DEVELOPMENT OF WORDWALL INTERACTIVE GAME TO INCREASE STUDENT INTEREST IN LEARNING SMK NEGERI 7 LHOKSEUMAWE

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Abstract

This study aims to develop an interactive game based on Wordwall to increase students' interest in learning Islamic Religious Education (PAI) subjects at SMK Negeri 7 Lhokseumawe, especially in the material of the laws of tajweed. The method used is research and development (R&D) with the ADDIE model (Analysis, Design, Development, Implementation, Evaluation). Data collection was done through observation and questionnaires given before and after learning. The results showed that the developed interactive game met the eligibility criteria both in terms of material and media, with a very good assessment on the aspects of ease of use and audio quality. The pilot test showed that the use of interactive games can significantly increase students' interest in learning, with the learning interest score increasing from 2126 to 2521. In addition, this game-based teaching material proved to be more interesting and effective in facilitating understanding of tajweed material compared to conventional methods.

Abstrak

Penelitian ini bertujuan untuk mengembangkan game interaktif berbasis Wordwall guna meningkatkan minat belajar siswa pada mata pelajaran Pendidikan Agama Islam (PAI) di SMK Negeri 7 Lhokseumawe, khususnya dalam materi hukum-hukum tajwid. Metode yang digunakan adalah penelitian pengembangan (Research and Development/R&D) dengan model ADDIE (Analysis, Design, Development, Implementation, Evaluation). Pengumpulan data dilakukan melalui observasi dan angket yang diberikan sebelum dan setelah pembelajaran. Hasil penelitian menunjukkan bahwa game interaktif yang dikembangkan memenuhi kriteria kelayakan baik dari segi materi dan media, dengan penilaian sangat baik pada aspek kemudahan penggunaan dan kualitas audio. Uji coba menunjukkan bahwa penggunaan game interaktif dapat meningkatkan minat belajar siswa secara signifikan, dengan skor minat belajar meningkat dari 2126 menjadi 2521. Selain itu, bahan ajar berbasis game ini terbukti lebih menarik dan efektif dalam memfasilitasi pemahaman materi tajwid dibandingkan dengan metode konvensional.

INTRODUCTION

Teachers have a crucial role in education, especially as learning planners. They are required to design an effective and efficient learning process by utilizing various relevant media and learning resources (Mukhadis et al., 2021). However, learning Islamic religious education still faces challenges, where the results are not optimal. Teachers' efforts to improve the quality of the teaching and learning process are considered not optimal, because the methods, approaches and evaluations used are still traditional. As a result, student absorption remains low, which becomes an obstacle in achieving learning objectives.

The learning process carried out by teachers in achieving effective goals generally uses the basic method, namely the lecture method. However, in achieving basic competencies, interactive and active methods must be used so that students achieve the desired competencies between teachers and students (Khaer et al., 2025).

According to regulation No. 19 of 2005, the government expects teachers to develop teaching materials and according to the minister of education No. 41 of 2007, about developing teaching tools in the form of lesson plans (RPP). One of the important components in lesson plans is learning resources. Thus, teachers are expected to have the ability to develop teaching materials that can be an important part of the learning resources used. The learning resources chosen must be appropriate and support the material being taught. The development of teaching materials is expected to be the answer to the various challenges faced in the learning process (Magdalena et al., 2021).

Using basic delivery methods such as explaining only with books sometimes makes it difficult for students to absorb the material. This is because the content factor of the book is too heavy for students to understand by being explained by the teacher. Then the teacher needs a method that can be easily understood by students

Studies conducted by researchers in the 2023-2024 school year at SMK Negeri 7 Lhokseumawe teachers still use ordinary teaching materials such as textbooks, this certainly still feels normal in the learning process, even students are sometimes confused and bored by applying the method, and it is still not seen that teachers use interactive technology-based methods.

