Jurnal AL-Muta`aliyah: Jurnal Pendidikan Guru Madrasah Ibtidaiyah
ISSN: 2614-1612 (e) | ISSN: 2502-2474 (p) | Vol.05, No.02, (2025), 105-114 | DOI: 10.51700/mutaaliyah.v5i2.1025

The Effect Of Baamboozle Media On Students' Interest In Learning Mathematics At Mi Nurul Huda

Ghina Aulia[1*], Amran[1] , Raden Ridwan Hasan Saputra[1]
[1]*Pendidikan Guru Madrasah Ibtidaiyah, Universitas Ibn Khaldun Bogor, Indonesia;*

Abstrak

Penelitian ini bertujuan untuk mengetahui pengaruh penggunaan media pembelajaran Baamboozle terhadap minat belajar matematika siswa di MI Nurul Huda 3 Kota Bogor. Penelitian ini menggunakan metode kuantitatif dengan desain kuasi-eksperimen, yaitu non-equivalent control group design. Populasi dalam penelitian ini adalah siswa kelas II yang berjumlah 42 siswa dan dibagi menjadi dua kelompok. Kelas II A (21 siswa) sebagai kelompok kontrol yang tidak menggunakan media Baamboozle, sedangkan kelas II B (21 siswa) sebagai kelompok eksperimen yang menggunakan media Baamboozle. Teknik pengambilan sampel yang digunakan adalah purposive sampling. Instrumen yang digunakan adalah angket untuk mengukur minat belajar siswa. Hasil penelitian menunjukkan bahwa rata-rata nilai posttest minat belajar pada kelompok eksperimen adalah 46,8, sedangkan pada kelompok kontrol adalah 36,5. Uji-t menghasilkan nilai signifikansi sebesar 0,000 (< 0,05), yang berarti Ha diterima dan Ho ditolak. Dengan demikian, dapat disimpulkan bahwa penggunaan media Baamboozle berpengaruh signifikan terhadap peningkatan minat belajar matematika siswa di sekolah dasar.

Kata Kunci: Media Pembelajaran Baamboozle, Minat Belajar, Pembelajaran Matematika

Abstract

This study aims to determine the effect of using Baamboozle learning media on students' interest in learning mathematics at MI Nurul Huda 3, Bogor City. This study employs a quantitative method with a quasi-experimental design, specifically a non-equivalent control group design. The study population consists of second-grade students, totaling 42 students divided into two groups. Class II A (21 students) serves as the control group and does not use the Baamboozle media, while Class II B (21 students) serves as the experimental group and uses the Baamboozle media. The sampling technique used was purposive sampling. The instrument used was a questionnaire to measure students' learning interest. The results showed that the average posttest score for learning interest in the experimental group was 46.8, while in the control group it was 36.5. The t-test produced a significance value of 0.000 (< 0.05), which means that Ha is accepted and Ho is rejected. Thus, it can be concluded that the use of Baamboozle media has a significant effect on increasing students' interest in learning mathematics in elementary school.

Key Word: Learning Media Baamboozle, Learning Interest, Learning Mathematics

Introduction

Education is one of the most important infrastructures in building a civilization and advancing a nation. Whether a nation or country can be considered advanced or not depends heavily on the educational process implemented in that country. Therefore, the development and advancement of the education sector are of utmost importance, as the foundation of a nation lies in its education. (Fadil, 2023). Education serves as one of the fundamental infrastructures in shaping a civilization and driving national progress. The level of advancement achieved by a country is closely tied to the quality and effectiveness of its educational system. In essence, the strength and resilience of a nation are rooted in the educational foundation upon which it is built (Voronina et al., 2022). Therefore, prioritizing the development and continuous improvement of the education sector becomes a critical necessity. A well-structured and forward-thinking

[*]Corresponding to the author: Ghina Aulia, Pendidikan Guru Madrasah Ibtidaiyah, Universitas Ibn Khaldun Bogor, Indonesia; e-mail: ghinaulia06@gmail.com

educational system not only equips individuals with knowledge and skills but also cultivates values, innovation, and leadership that are essential for national development and global competitiveness (Toker, 2022).

Mathematics is one of the core subjects in the elementary school curriculum that plays a strategic role in developing logical thinking skills, problem-solving abilities, and serves as the foundation for mastering other fields of knowledge, such as science, economics, and technology (Lin, 2023). Strong mathematical skills at the elementary school level not only help students understand more complex academic material in higher grades but also train them to think systematically, analytically, and reflectively in their daily lives (Kliziene et al., 2022). However, in practice, learning mathematics often poses a challenge for both students and teachers. This is reflected in the low numeracy achievement of Indonesian students in recent years.(Wawan & Retnawati, 2022).

Mathematics is one of the subjects that is often considered difficult by students at various levels of education, including at the Madrasah Ibtidaiyah (MI) level. The abstract and systematic nature of mathematics often reduces students' interest in learning this subject, resulting in suboptimal learning outcomes (Farikhin et al., 2024). Data shows that in some elementary schools, students' mathematics learning outcomes are still below 50% of the minimum competency threshold set. This issue calls for innovation in the learning process, particularly through the use of engaging and interactive learning media(Tiwow et al., 2022).

