

Kahoot-Based Play Learning to Improve Students' Interest in Islamic Religious Education: A Classroom Action Research

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Abstract

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Students' learning interest in Islamic Religious Education (PAI) often tends to be low when the learning process is dominated by conventional teaching methods that provide limited interaction and engagement. The integration of digital learning media and play-based learning approaches is considered a promising strategy to create more engaging and participatory classroom environments. This study aims to analyze the implementation of the Kahoot application based on play-based learning to improve students' learning interest in Islamic Religious Education. This research employed a Classroom Action Research (CAR) design involving 35 students of class XI.4 at State Senior High School 4 Bima City, West Nusa Tenggara, Indonesia. Data were collected through participatory observation, open-ended interviews, and documentation. The findings show that the integration of Kahoot with play-based learning strategies significantly increased students' participation and engagement in PAI learning. Participation increased from 20% in the pre-cycle stage to 77.14% in Cycle I, although it decreased to 62.86% in Cycle II due to technical constraints and student absenteeism. Overall, the learning process became more interactive and students showed greater enthusiasm toward the subject. Therefore, the implementation of Kahoot-based play learning can support the improvement of students' learning interest in Islamic Religious Education. Future learning practices are recommended to strengthen technological infrastructure and classroom management to optimize the effectiveness of digital game-based learning.

Keywords: Kahoot Application, Play-Based Learning, Islamic Religious Education, Learning Interest.

Abstrak

Minat belajar siswa dalam mata pelajaran Pendidikan Agama Islam (PAI) seringkali cenderung rendah ketika proses pembelajaran masih didominasi oleh metode konvensional yang kurang memberikan ruang interaksi dan keterlibatan aktif siswa. Pemanfaatan media pembelajaran digital yang dipadukan dengan pendekatan pembelajaran berbasis permainan dipandang sebagai salah satu strategi yang dapat menciptakan suasana belajar yang lebih menarik dan partisipatif. Penelitian ini bertujuan untuk menganalisis penerapan aplikasi Kahoot berbasis Play-Based Learning dalam meningkatkan minat belajar siswa pada mata pelajaran Pendidikan Agama Islam. Penelitian ini menggunakan desain Penelitian Tindakan Kelas (PTK) yang melibatkan 35 siswa kelas XI.4 di SMAN 4 Kota Bima, Nusa Tenggara Barat, Indonesia. Data dikumpulkan melalui observasi partisipatif, wawancara terbuka, dan dokumentasi kegiatan pembelajaran. Hasil penelitian menunjukkan bahwa integrasi Kahoot dengan strategi pembelajaran berbasis permainan mampu meningkatkan partisipasi dan keterlibatan siswa dalam pembelajaran PAI. Partisipasi siswa meningkat dari 20%

pada tahap pra-siklus menjadi 77,14% pada siklus I, meskipun pada siklus II mengalami penurunan menjadi 62,86% akibat kendala teknis dan absensi siswa. Secara keseluruhan, proses pembelajaran menjadi lebih interaktif dan siswa menunjukkan antusiasme yang lebih tinggi terhadap materi pembelajaran. Oleh karena itu, penerapan Kahoot berbasis Play-Based Learning dapat mendukung peningkatan minat belajar siswa dalam pembelajaran PAI. Ke depan, diperlukan dukungan infrastruktur teknologi dan pengelolaan kelas yang lebih baik untuk mengoptimalkan efektivitas pembelajaran berbasis permainan digital.

Kata Kunci: Kahoot, Pembelajaran Berbasis Permainan, Pendidikan Agama Islam, Minat Belajar

INTRODUCTION

In the digital era, technology has become a major pillar influencing various aspects of human life, including the field of education in the era of Society 4.0 and 5.0. Rapid technological development presents both opportunities and challenges. In addition to hardware, technology also includes software and information systems that facilitate the learning process. According to (Febriano Peea, Djoys Ratung Anneke, 2022), education in the Society 5.0 era must transform and integrate advanced technologies such as artificial intelligence and virtual reality into the learning process.

