

DEVELOPMENT OF PAI LEARNING MEDIA USING ARTIFICIAL INTELLIGENCE WORDWALL TO IMPROVE STUDENT LEARNING MOTIVATION IN CLASS 1A OF SMPN 8 KOTA BIMA

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Abstract

With the current technological developments, many artificial intelligence (AI) have been created that are useful as interactive learning media. Therefore, to avoid boredom and lack of interest in learning possessed by students if the learning media used is too monotonous and unpleasant to be applied to the learning process. So it is necessary to develop integrated and innovative learning media based on digital technology, for example by using artificial intelligence wordwall as a learning media. This type of research is development (R & D) using the ADDIE model. The results of the study show that starting from analysis, design, development, implementation, and evaluation are carried out in accordance with the ADDIE development model procedures. The learning interest shown when developing learning media appears to increase by an average of 84% with media feasibility after product validation with an average of 88% and with the practicality of using this wordwall learning media with an average of 85% and the development of PAI learning media using this wordwall was carried out in class 1A SMPN 8 Kota Bima.

Keywords: Wordwall, Learning Media, Learning Interest.

Abstrak

Dengan perkembangan teknologi yang terjadi saat ini menciptakan banyak artificial intelligence (AI) yang berguna sebagai media pembelajaran yang interaktif. Oleh karna itu untuk menghindari kebosanan dan kurangnya minat belajar yang dimiliki oleh siswa apabila media pembelajaran yang digunakan terlalu monoton dan tidak menyenangkan untuk diterapkan pada proses pembelajaran. Sehingga perlu dilakukan pengembangan media pembelajaran terintegrasi dan inovatif berbasis teknologi digital, misalnya dengan menggunakan artificial intelligence wordwall sebagai media pembelajaran. Jenis penelitian ini pengembangan (R & D) dengan menggunakan model ADDIE. Hasil penelitian menunjukkan mulai analisis, desain, pengembangan, implementasi, dan evaluasi dilakukan sesuai dengan prosedur model pengembangan ADDIE. Minat belajar yang ditunjukkan ketika pengembangan media pembelajaran terlihat meningkat dengan rata-rata 84% dengan kelayakan media setelah dilakukan validasi produk dengan rata-rata 88% serta dengan kepraktisan penggunaan media pembelajaran wordwall ini dengan rata-rata 85 % dan pengembangan media pembelajaran PAI dengan menggunakan wordwall ini dilakukan pada kelas 1A SMPN 8 Kota Bima.

Kata Kunci: Wordwall, Media Pembelajaran, Minat Belajar.



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INTRODUCTION

Education is a means of preparing the younger generation to face the challenges of the global era. Therefore, education must be implemented as effectively as possible to produce quality education and improve the quality of Indonesia's human resources. Technological advancements have had a significant impact on the education sector. Quality education can be achieved if the learning process is conducted effectively, meaning that it runs smoothly, is focused, and aligns with learning objectives, particularly in Islamic Religious Education.¹

Islamic Religious Education (PAI) plays a crucial role in shaping students' character, morals, and spirituality. The PAI learning process aims not only to transfer knowledge but also to instill religious values that can be applied in everyday life. However, the reality on the ground shows that many students struggle to understand PAI material due to uninteresting and monotonous learning media, which results in a lack of student interest in learning.²

With students' lack of interest in learning, teachers are forced to create new innovations in learning by taking into account current technological developments, particularly in the current digital era. The use of technology-based learning media is a solution to increase the effectiveness of the teaching and learning process. One innovation that can be utilized is the use of Artificial Intelligence (AI) in interactive learning media.³

By utilizing increasingly sophisticated technology, learning can be carried out well.⁴ Current technology is evolving into intelligent technology or AI (Artificial Intelligence), which is a computer system (machine) that possesses human-like intelligence. Current technological advances enable teachers to develop various media to assist students in the learning process.⁵

Interactive digital learning media can help teachers manage learning in the classroom.⁶ Using learning media through this approach is very beneficial because it increases students' enthusiasm for learning, which can result in better student achievement and improved learning

¹ Zhenith Surya Pamungkas et al., "Pengembangan Media Pembelajaran Interaktif Wordwall Dalam Meningkatkan Motivasi Belajar Siswa Kelas VII SMP Negeri 4 Gunung Sugih," *Social Pedagogy: Journal of Social Science Education* 2, no. 2 (2021): 135–48.

