Interactive PAI Learning Media Design Using Wordwall and Quizizz to Enhance Student Motivation and Participation

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ARTICLE INFO	ABSTRACT
	This study aims to develop an interactive learning media design for Islamic Religious Education (PAI) using the Wordwall and Quizizz platforms to enhance student motivation and participation in the learning process. The research method employed is Research and Development (R&D), involving needs analysis, media design, expert validation, limited trials, and evaluation. The results indicate that interactive learning media based on Wordwall and Quizizz effectively increase student engagement. Students demonstrate higher learning motivation, active participation, and greater interest in PAI material. These findings highlight the importance of utilizing interactive digital media as an innovative and enjoyable learning strategy.
	ABSTRAK
	Penelitian ini bertujuan untuk mengembangkan desain media pembelajaran Pendidikan Agama Islam (PAI) yang interaktif menggunakan platform Wordwall dan Quizizz guna meningkatkan motivasi dan partisipasi siswa dalam proses belajar. Metode penelitian yang digunakan adalah Research and Development (R&D) dengan tahapan analisis kebutuhan, perancangan media, validasi ahli, uji coba terbatas, dan evaluasi. Hasil penelitian menunjukkan bahwa media pembelajaran interaktif berbasis Wordwall dan Quizizz efektif dalam meningkatkan keterlibatan belajar siswa. Siswa menunjukkan motivasi belajar yang lebih tinggi, partisipasi aktif, dan minat yang meningkat terhadap materi PAI. Temuan ini menegaskan pentingnya pemanfaatan media digital interaktif sebagai strategi pembelajaran yang inovatif dan menyenangkan.
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A. Introduction

Islamic Religious Education (PAI) is one of the essential subjects aimed at shaping students' character, morality, and spirituality (Setiawan, 2018). PAI learning emphasizes not only cognitive aspects but also affective and psychomotor dimensions in students' daily lives (Rahmawati, 2020). In practice, however, PAI learning often faces challenges, particularly

regarding low motivation and student engagement in learning activities (Fadillah, 2019). This may result in insufficient understanding of religious concepts and limited application of moral values in school environments. Learning motivation is a key factor determining students' success in understanding educational material (Ryan & Deci, 2020). Both intrinsic and extrinsic motivation should be considered to create an effective and enjoyable learning environment. Student engagement is also an important indicator of learning success. According to Fredricks, Blumenfeld, and Paris (2004), learning engagement encompasses behavioral, emotional, and cognitive involvement of students in the learning process.

With the advancement of technology, the use of digital learning media has become an effective strategy to enhance students' motivation and engagement (Mulyadi & Hidayat, 2021). Interactive media allows students to learn more actively and participatively. Wordwall is a digital learning platform that enables teachers to create various interactive activities such as quizzes, puzzles, and educational games (Thomas, 2022), which can increase students' interest in the learning material. Quizizz is also a popular digital learning media because it provides interactive quizzes with instant feedback (Kurniawan, 2021) and supports game-based learning, motivating students to actively participate in lessons. The use of Wordwall and Quizizz in PAI learning provides an opportunity for teachers to combine traditional and digital approaches, making the learning process more dynamic (Rahman & Nugroho, 2020).

Previous studies indicate that interactive media can improve students' learning motivation. For example, the use of Quizizz has been shown to enhance exam scores and student participation in class (Hidayati, 2021). Additionally, Wordwall facilitates a variety of enjoyable learning activities, such as matching games, word searches, and quiz competitions, which significantly increase student engagement (Sari & Putri, 2022). The implementation of interactive digital media in PAI learning aligns with constructivist theory, which emphasizes the importance of students actively constructing knowledge through interaction with their learning environment (Piaget, 1972). Integrating digital media such as Wordwall and Quizizz also supports project-based learning, where students learn through relevant, collaborative, and enjoyable activities (Bell, 2010). Despite its potential, few studies specifically examine

the design of interactive PAI media that combines Wordwall and Quizizz in the context of enhancing students' motivation and engagement (Setiawan, 2023).

Therefore, this study aims to design and develop PAI learning media based on Wordwall and Quizizz and to analyze its effectiveness in improving students' motivation and participation in class. It is expected that the results of this study will contribute to PAI teachers in developing innovative learning strategies, improving the quality of instruction, and fostering students' interest and motivation through interactive digital media.

B. Method

This study employed a Research and Development (R&D) design with the aim of developing interactive learning media for Islamic Religious Education (PAI) based on Wordwall and Quizizz. The research followed a systematic development process adapted from Borg and Gall (1983), including needs analysis, media design, expert validation, limited trial, and evaluation of effectiveness. This approach allows iterative development and testing of learning media before final implementation.

The research was conducted at an Islamic Junior High School (SMP) in Medan, involving grade VII students. A purposive sampling technique was used to select participants who were representative in terms of learning motivation and digital literacy. A total of 30 students participated in the limited trial stage to assess the effectiveness of the developed media.

Data collection combined quantitative and qualitative methods. A questionnaire was administered to measure students' motivation and engagement before and after using the interactive media, using a Likert scale from 1 to 5. Observations were conducted to assess students' participation, attention, and interaction during the learning process. In addition, semi-structured interviews were held with teachers to gather insights on the usability and practicality of Wordwall and Quizizz. Documentation, including screenshots, quizzes, and students' responses, was collected to support evaluation.

The research instruments included a motivation and engagement questionnaire validated by experts for reliability (Cronbach's alpha $\geq$ 0.8), an observation checklist to monitor active participation, and interview guidelines for qualitative feedback from teachers.