This integration creates more interactive learning experiences and prepares students to explore and adopt project-based and collaborative learning approaches. Education also needs to emphasize solving social problems so that students become responsible and active citizens in an increasingly digitalized society (Febriano Peea, Djoys Ratung Anneke, 2022). This perspective aligns with Dewi (2024), who states that technology plays an important role in education because it helps teachers and students carry out the learning process in a more structured and effective manner. By utilizing digital technology, teaching and learning activities can become more efficient and interactive in line with the development of the times. Thus, the use of technology in education is not only about tools, but also about developing critical thinking skills, creativity, and literacy.

Furthermore, the use of technology in education can create an innovative and adaptive learning environment that supports students' character development in facing an ever-changing future. Kahoot is a digital platform that provides educational game features such as quizzes to increase students' participation and interest in learning. According to (Alf Inge Wang, 2020), the use of Kahoot not only makes learning a fun activity but also encourages social interaction among students, which positively affects their engagement in learning. The competitive element in Kahoot, where students can compete with each other, creates an enthusiastic atmosphere that increases students' motivation and enthusiasm for learning (Alf Inge Wang, 2020). Furthermore, Özdemir (2025) emphasizes that the Kahoot application provides immediate feedback to students, which is very important in the learning process.

This feedback helps students quickly understand their mistakes and provides opportunities to improve their understanding of the material, while also enabling teachers to adjust their teaching according to students' levels of comprehension (Özdemir, 2025). Therefore, the use of Kahoot in education can create a more engaging and interactive learning environment and effectively increase students' learning interest. This innovative approach makes Kahoot a bridge toward a more appropriate and effective learning process. Play-Based Learning (PBL) is a learning approach that utilizes play as a tool to develop students' skills and knowledge.

According to Bodrova and Leong (2020), PBL provides opportunities for students to learn through direct experiences, where they can explore, interact, and solve problems in an enjoyable context. This approach not only increases student engagement but also involves emotional and social aspects in learning, which are essential for their holistic development (Bodrova, E., & Leong, 2020). This is in line with the view of (Zosh, J. M., Hirsh-Pasek, K., 2022), who state that PBL strengthens cognitive and social aspects by creating a safe environment for experimentation and innovation. Students involved in PBL tend to have higher motivation to learn because they feel more connected to the learning material and can more easily apply the concepts they learn in real-life situations (Zosh, J. M., Hirsh-Pasek, K., 2022). Therefore, Play Based Learning (PBL) provides deeper opportunities for students to explore their learning experiences while improving cognitive, psychomotor, and problem-solving skills.

Islamic Religious Education (PAI) as one of the important subjects in Indonesia aims to shape students' character and morality. PAI teaches the fundamental values of Islam derived from the Qur'an and Hadith in accordance with Islamic teachings (Dahirin & Rusmin, 2024). In his book entitled *Pendidikan Agama Islam dalam Era Globalisasi*, (Nursalim, 2018) states that Islamic Religious Education must be able to adapt to the development of the times. He emphasizes the need for innovation in educational methods and curricula so that Islamic teachings remain relevant to contemporary challenges. (Nursalim, 2018) also emphasizes that Islamic Religious Education should be oriented toward societal needs and global peace. Thus, interactive and enjoyable religious learning can increase students' interest in studying religious teachings and help them better understand important concepts in PAI.

Students not only gain knowledge but also meaningful and engaging learning experiences in PAI classes. Learning interest is a crucial aspect of education that greatly influences students' learning outcomes. When students have high learning interest, they tend to participate more actively in learning activities and demonstrate stronger commitment to achieving academic goals (Dewi et al., 2025). On the other hand, low learning interest can lead to lack of engagement and unsatisfactory academic achievement. Suhartono (2020) states that students' learning interest in Indonesia experiences significant fluctuations. In his research, he found that 45% of elementary school students show high learning interest, 30% moderate interest, and 25% low interest. According to him, factors such as the learning environment, teaching methods,

and parental involvement greatly influence students' learning interest (Suhartono, 2020). Therefore, creating an engaging and enjoyable learning environment through digital platforms such as the Kahoot application is important to help students develop their learning interest, particularly in Islamic Religious Education. From these discussions, the Kahoot application, Play Based Learning, Islamic Religious Education, and learning interest form a strong foundation for developing more effective learning methods that meet the needs of students in the 21st century (Sulaiman et al., 2024).