Since this time, researchers still see Islamic religious education teachers still using textbooks as teaching materials in class, some have used projector media but it is only as a medium and still dominantly uses the lecture method in the learning process. Of course this does not meet the competency standards that have been based on government regulations. In today's technological developments, Islamic education teacher solutions must implement an interactive web-based learning process, with interactive web-based media, teachers can develop learning to be fun and attract students' interest.

Islamic religious education (PAI) as an integral part of the national education system bears strategic responsibility in shaping the character and morals of students. However, the implementation of PAI learning is still constrained by conventional teaching patterns that tend to be one-way, lack dialogue, and do not accommodate the learning needs of the digital generation. This situation is exacerbated by the low motivation of students in participating in learning, especially in cognitive aspects such as understanding tajweed that requires perseverance and complex information processing. The limited methods and media used are serious obstacles in transforming learning that should be more contextual and meaningful(Hartati, 2024).

One innovative platform that can be utilized in learning development is the Wordwall game. Wordwall is a website that allows teachers to create interactive learning experiences through various game-based activities, such as quizzes, pair matches and crosswords. With Wordwall, the learning process becomes more interesting and fun for students.

Advances in digital technology provide new opportunities in the development of learning models that are more interactive and fun. One promising approach is the use of educational game-based media (edugame) that can combine cognitive, affective and psychomotor elements in one integrative learning activity(Pratama & Setyaningrum, 2018). This kind of edugame can

stimulate attention, increase active participation, and create a learning atmosphere that is not monotonous. In the context of PAI learning, this approach is very relevant to be applied considering the nature of the material which is sometimes abstract and requires visualization and repeated practice such as in tajweed learning.

Research conducted by Rizqi Nuritno in his article entitled "Development of Interactive Multimedia-Based Teaching Materials" shows that the application of interactive media by teachers has succeeded in increasing student interest in learning at State Junior High School 12 Cirebon City. As a result, math learning using this media received a score of 4.26, which is included in the very good category. Although the study focused on Mathematics learning and proved effective in increasing students' interest in learning, the results showed that using technology-based learning would be superior and efficient than conventional methods. However, the question arises: can the application of a similar model in Islamic Religious Education (PAI) learning also increase students' interest in learning? Although web-based instructional materials for use in Islamic Education learning are now abundant, research that specifically evaluates their impact in increasing learning interest, especially on the science of tajweed, is still very limited.

Before carrying out the learning process, the teacher must know the objectives to achieve learning success, so the teacher must prepare teaching materials based on interactive media and then test the teaching materials so that the Islamic Religious Education learning process can run optimally.

SMK Negeri 7 Lhokseumawe is one example of a vocational school that is still trying to get out of the stagnation of traditional methods in learning PAI. Reliance on textbooks and lectures is not enough to answer the challenges of the times, especially in attracting students' interest in religious studies. Therefore, an innovation is needed in the form of developing interactive game-based learning media that suits the characteristics of students in the digital era. Wordwall, as a flexible and easily accessible platform, is seen as a potential means of intervention in increasing students' interest in PAI materials, especially in mastering tajweed. This research focuses on developing and evaluating the effectiveness of the media in the environment of SMK Negeri 7 Lhokseumawe.

Some details in the introduction can limit the researcher that the title to be studied is "Development of Interac tive Games to Increase Student Interest in Learning SMK Negeri 7 Lhokseumawe".

METHOD

Researchers in this study used the Research and Development (R&D) type of development research. This research seeks to produce and test the impact of methods carried out by teachers in game-based learning (Zainuddin, Mardianto, & Matsum, 2023). Researchers used Analysis, Design, Develop, Implementation, and Evaluation (ADDIE) as a model for designing learning (Rusdi, Sirajuddin, & Alfah, 2022). This model also functions for the development of learning methods, learning strategies, learning media, and learning teaching materials. Researchers used observation and questionnaire techniques as data collection in the development process carried out in the classroom. The observation technique is carried out unstructured and without systematic preparation, observation is carried out directly (Mazhar, 2021). Questionnaires as

data collection are carried out by asking questions directly to respondents before learning and after learning (Pozzo & Borgobello, 2019).

