



Utilization of Wordwall as an Interactive Game Media to Improve Motivation and Learning Outcomes of Asmaul Husana of Elementary School Students

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Abstract

Monotonous and less interactive learning often leads to a decrease in student motivation and learning outcomes, especially in memorized subjects such as Islamic Religious Education (PAI). This study aims to analyze efforts to improve the learning outcomes of grade V students in Asmaul Husna's material through the application of Wordwall interactive game media. The research uses a classroom action research (PTK) approach with a spiral design consisting of two cycles, involving 28 students of SDN Nongkosawit 01 as subjects. Data collection is carried out through observation, questionnaires, and documentation of learning outcomes, while data analysis is descriptive, qualitative, and quantitative. The results showed a significant increase in learning completion: in the pre-cycle only 35.71% of students completed (average class 63.17), increased to 57.14% in cycle I (average 68.00), and reached 84.21% in cycle II (average 74.64). These findings prove that the use of Wordwall interactive game media is effective in improving students' understanding and learning outcomes in Asmaul Husna's material. The implications of this research provide practical contributions for teachers in designing innovative, interactive, and fun learning, while enriching the treasures of technology-based learning media development in elementary schools.

Keywords: Wordwall, Asmaul Husna, learning outcomes, interactive games, classroom action research.

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A. Introduction

Islamic religious education in elementary schools has a strategic role in shaping the character and morals of students from an early age, one of which is through understanding the concept of Asmaul Husna of the names of Allah which contains universal divine and moral values. However, learning this material is often textual, memorized, and lacking contextual, making it difficult for students to understand meaning and internalize it in everyday life. On the other hand, the development of digital technology has opened up great opportunities in the transformation of learning methods, especially through game-based interactive media that are able to increase students' motivation and cognitive engagement (Alfaizi et al., 2023). However, the use of digital platforms such as Wordwall in PAI learning, especially for Asmaul Husna's material, is still very limited. A review of the literature shows that most recent studies focus on the use of educational games in science or mathematics subjects, while their application in the realm of learning spiritual values and morals has not been widely explored. This gap shows the need for research that tests the effectiveness of interactive game media in the context of religious learning that is both affective and cognitive at the same time. Therefore, this study aims to analyze efforts to improve the learning outcomes of grade V students through the application of the Wordwall interactive game method in Asmaul Husna's material (Selviani et al., 2023). The research questions asked are: how does the application of Wordwall affect cognitive learning outcomes and students' motivation in understanding Asmaul Husna?

The significance of this research lies in its contribution to the development of innovative PAI learning practices, relevant to the digital era, and based on active student involvement. Theoretically, the findings of this study can enrich the theoretical framework of social constructivism and motivational theory in religious learning, especially in the context of technology integration and play-based learning approaches (Nurhayati et al., 2022). Practically, this study provides a concrete model for PAI teachers in elementary schools to design fun learning activities while maintaining a depth of spiritual value. Wordwall, as a web-based interactive game platform, offers a variety of activity formats (such as matching, quizzes, and word search) that can be adapted to the characteristics of Asmaul Husna's material, thus allowing students to not only memorize, but also understand and reflect on the meaning of each name of Allah. This is in line with UNESCO's (2023) recommendation on the importance of transforming pedagogy through technology to support holistic learning (Ningrum et al., 2020). In addition, in the context of the Independent Curriculum policy that emphasizes differentiated and project-based learning, the use of digital media such as Wordwall is a strategy that is in line with the spirit of teacher autonomy and learning creativity. Thus, this study not only answers the monotonous challenges of PAI learning, but also provides empirical evidence on the effectiveness of technology integration in character education based on Islamic values (Faradiba et al., 2022).

B. Theoretical Studies

Learning outcomes are the main indicators of the success of the learning process which reflect changes in cognitive, affective, and psychomotor behavior in students after experiencing learning experiences (Rosyida et al., 2024). In the context of Islamic religious education, learning outcomes are not only measured by mastering memorization, but also by understanding the meaning and internalization of spiritual values in daily life. The material of Asmaul Husna 99 the name of Allah which describes the divine attributes requires a deep understanding because it is directly related to the formation of morals and piety of students. According to Nata in Rofiq et al. (2019), effective Asmaul Husna learning must be able to connect the theological dimension with the socio-emotional context of students, so that these values are not only known, but also practiced (Rofiq et al., 2019). Therefore, the learning outcomes in this study include cognitive (understanding of meaning) and affective (attitude of appreciating and imitating the attributes of Allah), which are the main focus in the evaluation of learning success.