² Arlina Arlina et al., "Peran Pendidikan Agama Islam Dalam Membentuk Karakter Bangsa," *El-Mujtama: Jurnal Pengabdian Masyarakat* 4, no. 2 (2024): 699–709, <https://doi.org/10.47467/elmujtama.v4i2.999>.

³ Dewa Akbar Pamungkas et al., "Pengaruh Penggunaan Media Pembelajaran Word Wall Terhadap Motivasi Belajar IPS Oleh," *JIPSINDO (Jurnal Pendidikan Ilmu Pengetahuan Sosial Indonesia) Universitas Negeri Surabaya* 10, no. 01 (2023): 67–78.

⁴ Annisa Savira and Rudy Gunawan, "Pengaruh Media Aplikasi Wordwall Dalam Meningkatkan Hasil Belajar Mata Pelajaran IPA Di Sekolah Dasar," *Edukatif: Jurnal Ilmu Pendidikan* 4, no. 4 (2022): 5453–60, <https://doi.org/10.31004/edukatif.v4i4.3332>.

⁵ Naili Inayah, *Pengembangan Media Evaluasi Pembelajaran Interaktif Berbasis Games Melalui Platform Wordwall Untuk Meningkatkan Hasil Belajar Siswa Kelas Iii Di Min 3 Jember.*, 2024.

⁶ Ani Daniyati et al., "Konsep Dasar Media Pembelajaran," *Journal of Student Research* 1, no. 1 (2023): 282–94, <https://doi.org/10.55606/jsr.v1i1.993>.

quality. Furthermore, digital learning tools provide students with opportunities to learn interactively, independently or collaboratively, and to acquire skills relevant to the material.⁷

Learning media provides benefits for both educators and students in the learning process. Various types of learning media, both concrete and digital, provide benefits for both teachers and students, helping students learn critical thinking.⁸ One way to increase activity in the student learning process is for teachers to use or utilize interactive and enjoyable learning media.⁹ Teachers can use a variety of learning media. One alternative application that can be used for teaching, especially in Islamic Religious Education, is a word wall.

Wordwall is a learning media platform that allows teachers to create various types of quizzes, games, and interactive activities that can increase students' interest in learning.¹⁰ In the explanation Olisna et al.,¹¹ the wordwall application is an AI (Artificial Intelligence) application on a website that can be used as a learning medium, learning resource, or engaging online assessment tool for students. This wordwall application provides a variety of attractive templates that teachers can use to create an interactive, engaging, and enjoyable learning process, while also increasing student interest in learning.¹²

Using a word wall application as a learning medium is the answer to how to build and create a fun learning process. Therefore, the goal of this activity is to provide an alternative solution for developing learning media in order to create and build a fun learning process for students.¹³

With this, this research was conducted at SMPN 8 Kota Bima, with the object of research on grade 1a students in the subject of Islamic Religious Education, which still shows less results in active student participation, thus indicating a lack of student interest in learning caused by the lack of innovation in learning media so that students are less interested in actively participating

⁷ Waluyo Hadi et al., "Analisis Penggunaan Media Interaktif Wordwall Terhadap Peningkatan Hasil Belajar IPA Di Sekolah Dasar," *Jurnal Pendidikan Mipa* 14, no. 2 (2024): 466–73, <https://doi.org/10.37630/jpm.v14i2.1570>.

⁸ Putri Cahya Sabitha and Cahyo Hasanudin, "Pemanfaatan Aplikasi Wordwall Sebagai Media Pembelajaran Seru Bagi Anak Sekolah Dasar," *Prosiding Seminar Nasional*, 2024, 1587–97.

⁹ Arif Agus Mujahidin et al., "Pemanfaatan Media Pembelajaran Daring (Quizizz, Sway, Dan Wordwall) Kelas 5 Di SD Muhammadiyah 2 Wonopeti," *Innovative: Journal Of Social Science Research* 1, no. 2 (2012): 552–60, <https://doi.org/10.31004/innovative.v1i2.3109>.

