field findings showed that after the implementation of the Wordwall-based drag-and-drop games, many students demonstrated improved recognition of Arabic letter forms and greater confidence in writing, This is also supported by the results of the research conducted (Aulia et al., 2024).

Based on the theory that a learning medium is effective if the percentage of students who achieve the minimum passing score falls within the 61% - 100% range, the results indicate that the development of web-based learning media falls into the effective category. This finding is consistent with previous research by Aeni (Aeni et al., 2022), in which the design of the Wordwall product was based on an analysis of teachers' needs for learning media and curriculum analysis, including the analysis of Basic Competencies and their alignment with student characteristics. It is also supported by research by Yosef (Setiawan & Andrianto, 2024), which emphasized the importance of integrating interactive learning media such as Wordwall into the curriculum to enhance student participation and learning interest, particularly in religious education subjects. Maulida (Aini et al., 2024) also stated that educational game media such as Wordwall is highly valid and appropriate for learning. It can be concluded that the findings demonstrate that Wordwall learning media is valid, practical, and effective in enhancing students' understanding and learning interest, both in Indonesian language and Arabic language education. Wordwall is designed to match the needs of teachers and the characteristics of students, and it has proven capable of creating a more interactive and enjoyable learning experience.

Furthermore, to determine the effectiveness of the Drag and Drop learning media based on Wordwall in improving the Arabic Writing Skills of MTs Al-Hikmaturrohmaniyah students, the researcher conducted data analysis using the statistical software SPSS. The analysis process began with a normality test on the pretest and posttest data to ensure that the data followed a normal distribution and met the requirements for subsequent parametric testing. The normality test was performed using the Kolmogorov-Smirnov and Shapiro-Wilk methods (Prajogo, U. S, 2016). One student, Aisyah, preferred learning to write through games because she no longer feared making mistakes and could independently repeat the tasks. This aligns with media learning theory, which highlights how media can overcome limitations of space, time, and fear of failure by offering safe

and enjoyable practice opportunities.

Student engagement also increased significantly. Wordwall games provide visual stimuli and challenges that motivate students while maintaining a comfortable learning environment (Ishak et al., 2023). In drag-and-drop-based games, students actively construct words in proper structures, enhancing critical thinking skills while stimulating visual memory and fine motor coordination (Twomey et al., 2022). The analysis results indicate that the Wordwall-based learning media developed is effective and feasible for teaching Writing (Arabic Writing Skills) at the MTs level. This finding aligns with the research by Zeiburhanus Saleh (Saleh et al., 2023) (Papadopoulos et al., 2020), which concluded that the use of Wordwall can increase students' interest and understanding in learning Arabic through an interactive and enjoyable approach. Thus, the meaning of this finding emphasizes that integrating digital media such as Wordwall not only enhances student engagement but also strengthens Writing through evaluative approaches that are varied and adaptive to the learning styles of today's students.

However, several obstacles were encountered during implementation. These included limited ICT facilities at school and the readiness of teachers to integrate digital media (Kozma & Isaacs, 2021). Ustazah Siti noted that technical issues such as device and network limitations and the need for teacher training were crucial factors in the sustainability of this media use. This highlights that instructional media cannot function optimally without systemic support in terms of infrastructure and human resources (Arum. E, 2023). The development of drag-and-drop games using Wordwall in mahārah kitābah instruction has proven effective in addressing the challenges of teaching Arabic writing. This approach bridges the gap between students' need for active practice and the limitations of conventional methods that often lack engagement. Through this innovation, students not only acquire technical Arabic Writing Skills but also experience an enjoyable, participatory, and meaningful learning process.

CONCLUSION

The study at MTs Al-Hikmaturrohmaniyah revealed that the integration of Wordwall, particularly through a Drag and Drop game, had a significant positive impact on students' engagement and understanding in Arabic writing lessons. This interactive tool not only increased students' motivation and participation but also provided an enjoyable and dynamic learning atmosphere. The game-based approach allowed students to practice arranging words and sentences

independently while receiving immediate feedback, which supported the development of their Arabic Writing Skills in a more effective and innovative way. Furthermore, the development of the Wordwall-based game followed a structured process—planning, design, implementation, and evaluation—ensuring it met students' learning needs. Both students and educators benefited from the use of this media; students improved in writing structure and accuracy, while teachers found it a more engaging and efficient method compared to traditional approaches. Overall, the findings confirmed that Wordwall is an effective tool for enhancing learning outcomes in writing education.

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