With appropriate technological integration, this learning approach offers new ways to explore religious education without neglecting the moral and ethical values contained within it. Through the use of the Kahoot application in the context of PAI learning, students not only learn the material in a more enjoyable way but also develop social and emotional competencies that are important in their lives (Alfiansyah, 2025). However, although previous studies have discussed the use of digital learning media and innovative learning approaches, studies that specifically analyze the implementation of the Kahoot application integrated with Play Based Learning in Islamic Religious Education learning remain limited, particularly in the context of classroom-based qualitative studies in Indonesian senior high schools. Many existing studies focus more on general subjects or emphasize quantitative measurement of learning outcomes rather than exploring how digital game-based learning strategies can influence students' learning interest in religious education contexts.

This condition indicates a research gap that requires further exploration, especially in understanding how Kahoot integrated with Play Based Learning can influence students' learning interest in PAI learning environments. Therefore, this study aims to explore how the implementation of the Kahoot application based on Play Based Learning can improve students' learning interest in Islamic Religious Education learning at SMAN 4 Kota Bima. The researcher will analyze students' responses to this learning method and identify the challenges encountered during the implementation process. Through this study, it is expected that insights can be obtained regarding the effectiveness of using technology in education, particularly in the context of religious teaching, which can serve as a reference for educators and policymakers in the field of education.

METHODS

Research Design

This study employed Classroom Action Research (CAR) as the research design. Classroom Action Research is a reflective form of research aimed at improving teaching practices in a more professional manner. CAR provides opportunities for teachers to analyze and understand classroom conditions so that appropriate changes can be implemented to improve students' learning outcomes (Suyanto, 2015). This research design was chosen because it focuses on improving the quality of the learning process and enhancing students' learning interest directly in the classroom through planned and

systematic actions. The study used a qualitative descriptive analysis approach supported by simple quantitative data.

Research Setting and Participants

The research was conducted at SMAN 4 Bima City, West Nusa Tenggara, Indonesia, involving 35 students of class XI.4 as research participants. The participants were selected purposively because the class represented students who experienced relatively low learning interest in Islamic Religious Education (PAI) during the preliminary observation stage. Therefore, the class was considered appropriate for implementing learning innovations aimed at improving students' engagement and learning interest.

The research was conducted over a period of one to two months during the odd semester of the 2025/2026 academic year. The research procedure followed the stages of Classroom Action Research consisting of the pre-cycle stage, Cycle I, and Cycle II.

Data Collection Techniques

Data were collected through participatory observation, open-ended interviews, and documentation. Participatory observation was used to observe students' participation and learning interest during the implementation of Kahoot-based Play-Based Learning activities. The observation focused on students' engagement, enthusiasm, and interaction during the learning process.

Open-ended interviews were conducted after each cycle with several student representatives as respondents. These interviews aimed to obtain deeper information about students' perceptions, learning experiences, and technical challenges encountered during the learning process. In addition, documentation was used to support the research findings, including photographs of classroom activities and screenshots of Kahoot quiz results.

Data Analysis

Data analysis was conducted using descriptive qualitative analysis supported by simple quantitative percentage data. The qualitative analysis followed three main stages.

The first stage was data reduction, which involved selecting and focusing on relevant data related to students' learning interest, particularly from observation results and interview findings. The second stage was data display, where the data were presented in the form of narrative descriptions, interview quotations, and percentage tables to facilitate understanding of changes occurring between cycles. The third stage was conclusion drawing, in which final conclusions were drawn regarding the effectiveness of the Kahoot application based on Play-Based Learning in improving students' learning interest based on both qualitative evidence and quantitative support.

Validity of Data

To ensure the credibility and trustworthiness of the research findings, this study applied data triangulation and technique triangulation. Data triangulation was conducted by comparing information obtained from different sources, such as observation results, interview responses, and documentation. Technique triangulation was carried out by using multiple data collection methods to examine the same phenomenon. Through these triangulation strategies, the validity and reliability of the research findings could be strengthened, ensuring that the conclusions accurately reflected the learning conditions observed during the study.

RESULTS AND DISCUSSION

Results

This classroom action research was carried out in three stages: pre-cycle, cycle I, and cycle II in grade XI.4 students of SMAN 4 Bima City (N = 35) even semester of the 2025/2026 school year. The main indicator is the level of active student participation as a representation of learning interest in PAI learning using the Play Based Learning Kahoot application.