¹⁰ Septy Anggrainy, "Penggunaan Media Wordwall Dalam Pembelajaran Interaktif Pada Mahasiswa UIN Raden Intan Lampung," *At-Tarbiyah: Jurnal Penelitian Dan Pendidikan Agama Islam* 1, no. 2 (2024): 105–9.

¹¹ Olisna Olisna et al., "Pengembangan Game Interaktif Wordwall Untuk Meningkatkan Akhlak Terpuji Siswa Sekolah Dasar," *Jurnal Basicedu* 6, no. 3 (2022): 4133–43, <https://doi.org/10.31004/basicedu.v6i3.2737>.

¹² Nafia Wafiqni and Fanny Mestyana Putri, "Efektivitas Penggunaan Aplikasi Wordwall Dalam Pembelajaran Daring (Online) Matematika Pada Materi Bilangan Cacah Kelas 1 Di MIN 2 Kota Tangerang Selatan," *Elementar: Jurnal Pendidikan Dasar* 1, no. 1 (2021): 68–83, <https://doi.org/10.15408/elementar.v1i1.20375>.

¹³ Hartutik Hartutik and Rapita Aprilia, "Pengembangan Wordwall: Inovasi Media Pembelajaran Digital Terintegrasi," *Didaktika: Jurnal Kependidikan* 13, no. 2 (2024): 1525–40.

during learning activities in class. Therefore, a new innovation in learning media is needed that can increase student motivation and interest in learning.

Thus, this research presents an alternative way to increase student learning interest by using AI (Artificial Intelligence) as a learning medium through a wordwall application, an educational tool that can assist teachers as an interactive learning tool to create more engaging lessons. To use this AI, students can register and use the wordwall application on a PC or mobile device by accessing the wordwall application link through the Google search engine.

RESEARCH METHODS

This research is a research and development (R&D) study using the ADDIE model, which consists of five stages: Analysis, Design, Development, Implementation, and Evaluation. The research uses qualitative and quantitative data. The following explains the steps in the ADDIE model.¹⁴

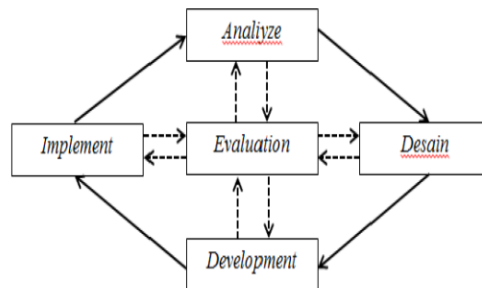


Figure 1 stages of the ADDIE model

1. *Analysis*:analyzing the need for new product development (models, methods, media, teaching materials) and analyzing the feasibility and requirements for product development.
2. *Design*:a systematic process that starts from designing the concept and content of the product.
3. *Development*:This phase includes activities to implement previously created product designs. At this stage, instruments to measure product performance are also needed.
4. *Implementation*:to obtain feedback on the product being created/developed. Initial feedback (initial evaluation) can be obtained by asking questions related to the product development objectives.

¹⁴ Abdul Azis Hasnah Kusumawardani, Muhammad Galih Riskiawan, Meilanie, "Pengembangan Media Wordwall pada Mata Pelajaran PAI Materi Beriman kepada Hari Akhir di SMPIT Al-Ghazali," *Penelitian Dan Pendidikan Agama Islam* 2, no. 1 (2024): 241–47.

5. *Evaluation*: carried out to provide feedback to product users, so that revisions are made in accordance with the evaluation results or needs that cannot be met by the product.¹⁵

Data collection in this study utilized several techniques, including interviews, questionnaires, and documentation. Both qualitative and quantitative analysis techniques were employed. Qualitative data were obtained from suggestions or criticisms provided by experts, while quantitative data were obtained from assessment scores for each indicator assessed.

RESULTS AND DISCUSSION

The development of Artificial Intelligence (AI)-based Islamic Religious Education (PAI) learning media through the Wordwall platform and its impact on the learning motivation of class 1A students at SMPN 8, Bima City. This research was conducted to address the need for adaptive, interactive learning innovations that can foster students' enthusiasm for learning, particularly in Islamic Religious Education (PAI).