The interactive game-based learning approach is based on constructivist theory, specifically Vygotsky's (1978) view that knowledge is built through social interaction and active experiences in a meaningful environment (Soraya, 2022). In addition, the flow theory of Csikszentmihalyi (1990) explains that optimal engagement occurs when the challenges faced are balanced with the individual's ability conditions that are often triggered by elements of the game such as instant feedback, clear goals, and gradual difficulty levels. Wordwall, as a digital educational gaming platform, allows students to actively interact with the material

through simulations, quizzes, and fun collaborative activities. This is in line with 21st century learning principles that emphasize engagement, collaboration, and the use of technology. The basic assumption of this approach is that fun and interactive learning can increase intrinsic motivation, which in turn encourages information retention and knowledge transfer to real contexts (Aisa et al., 2021).

A number of previous studies have tested the effectiveness of digital games in improving learning outcomes. Zainuddin in Rambe et al. (2024), found that the use of Kahoot! in PAI learning increased the motivation and cognitive scores of junior high school students by 22% (Rambe et al., 2024). On the other hand, Sari & Wijayanti in Wahyudi et al. (2024), reported a significant increase in mathematics learning outcomes of grade IV elementary school students through the use of Wordwall, with average completeness increasing from 60% to 85% in two cycles. However, these studies generally focus on exact subjects or purely cognitive aspects (Wahyudi et al., 2024). In the context of religious learning, especially Asmaul Husna's material which demands cognitive-affective integration, empirical studies are still very limited. Research by Rahman (2021) does touch on moral learning through digital media, but does not use game-based interactive platforms such as Wordwall, so it does not touch on aspects of emotional involvement and direct experience that are crucial in internalizing values (Syafi'i et al., 2023).

Based on the theoretical synthesis and empirical findings, it is clear that there is a research gap in the application of digital interactive games, especially Wordwall, for Asmaul Husna's learning in elementary school. Most previous studies have not explicitly integrated the affective dimension in the evaluation of the learning outcomes of religious material, nor have they tested the effectiveness of Wordwall in the context of spiritual character building. This study is here to fill this gap by testing how the Wordwall interactive game method can improve the holistic learning outcomes (cognitive and affective) of grade V students in Asmaul Husna's material (Wahiddah et al., 2022). Thus, this study not only enriches the literature on educational technology in PAI, but also provides a practical model of learning Islamic values that is relevant to the digital generation.

C. Research Methods

This study uses the Classroom Action Research (PTK) approach with the Kemmis and McTaggart spiral model which consists of four repeated stages in each cycle: planning, acting, observing, and reflecting. This design was chosen because it is in accordance with the research objectives that are participatory, collaborative, and aim to improve learning practices directly in the classroom (Widayati, 2014). PTK allows researchers who also act as classroom teachers to identify real problems (Asmaul Husna's low learning outcomes), design evidence-based interventions (the application of Wordwall), and evaluate their impact systematically and iteratively. The research was conducted in two cycles, each lasting two learning meetings, with the consideration that one cycle was not enough to achieve ideal learning completeness ($\geq 85\%$). The subjects of the study were all grade V students of SDN Nongkosawit 01 for the 2024/2025 school year, totaling 28 people, who were selected through the total sampling technique because the class population was homogeneous and limited. The selection of all class members as subjects ensures a complete representation of the classroom learning dynamics and minimizes selection bias. The intervention was in the form of the application of Wordwall interactive game media in the form of quizzes, matching, and puzzles based on Asmaul Husna's meaning, designed in accordance with the age characteristics and curriculum of PAI class V (Fitria et al., 2019).