Table 1. Student Participation Developments

Stages	Number of active Interest students	Total Students	Presentase	Remarks
Pre-cycle	8	35	20,00%	Conventional learning (lectures + notes)
Cycle I	27	35	77,14%	First time using Kahoot
Cycle II	22	35	62,48%	There are technical constraints and high attendance

Source: Researcher observation data (2026).

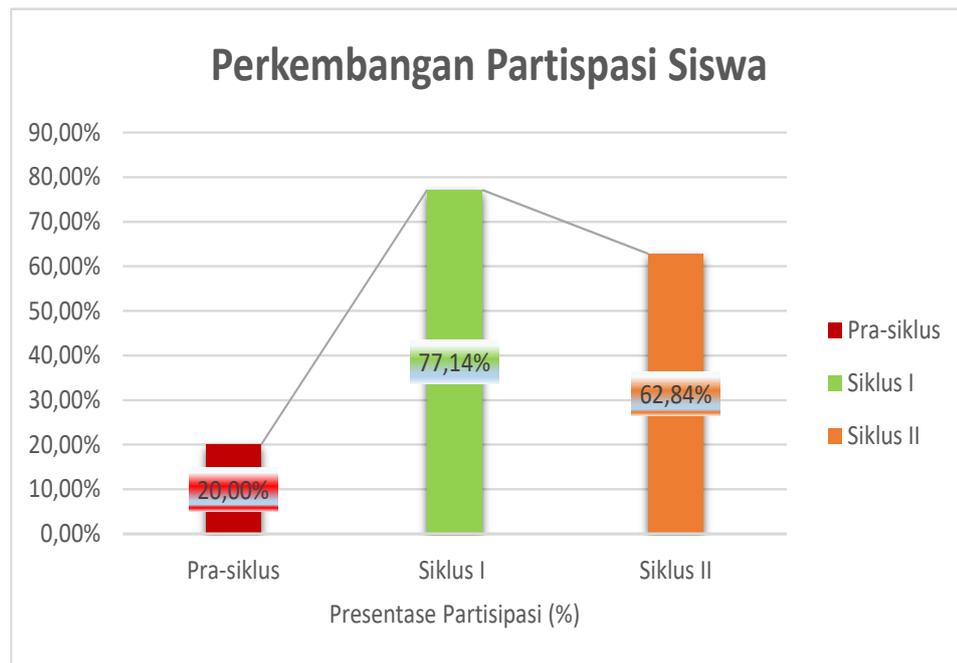


Figure 1. Development of Students' Participation in PTK Kahoot

Qualitative findings from observations and open-ended interviews:

Pre-cycle: Students tend to be passive, rarely answer questions, monotonous classroom atmosphere. because there is no innovative interactive media that is able to increase students' interest and participation in Islamic Religious Education learning.



Figure 2. Pre-cycle

Cycle I: The classroom atmosphere is very lively, students scramble to answer, cheer each other on, and spontaneously ask to "play again" after the quiz. This shows that The application of Play Based Learning-based Kahoot is able to increase students' interest in learning Islamic Religious Education.



Figure 3. Student Participation in Kahoot



Figure 4. Students' Final Grades

Cycle II: Despite the drop in numbers, the students who attended remained enthusiastic. The decrease was caused by 6 students being absent, the internet connection was unstable, and the quota ran out.



Figure 5. Cycle II

Nama peserta	Peringkat	Jawaban yang benar	Balok dijawab	Skor akhir
Ila	1	100%	10	10.000
nabila	2	75%	7	7.500
hanga	3	60%	6	6.000
Cewas-Di-Akum	4	60%	6	6.000
Fajra	5	75%	7	7.500
nahal	6	75%	7	7.500
shen	7	75%	7	7.500
ara sibal	8	75%	7	7.500
dandan yaguna	9	75%	7	7.500
Rika	10	100%	10	10.000