By utilizing AI technology in Wordwall media, the learning process becomes more engaging and accessible to students. This discussion will outline how the developed media is applied in learning, student responses to it, and the increased learning motivation reflected in the results of observations, interviews, and distributed questionnaires.

Results

The development of digital technology in the modern era has had a significant impact on the world of education, particularly in the development of innovative and interactive learning media. One manifestation of the use of technology in learning is the use of Artificial Intelligence (AI)-based digital media, such as the Wordwall platform, which is starting to be widely used by educators to create a more interesting and enjoyable learning atmosphere. Wordwall is an interactive learning platform that allows teachers to design various types of learning activities such as quizzes, puzzles, word matching, and other educational games. With a fun and participatory approach, this media is considered capable of increasing active student engagement in the learning process. Learning Islamic Religious Education (PAI), which is sometimes considered monotonous or theoretical by some students, Wordwall presents an alternative solution to make learning materials more contextual and interesting. This study focuses on the development and implementation of Wordwall-based learning media in class 1A SMPN 8 Kota

¹⁵ Fitria Hidayat and Muhammad Nizar, "Model Addie (Analysis, Design, Development, Implementation and Evaluation) Dalam Pembelajaran Pendidikan Agama Islam Addie (Analysis, Design, Development, Implementation and Evaluation) Model in Islamic Education Learning," *Jurnal UIN* 1, no. 1 (2021): 28–37.

Bima, with the main goal of increasing student interest in learning PAI subjects. Interest in learning is one of the important aspects that influence the success of the educational process. When students have a high interest, they tend to be more focused, diligent, and motivated in participating in learning activities.¹⁶ Wordwall is an engaging and fun web-based platform that serves as a learning tool. It enables educators to create interactive learning materials that support the teaching process.

Wordwall is an interactive web application that can be used as an engaging learning and assessment tool for students during both offline and online learning.¹⁷ Wordwall offers many advantages, including its free use and the availability of several different templates. Furthermore, the completed learning media is tailored to the learning activities and materials delivered to students through various platforms, such as WhatsApp, Google Classroom, and other supported applications.

With the explanations above, the model used is the ADDIE model with five stages, namely:

1. Analysis Stage
 - a. Needs analysis

This research is motivated by the real-life situation at SMPN 8 Kota Bima, particularly among class 1A students in Islamic Religious Education (PAI). Based on initial observations, it appears that students' interest in Islamic Religious Education (PAI) is still relatively low. This is indicated by a lack of active student participation, minimal enthusiasm during learning, and low student attention to the material presented. This low interest in learning certainly impacts suboptimal learning outcomes and a passive learning atmosphere. One contributing factor to this low interest in learning is the teacher's monotonous learning methods, dominated by one-way lectures without actively engaging students. This method, although still relevant in some contexts, is less effective for the current generation of students who are more interested in visual, interactive, and technology-based learning. In response to these conditions, innovative learning media are needed that can stimulate student interest and motivation to learn. Wordwall is one solution offered in this study. Wordwall is a digital-based interactive learning platform that allows teachers to create learning activities such as quizzes, puzzles, and other educational games. This media not only presents material in an engaging manner but also encourages active student

¹⁶ Sabitha and Hasanudin, "Pemanfaatan Aplikasi Wordwall Sebagai Media Pembelajaran Seru Bagi Anak Sekolah Dasar."

¹⁷ Desi Ratnasari et al., "Pemanfaatan Aplikasi Wordwall Sebagai Media Pembelajaran Bahasa Inggris Yang Menyenangkan," ... *Seminar Nasional Hasil ...*, 2022, 1243–50.

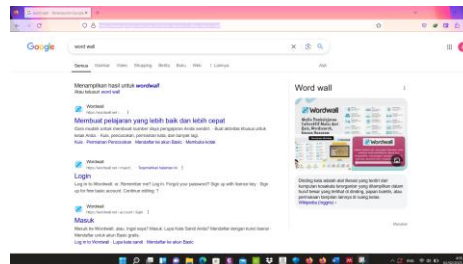
participation through direct interaction with the content. By developing Wordwall-based Islamic Religious Education (PAI) learning media, it is hoped that it will create a more enjoyable learning environment, motivate students to be more active, and increase their interest in learning and engage in more meaningful Islamic Religious Education (IS) lessons. With the advancement of artificial intelligence today, it is being utilized as a learning medium to address these issues.