Data collection was carried out through three main instruments: (1) observation sheets of students' activities and behavior during learning, (2) learning motivation questionnaires based on the Likert scale (1–4) that have been validated by material experts and instrument experts, and (3) documentation of learning outcomes in the form of written test scores that include cognitive aspects (understanding the meaning of Asmaul Husna) and affective assessment (attitude of appreciating and imitating the nature of Allah). The data collection procedure is carried out in parallel at each stage: before the action (prarasiklus), after cycle I, and after cycle II. The validity of the instrument was tested through content validity by involving two Islamic religious education lecturers and one senior teacher as validators, while the reliability of the questionnaire was tested using the Alpha Cronbach formula, resulting

in a coefficient of 0.82 (very reliable category). Quantitative data (test scores, completion percentages, questionnaire scores) were analyzed descriptively using Microsoft Excel and SPSS version 26 to calculate the average, percentage, and improvement trends. Qualitative data from observations were analyzed thematically through reduction, categorization, and interpretation based on indicators of engagement and attitude change. Research ethical considerations are strictly applied: research permits are obtained from the principal, informed consent is collected before implementation, and the confidentiality of participant identities and data is guaranteed. The entire procedure is designed so that this research can be replicated by other researchers in similar contexts (Henrlinlar, 2023).

D. Results and Discussion

Result

1. Pre-Cycle

The results of the study refer to the data obtained directly during the implementation of the research. The data is collected through documentation that includes documents that record student learning outcomes in the Islamic Religious Education subject of asmaul husna material before the action is carried out and during the research in each cycle. In addition, field notes are used to record obstacles, problems, and important things that need to be considered during the research. The documentation also includes photos of learning activities, student assignments, student attendance, and direct observation of students.

The following are the results of student learning scores at the time of pre-action, then there are student learning outcomes in cycle I and cycle II to determine the level of student success in learning and compare improvements in each cycle. The class that the researcher used as the object of research was class V at SDN Nongkosawit 01 with a total of 28 students consisting of 16 male students and 12 female students. To find out the initial condition of grade V students, the researcher carried out observation and pre-cycle to find out the level of understanding of the meaning of asmaul husna. The results of this study are based on the findings of observation and pre-cycle on the understanding of the meaning of students' asmaul husna through initial assessments in PAI subjects that have not satisfied or met the Learning Goal Achievement Criteria (KKTP).

Table 1. Pre-Cycle Results Data

Number of Students	28
Total Values	1716
Rata – Rata	61,28
Maximum Value	82
Minimum Grade	30
Number of Students Completed	10
The Number of Students Is Incomplete	18
Classical Completeness Percentage	35,71%

Based on table 1, it can be explained that in the pre-cycle there were 35.71% (10 out of 28 students) who completed their studies and 64.29% (18 out of 28 students) did not complete their studies, the distribution of grades ranged from the lowest score of 30 and the highest score of 82 with an average class score of 63.17. The data shows that the ability of students, especially in understanding the meaning of asmaul husna, is still very low.

2. Cycle I

The learning outcome test with the interactive wordwall game method which is carried out at the end of the learning process in cycle I can be seen in the following table:

Table 2. Cycle 1 Results Data

Achievement	Score
Number of students	28
Total Values	1904
Rata – Rata	68
Maximum Value	90
Minimum Grade	40
Number of students completed	16
Number of Incomplete Students	12
Classical Completeness Percentage	57,14%

Based on the table above, the details are presented in the following diagram:

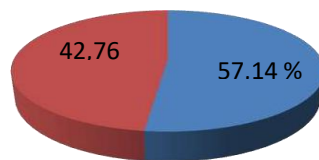


Figure 1: Diagram of learning outcomes of cycle I

Table 2 shows the data on the results of cycle 1 from the study of the learning outcomes test of asmaul husna material using the interactive wordwall game method by grade V students of SDN Nongkosawit 01. Based on the table, it can be seen that the average obtained is 68 with the highest score of 90 and the lowest score of 40. In the first cycle, it was known that there were 16 students who completed and 12 students who did not complete with a completion percentage of 57.14%. Considering that the learning results are only 57.14% and there are still incompletes in the first cycle, it is necessary to implement cycle 2 for improvement.