Figure 6. Kahoot quiz report and Answer Score

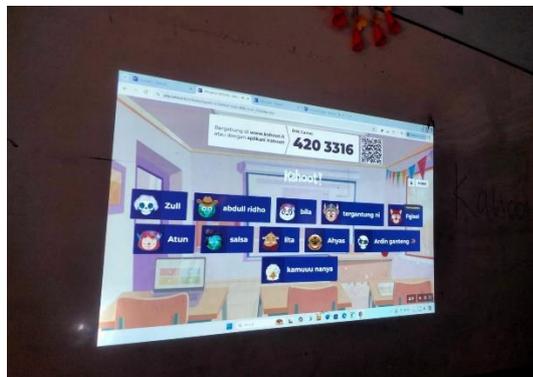


Figure 7. Kahoot Join Process

Student citation (post-cycle II open interview):

Student A: "It's fun, it's like playing a game but still learning. The question of morality and the story of the prophet is easier to remember."

Student B: "The adrenaline keeps rising, afraid of losing to friends. So be more focused. Kahoot is good for the modern age, but it has to be combined with traditional methods as well."

Student C: "All methods are effective, Kahoot with games, traditional with seriousness. But in this day and age, Kahoot is better so that it doesn't get bored."

Student D: "The hope is that every week we use Kahoot dong Bu, or we can make the quiz about the stories of the prophet and hadiths."

Discussion

The results of the study showed a very significant increase in active participation from 20.00% (pre-cycle) to 77.14% in cycle I. This increase of 57.14 percentage points confirms the findings (Alf Inge Wang, 2020) and (Özdemir, 2025) that gamification elements in Kahoot (points, leaderboard, music, and healthy competition) are able to trigger intrinsic and extrinsic motivation of students simultaneously.

The Play-Based Learning approach applied is also in line with the theory (Bodrova, E., & Leong, 2020) and (Zosh, J. M., Hirsh-Pasek, K., 2022) that learning through fun play increases cognitive, emotional, and social engagement. In the context of PAI, material that has been considered "heavy" becomes memorable and fun when presented in the form of interactive quizzes. This is also in line with (Nursalim, 2018) which emphasizes the adaptation of PAI methods with technology for contemporary relevance.

The decrease in participation in cycle II (62.86%) did not reflect a decrease in students' interest in the Kahoot method. An open interview conducted immediately after cycle II actually showed that 100% of respondents remained very enthusiastic and expected to use Kahoot regularly in the next semester. They explicitly state that the main obstacles are external factors (internet connections, quotas exhausted, and attendance), not the application or learning method itself. These findings are in line with (Dewi, 2024) and (Paputungan et al., 2023) that the success of formative technology is highly dependent on the availability of supporting infrastructure. Formative technology is defined as a dynamic approach to solving learning problems through digital tools that facilitate real-time feedback, so that educators can tailor content based on student progress (Paputungan et al., 2023). In addition, traditional learning remains an important role for strengthening deep concepts, as expressed by students and supported (Putri et al., 2025).

Thus, even though it was only carried out for two cycles due to the limited PPL time and semester holidays, this study has succeeded in proving that Play Based Learning-based Kahoot is effective in increasing PAI learning interest if supported by adequate technological facilities.

CONCLUSION

The implementation of the Kahoot application based on Play-Based Learning proved to be effective in increasing students' learning interest in Islamic Religious Education at SMAN 4 Kota Bima. This finding is evidenced by the increase in students' active participation from 20.00% in the pre-cycle stage to 77.14% in Cycle I. Although participation decreased to 62.86% in Cycle II, this decline was not caused by a reduction in students' learning interest. Instead, it was influenced by technical constraints such as unstable internet connections, exhausted data quotas, and a high level of student absenteeism prior to the semester break. The results of open-ended

interviews conducted after Cycle II further confirmed that students remained highly enthusiastic about the use of Kahoot and expressed their expectation that the platform would continue to be used in future learning activities. However, this study has several limitations that should be acknowledged. The research was conducted in only one educational setting, namely SMAN 4 Kota Bima, with a single class as the research participants. As a result, the findings reflect the specific learning context of that school and may not be directly generalized to other schools or educational environments with different characteristics. In addition, this study employed a qualitative descriptive approach within the framework of Classroom Action Research, which focuses on improving classroom practices in a particular setting. Therefore, the results should be understood as contextual findings that provide practical insights rather than universal conclusions applicable to all learning contexts.

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