2. Planning Stage (Design)

In the planning stage, the development of learning media focused on the initial design of interactive digital media based on Wordwall, tailored to the characteristics and needs of first-grade junior high school students. This process began with curriculum analysis and mapping of relevant Islamic Religious Education (PAI) teaching materials to be used as learning content. The goal was to create media that was not only visually appealing but also in accordance with the basic competencies that students must achieve. The media was designed to be easily accessible by students through digital devices, both at school and at home. By adopting an educational game-based approach (game-based learning), Wordwall is expected to be able to present learning materials in a more enjoyable way, encourage active student participation, and facilitate the understanding of important concepts in Islamic Religious Education learning. The following are the steps taken to create digital learning media based on worldwall:

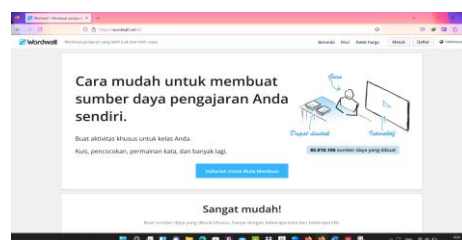
- a. Go to the Google website and search for “artificial intelligence wordwall”.

Figure 2. AI Wordwall Search



- b. Click sign up or register then fill in your name, email address, or sign up directly with a Google account using a laptop or cellphone to be able to access.

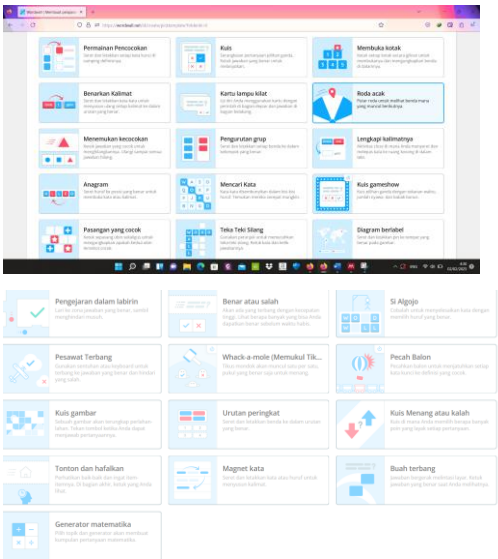
Figure 3. Sign up



- c. Click create activity then select one of the templates you want to use as learning media.
 - d. Enter the title and description of the learning media used.
 - e. Type the content of the material to be delivered and adjust it to the type of learning media used.
3. Development Stage

In this stage, it is necessary to develop learning media using word walls, with several learning media templates used by teachers, both free and those accessed by subscription:

Figure 4. Wordwall template



In this development, its feasibility and validation were tested by involving teachers and students, which showed that this product was suitable for use as a learning medium with the following results:

- a. Validation by subject matter experts: 90% (very good)
- b. Media expert validation

Table 1: Validation of media suitability

Aspect	Score	Average (%)	Information
Text and Color Matching	9	90%	Very worthy
Practical design	4	80%	Worthy
Clarity of instructions	9	90%	Very worthy
Media content	9	90%	Very worthy
Average presentation		88%	Very worthy

Based on data obtained from the validation of the learning media by experts, the developed Wordwall-based media received a "very suitable" rating for use in Islamic Religious Education (PAI) learning. This result is demonstrated by an average rating of 88%, indicating that the media meets both substantive and technical feasibility criteria.

Aspects assessed in the validation included the quality of content and materials, visual appearance, interactivity, and suitability to the characteristics of first-grade junior high school students. A high validation score reflects that this media has been designed appropriately, attractively, and relevant to learning needs. Furthermore, this media is considered effective in presenting learning materials more interactively, thereby increasing student engagement in learning activities. With validation results showing a high level of feasibility, this Wordwall-based learning media can be used as an alternative digital learning strategy that supports increasing student learning interest, particularly in Islamic Religious Education (PAI) subjects.