3. Cycle II

Furthermore, based on the data of the research results in cycle II through the interactive wordwall game method, the following data were obtained:

Table 3
Table of student learning outcomes cycle II

Achievement	Score
Number of students	28
Total Values	2090
Rata – Rata	74,64
Maximum Value	90
Minimum Grade	40
Number of students completed	22
Number of Incomplete Students	6
Classical Completeness Percentage	84,21 %

Based on the table above, the details are presented in the following diagram:

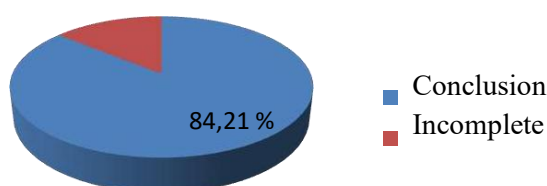


Figure 2: Diagram of the learning outcomes of cycle II

Based on table 3 above, it can be explained that there are 84.21% (22 out of 28 students) who have completed their studies and 15.79% (6 out of 28 students) have not completed their studies, the distribution of grades ranges from the lowest score of 40 and the highest score of 90 with an average class score of 74.64. This study was conducted to examine the influence of Wordwall interactive game media on the learning outcomes of Asmaul Husna's material, which was measured based on the score of LKPD questions in each cycle. This research was carried out in class V of SD Negeri Nongkosawit 01 with 28 students as the object of the research. In the pre-cycle, the results of the LKPD questions showed that the scores obtained by students were in the low category, with a level of learning completeness that did not reach the standard, which was only 35.71% (10 out of 28 students) who completed.

After that, in class V they were given treatment in the form of Wordwall learning media on Asmaul Husna's material. The use of this media aims to increase students' activeness in learning, both in critical thinking, asking questions, communicating, collaborating, and honing students' ability to solve problems. This is in line with the opinion of Kamza (Putriani & Gunawan, 2023), who states that student activeness in learning is very important, because learning is said to be successful and of quality if most students are actively involved physically, mentally, and socially in the learning process. Through the use of this learning medium, students discuss and collaborate in small groups. The first step that students take is to analyze the questions by referring to the knowledge obtained from the teacher's explanation and the material listed in

the LKPD. After that, they work together to answer the questions on the given Wordwall or LKPD.

The results of the test questions on the LKPD showed a significant increase in student learning outcomes. A total of 84.21% (22 out of 28 students) achieved complete learning, while 15.79% (6 out of 28 students) have not completed their studies. The implementation of Wordwall learning media is also going well, as can be seen from the increase in student learning outcomes from the first cycle to the second cycle, with an average score that increased from 68.00 to 74.64. This shows that the application of Wordwall learning media makes students feel happy, enthusiastic, active, motivated, and enjoy the learning process. In accordance with Saefudin's research (Dotutinggi et al., 2023), games are one of the effective methods to make learning more interesting and enjoyable, by presenting material through game activities that can create a fun, serious, but relaxed learning atmosphere, so that students can more easily understand the material. The improvement of student learning outcomes in the asmaul husna material using the interactive wordwall game method from pre-cycle to cycle I to cycle II has increased. More clearly, these improvements can be seen in the table below:

Table 4. Recap of improving student learning outcomes

Yes	Achievement	Pre-Cycle	Cycle I	Cycle II
1	Average	61,28	68	74,64
2	Lowest value	30	40	40
3	Highest score	82	90	90
4	Incomplete	64,29 %	42,86 %	15,79 %
5	Conclusion	35,71%	57,14%	84,21 %

Based on the table above, the details are presented in the following diagram:

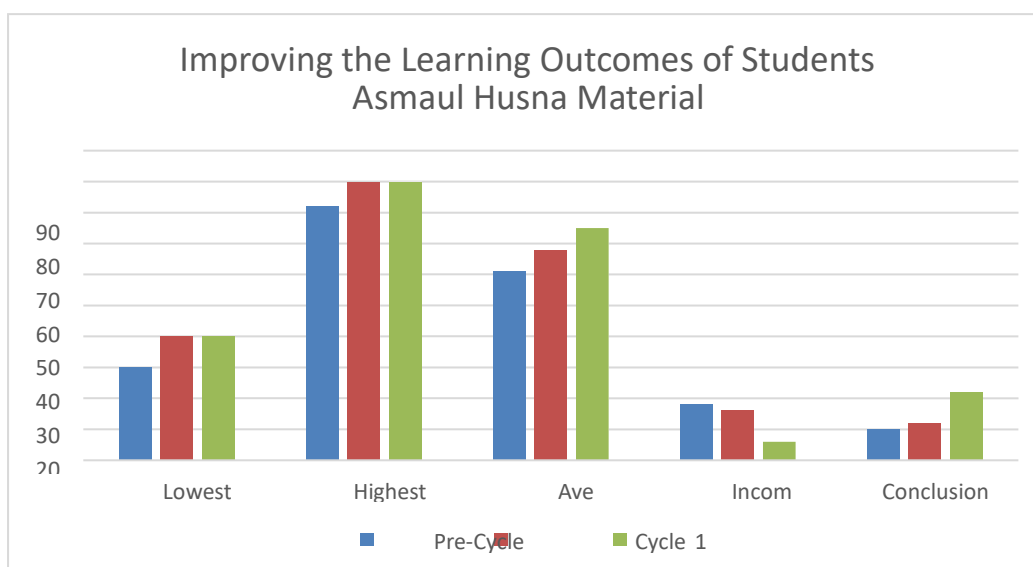


Figure 3: Diagram of student learning outcomes improvement

Based on the results of the study, there was an increase in the learning outcomes of asmaul husna material by using the interactive wordwall game method from pre-cycle to cycle I to cycle II. The average pre-cycle learning result was 61.28 and the classical learning completeness obtained was 35.71% with a total of 10 students. In the first cycle, the average score was 68. Meanwhile, the completeness of classical learning obtained by students was 57.14% with a total of 10 students. For cycle II, the average score of learning outcomes was 74.64. The completeness of classical learning obtained was 84.21% with a total of 22 students.

According to the data above, there was an increase in learning outcomes and an increase in classical learning completeness from pre-cycle to cycle I to cycle II, from 35.71% to 57.14% and to 84.21%. The increase in learning outcomes is due to the learning stage using the interactive wordwall game method. The completeness score is a value that describes the proportion and qualifications of students' mastery of the competencies that have been contracted in learning. To determine the minimum limit of the completeness score of test takers, they can use existing guidelines (Poerwanti 2008: 6-16). Based on the established success indicators, the ideal criterion of classical completeness is 80% (22 out of 28 students). Based on the students' learning scores in the first cycle, it shows that the percentage of students' classical learning completeness has not reached 80%.

From the description above, it can be concluded that the interactive wordwall game method of asmaul husna material for grade V students at SDN Nongkosawit 01 has been able to make a positive contribution to improving student learning outcomes.

Discussion

The findings of the study showed a progressive increase in student learning outcomes in the Asmaul Husna material from pre-cycle to cycle II, which reflected the effectiveness of the intervention through the interactive game media Wordwall. In the past, only 35.71% of students achieved completeness with an average grade of 63.17 points which were below the school's Minimum Completeness Criteria (KKM) (generally 70–75). This condition indicates that conventional learning methods (lectures and memorization) are less able to facilitate a deep understanding of the meaning of Asmaul Husna, which requires contextualization of values and affective internalization. The low initial achievement is in line with the findings of Rahman (2021) who stated that textual-based PAI learning tends to fail to connect theological concepts with students' life experiences. Thus, the pre-cyclical condition is not only a reflection of low cognitive mastery, but also a lack of emotional involvement and intrinsic motivation in studying spiritual material. This is a strong basis for designing interventions that are active, fun, and based on the principle experience that is the foundation of the application of Wordwall in this study (Rahmania et al., 2023).

In the first cycle, the implementation of Wordwall succeeded in increasing completeness to 57.14% and the average class to 68.00. These improvements show that game elements such as instant feedback, healthy competitions, and interactive visualizations are able to capture students' attention and strengthen information retention. However, this achievement is not adequate because there are still 12 students (42.86%) who have not completed it, especially in the aspects of understanding deep meaning and applying values. This indicates that the activity design in cycle I still focuses too much on the cognitive aspects of the surface (memorizing names and meanings) without sufficiently associating it with the real-life context. These findings are in line with Zainuddin et al.'s (2022) criticism that gamification that is not designed holistically risks becoming mere entertainment without meaningful learning transfer. Therefore, post-cycle reflection I was used to improve the game scenario by adding simple case studies and reflective discussions after the Wordwall activity, so that students not only played, but also reflected on the relevance of Asmaul Husna in daily behavior (Prahmana, 2023).