RESULT AND DISCUSSION

The final result of the research and development is an interactive game designed to support the learning of Al-Qur'an Hadith class VII. The development process involves five main stages, namely: 1) Analysis 2) design 3) Development, 4) Implementation and 5) Evaluation

Interactive games are designed to support the learning process, both in the classroom and independently. The product is very user-friendly thanks to the attractive templates provided. The material presented focuses on the laws of tajweed, tailored to the existing learning needs. In addition, the game combines learning material with quiz and puzzle elements, designed in a fun way to make it easier for students to understand and master the material being taught.

This interactive game was declared feasible based on a comprehensive evaluation of the material and media aspects. The material assessment was conducted by experts, namely lecturers from the Lhokseumawe State Islamic Institute and PAI teachers at SMK Negeri 7 Lhokseumawe, who appreciated the alignment with the curriculum, language accuracy, and effectiveness of teaching materials. Meanwhile, the material presentation component and game interactivity were considered to meet good standards.

Media evaluation was conducted by experts (Alvadina, Pani Yuni Fitrisia, Azmi Yufriadi, Ferdi Syahriani, Fadilla Ngardi, 2024), namely lecturers from the Lhokseumawe State Islamic Institute and teachers from SMK Negeri 7 Lhokseumawe. The aspects of ease of use and audio quality obtained a Very Good predicate, while the appeal of simplicity and visualization were rated in the Good category.

In addition to expert evaluation, the feasibility of interactive games was also tested by students in PAI learning. The results of the small group trial showed Very Good indicators on the ease of capturing lessons and speaking accuracy. Good indicators include certainty of writing, utilization of teaching materials, systematic presentation, relevance of questions to the material, audio quality, and increased motivation and attractiveness. However, the appropriateness of the picture, anime, and ease of learning only received a Fair assessment.

In the broad category, the indicators obtained achieved good scores such as the appropriateness of writing, the appropriateness of pictures and anime, the implication of lessons, the ease of capturing lessons, the compatibility of speaking, and achieving an increase in motivation and interest. Very good indicators were given to learning relief and material appropriateness.

The available information revealed that the mean values of several components and classified them into five categories. The results show that: (1) the evaluation of the material expert achieved a score of 4.5, which is classified as Good, (2) the assessment of the technology expert received a score of 4.56, which is classified as Very Good, and (3) the feedback of 4.5 was achieved by the small group of students, which is also in the Good category. With these results, the interactive learning media teaching material lies on the standard of feasibility from the aspects of the lesson and instrument.

This paper not only tests interactive media-based learning materials with tajweed science material, but also analyzes the increase in students' PAI learning interest before and after using them. The initial total score of learning interest was 2126, which then jumped to 2521 at the end of the test. Based on the N-gain calculation, the increase of 0.405 was classified as moderate.

This finding confirms that interactive multimedia teaching materials are significantly able to encourage students' interest in learning.

Table 1.1 Descriptive Statistics Before and After

Statistik	Pretest	Posttest
Total Skor	2.126	2.521
Jumlah Responden	30 siswa	30 siswa
Rata-rata (Mean)	70,87	84,03
Median	±71	±84
Skor Maksimum	±80	±95
Skor Minimum	±60	±70

Statistik	Pretest	Posttest	N-Gain
Total Skor	2126	2521	—
Rata-rata	~70.87	~84.03	0.405

The average pretest score of 70.87 shows that students' interest in learning in PAI subjects before the application of interactive media is still in the sufficient category and not optimal. After the intervention using edugame-based interactive media, there was an increase in the average posttest score to 84.03, which is classified in the good category. The average difference of 13.16 points, when calculated using the N-Gain formula, resulted in a value of 0.405 which is included in the moderate category. This finding indicates that the use of Wordwall interactive media has a positive impact on increasing students' interest in learning, although the level of effectiveness still does not reach the high category.