- c. Teacher response: which shows that the learning media offered has a positive impact in increasing students' interest in learning in class 1a of Smpn 8 Kota Bima.
 - d. Limited trial: in this trial conducted on students, it was found that students were interested in participating in learning using wordwall learning media, indicating that the use of artificial intelligence wordwalls can be used as a learning medium in the classroom.
4. Implementation Stage (*Implementation*)

The implementation phase is a trial process for the use of the Wordwall learning media that has been developed on research subjects, namely class 1A students of SMPN 8 Kota Bima. The implementation was carried out with the aim of seeing the extent of the effectiveness and practicality of the media in real learning situations. The number of students involved in this phase was 30 people. The Wordwall learning media was accessed by students through personal devices in the form of mobile phones (HP), which allowed them to interact directly with the learning materials that had been packaged in the form of quizzes, puzzles, and educational game-based activities. The use of Artificial Intelligence (AI) technology in this media makes it easier for teachers to deliver material in an interesting and adaptive manner, while providing a more dynamic learning experience for students.

Based on observations during implementation, the Wordwall learning media was deemed practical, both in terms of its ease of use by students and the ease with which teachers integrated it into teaching and learning activities. Students demonstrated high levels of enthusiasm, evident in their active participation in completing assignments given

through the Wordwall. Furthermore, the media proved to be easily accessible and did not present significant technical challenges. The following are the results of the media's practicality scores:

Table 2: results of media practicality

Aspect	Score	Average (%)	Information
Interactive aspects	8	80%	Practical
Interesting aspects	9	90%	Practical
Creative aspects	9	90%	Practical
Total average		85%	Practical

Based on the results of the assessment criteria, it is said that GAULL obtained the "practical" criteria with an average score of 85%.

Table 3: Results of the Pre- and Post-Test Questionnaire (Learning Interest):

Indicator	Before the wordwall	After the wordwall	Information
Interest	60%	88%	Increase
Activity	55%	85%	Increase
Feeling happy	50%	90%	Increase
Desire to Learn	58%	87%	Increase
Average presentation		84%	Increase

Based on the results of the pre- and protest questionnaire tables, it shows that there is an increase in student involvement in having an interest in learning Islamic Education learning using AI wordwall, this shows the feasibility of learning media using wordwall as a learning medium.

5. Evaluation Stage

Researchers conduct evaluation and revision stages to achieve the best results. Evaluation is conducted in the middle stage of the ADDIE model, where researchers evaluate the quality of the media and materials developed. Furthermore, based on the suggestions and input obtained from the evaluation, researchers make improvements and adjustments to the media and materials that have been developed. This aims to ensure that the resulting learning media achieves an optimal level of validity. By conducting appropriate evaluation and revision, researchers can improve the quality of the media and

materials developed as the research progresses, resulting in a product that is better suited to learning needs.

Discussion

The use of technology-based learning media, particularly Wordwalls, in Islamic Religious Education (PAI) learning at SMPN 8 Bima City is still very minimal and has not even been optimally implemented in the school environment. Based on the results of observations conducted by researchers, the learning methods used by teachers tend to be traditional, namely relying on the lecture method as the main approach in delivering material. The use of this dominant lecture method has limitations, especially in the context of 21st-century learning that demands active student involvement and the use of digital technology. As a result, students show symptoms of boredom and lack of motivation in participating in learning. This boredom is caused by a lack of variety in learning methods and media, as well as the lack of innovations that can optimally attract students' attention. This condition indicates the need for innovation in interactive and adaptive learning media to adapt to current developments, especially in utilizing digital technology that is familiar to students. Wordwalls as an interactive learning media based on games and Artificial Intelligence is one solution that can be used to overcome this problem. This media not only presents material in an interesting and enjoyable way, but also encourages active student participation in the learning process.

In developing this wordwall learning media, researchers offer learning media that is felt to be able to increase students' interest in learning Islamic Religious Education (PAI). In the process of implementing the development of this learning media, it is carried out in sync with the procedures carried out by Dick and Carry, the model in the ADDIE research uses five processes, namely: Analysis, Design, Development, Implementation and Evaluation.¹⁸

In developing a word wall as an integrated learning medium with learning resources and evaluation, each stage, from analysis, product design, product development, classroom implementation, and evaluation, has been carried out according to standard procedures. This is in accordance with the explanation in Hidayat and Nizar¹⁹ the ADDIE development model is very effective to use because the stages are very systematic so that it can produce products that are ready to use and meet product development testing standards.