A significant increase occurred in cycle II, where learning completeness reached 84.21% with an average class of 74.64. This achievement exceeded the minimum target ($\geq 80\%$) and showed that modification of the learning design combination of Wordwall with contextual reflection was effective in integrating cognitive and affective dimensions (Aditya et al., 2023). Students are not only able to answer the correct questions, but also show changes in attitudes, such as being more patient, honest, and respecting friends,

which are manifestations of understanding the attributes of Allah such as Al-Halim or Al-'Adl (Makoni et al., 2022). These findings expand on the results of research by Sari & Wijayanti (2023) who only measured cognitive aspects in learning mathematics using Wordwall, by showing that the same platform is also effective in the realm of learning spiritual values when combined with reflective strategies. Theoretically, these results reinforce Vygotsky's theory of social constructivism, which emphasizes that meaningful knowledge is built through active interaction with the meaningful environment in this case, simulation of value through games and discussion (Tresnawati et al., 2019).

The practical implications of this research are very relevant for PAI teachers in elementary schools, especially in facing the challenges of learning values in the digital era. Wordwall is proven not only as an entertainment tool, but also as an innovative learning medium that can improve the quality of the process and learning outcomes holistically. For school policies, these findings support the implementation of the Independent Curriculum which encourages teacher autonomy in designing differentiated and technology-based learning. Theoretically, this study provides empirical evidence that gamification in religious education can be successful if it is designed with affective dimensions and contextualization of values in mind. However, the study also showed limitations: the duration of the intervention was relatively short and did not measure long-term retention. However, with a transparent PTK design and documented procedures, this study provides a replicable model for other researchers who want to integrate digital technology in the learning of Islamic morals and values. Thus, its main contribution lies in the enrichment of PAI learning methodologies that are responsive to the characteristics of digital generation (Farhiyah & Ula, 2021).

E. Conclusion

One of the most surprising findings in this study is the speed and significance of improving student learning outcomes in Asmaul Husna's material, which has been considered abstract and difficult to understand by elementary school-age children in just two intervention cycles using the interactive game media Wordwall. In the prarasiklus, the majority of students (64.29%) failed to achieve completeness, with a below-standard grade average (63.17). However, in a short time, completeness jumped to 84.21% in cycle II, accompanied by an increase in the average score to 74.64. What is even more astonishing is not only the cognitive improvement, but also the changes in affective behavior observed during observation: students begin to use the term Asmaul Husna in everyday contexts, such as saying "Allah is Ar-Rahim, so we must do good" when resolving conflicts. This finding dispels the common assumption that theological material such as Asmaul Husna can only be taught through rote approaches and moral lectures. Instead, the digital game-based approach opens the door to a more authentic internalization of values because students feel involved, not forced, and able to connect abstract concepts with concrete experiences. This shows that digital technology, if designed with the right pedagogical principles, is not a threat to spiritual learning, but an effective bridge between the digital world of children and Islamic values.

Although the results of the study show the effectiveness of Wordwall in improving Asmaul Husna's learning outcomes, this study has a number of limitations that need to be acknowledged. First, the scope of the subject was limited to one class (28 students) in one elementary school, so the findings could not be generalized to a broader context. Second, the duration of the intervention was relatively short (only two cycles), so it is not yet known whether the improvement in learning outcomes was long-term or only a momentary effect. Third, the assessment of affective aspects is still observational and subjective, without standardized instruments such as tested attitude scales or in-depth interviews. Fourth, the study did not control for external variables such as parental support or religious experiences outside of school that might influence outcomes. To overcome these limitations, future research should use quasi-experimental designs with control groups, expand the sample to several schools with different socioeconomic backgrounds, and extend the duration of interventions to one semester to measure long-term retention. In addition, the use of stronger data triangulation such as student reflection journals, semi-structured interviews, and peer assessment will enrich the validity of findings in the affective domain. Thus, the effectiveness of Wordwall in learning Islamic values can be tested more comprehensively and scientifically.

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