According to Hamalik, interest in learning is influenced by several factors, one of which is the subject matter and teacher attitude. Interesting subject matter tends to be studied more often by students.(Naffi'an et al., 2024) Hamalik also explained that motivation is an important factor in increasing interest in learning. Students with high motivation will show great interest in a subject, which then encourages them to study the material consistently over a period of time. Meanwhile, Wijayanto stated that the use of interactive multimedia in learning can increase student motivation, so that learning objectives are easier to achieve.

From the results of the study, it can be concluded that teachers and students gave positive responses to the use of interactive games for learning. The evaluation shows that the interactive game of Islamic Religious Education with tajweed law material is declared feasible and effective, as well as being able to significantly increase students' interest in learning.

The development of the Wordwall interactive game for PAI learning offers advantages over conventional teaching materials. The language in this game is structured more simply and adapted to the level of students' intellectual abilities, ensuring the material is easy to understand and more interesting to use. The visual display is also attractive and helps students understand the material more effectively. In addition, the Wordwall interactive game is equipped with image features that support the understanding of tajweed material. This teaching material also presents quizzes and puzzles that are more interesting and fun, with assessment results displayed

immediately. This allows students who obtain unsatisfactory scores to repeat the quiz until they reach the desired score.

In addition to the differences mentioned, Wordwall interactive game teaching materials also have disadvantages, which can only be used when there is internet network access. Nevertheless, this teaching material has a significant positive impact on students' interest in learning PAI subjects.

Based on the research and development that has been carried out, the limitations of the Wordwall interactive game teaching materials regarding the laws of tajweed are as follows:

1) Teaching materials can only be accessed by students during PAI lesson hours,
2) Only in two product testing implementations, namely small group trial testing in class VII with the participation of 30 students,
3) Testing of teaching materials was carried out in 1 institution due to lack of time and administration, as well as
4) Focusing on the impact of increasing students' interest in learning PAI.

Conclusion

Based on the results of research and development of Wordwall interactive games for PAI learning, it can be concluded that this product is already in the characteristics of good appropriateness in terms of lessons or instruments. The assessment triggered by material and media experts, as well as learner responses, show that this teaching material is suitable for use in the learning process. This interactive game succeeded in attracting students' interest with an attractive visual display, simple and easy-to-understand language, and interesting features such as quizzes and puzzles that facilitate understanding of tajweed material. In addition, the use of this teaching material is proven to increase students' interest in learning PAI subjects. However, this research also shows that there are some limitations to these teaching materials. One of them is the dependency on the internet network to access the Wordwall interactive game. In addition, the product trial was limited to one school and a small group of students, so the results may not fully reflect its effectiveness across educational contexts. Nevertheless, the increase in students' interest in learning shows that this interactive game-based teaching material has great potential to improve the quality of PAI learning, although it needs further development related to the existing limitations.

CONCLUSION

The findings of this study indicate that the overall readiness of English teachers in implementing the Merdeka Belajar Curriculum varies, with the majority demonstrating a relatively high level of preparedness. Of the five teachers interviewed, three exhibited readiness across all four key indicators: comprehension of the curriculum's principles, the ability to design instructional materials (including CP, ATP, and assessment planning), implementation of differentiated learning, and application of both formative and summative assessments. These participants articulated a clear understanding of the Merdeka Belajar Curriculum as a student-centered approach that emphasizes learner autonomy, creativity, and contextualized instruction. Their instructional planning reflected a flexible and simplified model in alignment with curriculum objectives, and their classroom practices incorporated a range of strategies to

accommodate students' varying abilities and learning preferences. Furthermore, these teachers were able to implement assessment in a comprehensive manner, utilizing diagnostic, formative, and summative tools in accordance with the curriculum guidelines. In contrast, the remaining two participants demonstrated partial readiness. While they showed some awareness of the curriculum's objectives, their implementation was still in its initial stages, with some reliance on conventional methods and limited engagement in differentiated instruction or curriculum-specific assessment strategies. This variation in readiness suggests that while positive progress has been made in the adoption of the Merdeka Belajar Curriculum, continued professional development, mentorship, and institutional support are critical to facilitating a more uniform and effective implementation across educational contexts.

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