¹⁸ Nisriina Amiirah Faatin and NFn Rusnilawati, "Pengembangan Media Digital Wordwall Ditinjau Dari Kemampuan Berfikir Tingkat Tinggi Materi Operasi Bilangan Kelas Vi," *Kwangsan: Jurnal Teknologi Pendidikan* 10, no. 2 (2022): 221, <https://doi.org/10.31800/jtp.kw.v10n2.p221--238>.

¹⁹ Hidayat and Nizar, "Model Addie (Analysis, Design, Development, Implementation and Evaluation) Dalam Pembelajaran Pendidikan Agama Islam Addie (Analysis, Design, Development, Implementation and Evaluation) Model in Islamic Education Learning."

Wordwall learning media is usually integrated with learning resources and evaluations, making it easier for teachers to support a smooth digital learning process. Wordwalls can be used to create learning media such as quizzes, matching games, anagrams, word scrambles, word searches, grouping, and more. Wordwall applications are attractive because they allow you to access the created media online or download a printed PDF version.²⁰

Wordwall itself is a web-based platform that allows users to enhance learning by offering both paid and free templates that can be customized to meet teachers' needs. With its user-friendly interface, Wordwall makes it easy for teachers to design engaging and interactive materials.²¹ By also paying attention to the research conducted, the results of the use of this media are that wordwall media is able to increase students' interest in learning. This can be seen from the aspect of student activity, the observation assessment criteria are measured through several indicators, including: (a) Student activity when participating in offline teaching and learning activities (b) Student activity when collecting assignments on time, (c) Asking questions about material that is not yet understood.

Regarding the development of Islamic Religious Education (PAI) learning media using Artificial Intelligence Wordwall, it can be concluded that this media has a positive impact on increasing the learning motivation of class 1A students at SMPN 8 Kota Bima. The implications of this finding cover several important aspects in the world of education. For teachers, the use of AI-based technology such as Wordwall can be an innovative alternative in delivering material, because it is able to create a more interactive, enjoyable learning atmosphere and encourage active student participation. This requires teachers to be more adaptive and creative in developing learning methods that are appropriate to the characteristics of today's students who are familiar with digital technology. From the perspective of school institutions, the results of this study indicate the importance of supporting the development of teacher competencies through training in the use of learning technology, as well as providing adequate facilities so that digital-based learning can be implemented optimally. Meanwhile, for students themselves, Wordwall media has been proven to be able to foster an enthusiasm for learning through an educational game approach, so that PAI material that has been considered rigid and monotonous becomes easier to understand and enjoy. This research also contributes to the development of science, especially in the field of educational technology, and can be used as a reference for future researchers who want to explore the use of AI-based learning media in other levels or subjects.

²⁰ Siti Faizatul Nissa and Novida Renoningtyas, "Penggunaan Media Pembelajaran Wordwall Untuk Meningkatkan Minat Dan Motivasi Belajar Siswa Pada Pembelajaran Tematik Di Sekolah Dasar," *Edukatif: Jurnal Ilmu Pendidikan* 3, no. 5 (2021): 2854–60, <https://doi.org/10.31004/edukatif.v3i5.880>.

²¹ Fanny Landari Putri and Arrini Shabrina Anshor, "Pengembangan Media Pembelajaran Berbantuan Wordwall Untuk Meningkatkan Minat Belajar Matematika Siswa Kelas IV SD Swasta It Cemara Islam Plus," *Pendas: Jurnal Ilmiah Pendidikan Dasar* 09, no. September (2024): 492–505.

CONCLUSION

Wordwalls are an effective tool for creating interactive learning media in junior high schools. With their benefits in increasing student engagement, facilitating material customization, supporting independent learning, and enhancing critical thinking skills, wordwalls can be an essential part of modern teaching strategies. Proper use of wordwalls can help teachers create more engaging and effective lessons. This helps prevent the learning from feeling monotonous, especially in Islamic Religious Education (PAI) learning, which typically uses the lecture method. The development of wordwall learning media can be used as a tool in the learning process.

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