The research was implemented in five stages. The first stage was needs analysis, identifying learning challenges, students' motivation, and engagement levels in PAI. The second stage involved media design, developing interactive learning activities using Wordwall and Quizizz aligned with the PAI curriculum. The third stage was expert validation, where the prototype media was evaluated by educational and PAI experts for content accuracy, interactivity, and usability. The fourth stage was a limited trial, in which the media was implemented with a small group of students to observe engagement, motivation, and practicality. The final stage was evaluation and revision, where feedback from the trial was used to refine the media for broader application.

For data analysis, quantitative data from the pre-test and post-test questionnaires were analyzed using descriptive statistics such as mean and standard deviation, and paired sample t-tests to determine significant differences in student motivation and participation. Qualitative data from observations, interviews, and documentation were analyzed using thematic analysis to identify patterns and insights regarding the effectiveness and usability of the interactive media.

Ethical considerations were strictly observed. Informed consent was obtained from students and parents, confidentiality of participants was maintained, and all data were used exclusively for research purposes. The study ensured honesty in reporting the results and respect for participants' rights.

C. Results and Discussion

The results of this study are presented based on the effectiveness of the interactive PAI learning media using Wordwall and Quizizz in improving students' motivation and participation. The evaluation was conducted through quantitative data from pre-test and post-test questionnaires, and qualitative data from observations, interviews, and documentation.

1. Student Motivation

The analysis of the pre-test and post-test questionnaires showed a significant increase in students' motivation after using the interactive media. The mean score of motivation increased from 3.12 in the pre-test to 4.25 in the post-test, indicating a notable improvement. The paired sample t-test confirmed that this increase was statistically significant ($p < 0.05$). This finding suggests that the use of Wordwall and Quizizz effectively stimulates intrinsic motivation among students. Students reported that the interactive games and instant feedback provided by the platforms made learning more enjoyable and engaging, which aligns with previous research indicating that digital media can enhance motivation in classroom learning (Hidayati, 2021; Thomas, 2022).

2. **Student Participation**

Observation during the learning process showed that students' participation increased significantly. Most students actively responded to questions, completed quizzes on time, and collaborated during interactive activities. The observation checklist indicated that 85% of students participated actively during lessons using Wordwall, and 90% showed high engagement when using Quizizz. Interviews with teachers confirmed that students were more attentive and enthusiastic during lessons compared to traditional methods. This finding supports the idea that interactive digital media can enhance behavioral and emotional engagement in the learning process (Fredricks et al., 2004).

3. **Qualitative Feedback**

Teachers' feedback from interviews highlighted several strengths of the developed media. First, the media was user-friendly and easy to integrate into the curriculum. Second, it allowed teachers to monitor student performance in real-time, providing immediate feedback for corrective learning. Students also reported that the interactive games reduced boredom and increased their willingness to participate. These findings are consistent with constructivist learning theory, which emphasizes active knowledge construction through interaction with engaging and meaningful learning activities (Piaget, 1972).

4. **Effectiveness of Wordwall and Quizizz Integration**

The integration of Wordwall and Quizizz provided varied interactive activities, such as matching games, multiple-choice quizzes, and collaborative challenges. This variation catered to different learning styles and enhanced cognitive engagement. The combination of game-based learning (Quizizz) and interactive content creation (Wordwall) resulted in a more dynamic and participatory learning environment. This is in line with Bell (2010), who argued that project-based and interactive digital learning can significantly improve engagement and motivation.

5. Discussion

The results indicate that the designed interactive media effectively increases both motivation and participation among students. The positive changes are attributed to several factors: the engaging format of digital media, the immediate feedback feature, the gamification element, and the alignment with curriculum objectives. These factors collectively create a stimulating learning environment that encourages active involvement. The findings of this study support previous studies that show interactive learning media can enhance students' motivation and engagement in classroom learning (Mulyadi & Hidayat, 2021; Sari & Putri, 2022).

Moreover, this study provides practical implications for PAI teachers. By integrating Wordwall and Quizizz into the learning process, teachers can create interactive lessons that not only improve academic achievement but also foster students' interest, collaboration, and enjoyment in learning religious education. The study demonstrates that digital media does not replace traditional teaching but rather complements it to achieve better learning outcomes.

In conclusion, the development and implementation of interactive PAI learning media using Wordwall and Quizizz significantly improve students' motivation and participation. The combination of game-based and interactive content platforms offers an innovative approach to enhance the quality of Islamic Religious Education and supports active, meaningful, and enjoyable learning experiences.

D.   Conclusion

Based on the findings of this study, it can be concluded that the implementation of the Numbered Heads Together (NHT) learning model has a significant impact on improving student learning outcomes in the *Asmaul Husna* material for Grade IV students at SDN 101953 Pantai Cermin. This is evident from the increase in student achievement in each learning cycle, both in terms of understanding, participation, and activeness during the learning process.

The NHT learning model encourages students to actively engage in group discussions, fosters collaboration, and builds a sense of responsibility in each student. Through this process, students become more motivated and confident in expressing their ideas, which in turn contributes to better academic performance.

Thus, the NHT learning model can be considered as an effective alternative in learning Islamic Religious Education, particularly in developing a deeper understanding of *Asmaul Husna*. This research also provides implications for teachers to apply innovative and student-centered learning models to enhance the quality of learning in the classroom.

E.   Bibliography

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