According to UNESCO data (2024), the average numeracy score of elementary school/madrasah ibtidaiyah (SD/MI) students in Indonesia is around 55.2 on a scale of 100(Asnawati et al., 2022). This score is still below the Southeast Asian regional average of 60.0, indicating that most Indonesian students have not yet fully mastered basic numeracy skills. This low achievement is further reinforced by PISA assessment results, which show that Indonesian students' mathematical thinking abilities lag behind those of neighboring countries such as Malaysia, Thailand, and Vietnam(Nandang Mustafa, 2023). This finding serves as a stark warning of the need for systematic efforts to improve the quality of mathematics education, particularly through approaches that can stimulate students' interest and motivation to learn from an early age.

One of the fundamental problems in mathematics education at the elementary level is the low level of student interest in the subject. A study conducted by (Čakāne et al., 2023) found that only about 30% of elementary school students expressed a strong interest in mathematics. The rest find it difficult, do not enjoy the learning process, or even feel anxious when faced with mathematics problems. This inevitably affects concentration, active participation in class, and ultimately impacts students' learning outcomes. This low interest in learning is often triggered by teaching methods that lack variety, the use of media that is not contextually relevant, and the dominance of conventional approaches that tend to emphasize memorization and repetition rather than conceptual understanding(Nokes, 2023).

According to(Amran et al., 2021) Mathematics learning for some students is a scary subject even in all levels of education. Because there are numbers, formulas, calculations, which are considered difficult and hard for some students to learn. As a result, many students feel less motivated to learn mathematics because the learning methods applied are considered monotonous. Research shows that students' low interest in learning mathematics can have a negative impact on their learning outcomes (Siagian, 2017). Therefore, teachers are expected to be able to develop more inter.

This situation is exacerbated by the fact that many teachers still rely on lectures and practice questions as their main strategies for delivering mathematics material. Data (Gai Mali et al., 2023)shows that more than 60% of elementary school teachers in Indonesia still use traditional teaching approaches without the support of interactive media or educational technology. This situation makes the teaching and learning process monotonous, non-contextual, and less likely to spark students' curiosity(Sinha et al., 2021). As a result, students are more likely to feel bored, lose motivation, and find it difficult to actively participate in learning activities.

The main challenges in mathematics learning in elementary schools are low student engagement, lack of motivation, and monotonous and uninteractive learning methods. Teachers are required to be more creative and innovative in choosing learning media that suit the characteristics of students in order to increase interest and active participation in mathematics learning (Herawati et al., 2024; Shiddiq et al., 2025; Wardani & Kiptiyah, 2024).

Bogor City is one of the cities that pays great attention to the education sector. The government continues to strive to improve the quality of education through various policies and programs so that

all students have equal access to quality learning. However, challenges still exist, especially in terms of the use of technology in learning. Although internet and technology access in Bogor City is quite good, not all schools are able to optimize its use in the teaching and learning process(Lestari, 2023). Technological advances in education bring great opportunities for educators to use digital-based learning aids. One form of technology utilization is the use of innovative and interactive learning media. Learning media plays an important role in facilitating the delivery of material by teachers and increasing the effectiveness and quality of students' understanding of the material being studied. With the existence of appropriate and interesting learning media, the teaching and learning process can take place more interactively and enjoyably, so that students become more active and involved in learning, especially in mathematics learning(Aulia et al., 2023).

Contemporary challenges in the 21st century highlight the increasing interconnectedness of the world. A country depends on external countries, as well as its own population. The challenges and opportunities of the 21st century are increasingly transnational and know no national boundaries. Advances in digital information technology have made connectivity and communication between individuals in different countries easier, more efficient, and more convenient. Global interconnectivity has led to countries becoming more interdependent, and information technology provides opportunities for individuals to gain knowledge from other places, situations, and cultures. Being a global citizen means not only participating in the physical world, but also being a member of the digital community(Fadil et al., 2024, 2025).

On the other hand, developments in digital technology provide great opportunities to transform education, including mathematics learning. One approach that is currently growing rapidly is the use of game-based learning (GBL). GBL utilizes game elements such as challenges, scores, and competitions to create a fun, interactive, and participatory learning environment(Liu et al., 2020). Research by (Morgan, 2022) shows that GBL can significantly increase student motivation and engagement, as well as have a positive impact on academic achievement.

One learning medium with great potential to support the GBL approach is Bamboozle, a web-based interactive quiz platform that allows teachers to create educational games in the form of challenging questions (Dania, 2023). This platform is very flexible, can be used for various subjects, and does not require high technical skills from teachers. The main advantage of Bamboozle lies in its ability to create a competitive yet enjoyable learning environment, while also encouraging collaboration among students in answering questions.(Avci, 2022)

Recent studies show that the use of Baamboozle can significantly increase engagement, interest in learning, and mathematics learning outcomes among students.(Hilda & Prasetyaningtyas, 2024; Shiddiq et al., 2025; Wahyuningsih et al., 2024; Wardani & Kiptiyah, 2024). For example, in a study using the Problem-Based Learning (PBL) model supported by Baamboozle, students' interest in learning scores increased from 70.13 to 75.83, and critical thinking scores also rose significantly(Wahyuningsih et al., 2024). Additionally, another study reported an average increase in students' scores from 63.33 (pretest) to 91.90 (posttest) after game-based learning with Baamboozle.

The use of Bamboozle in several elementary schools abroad has been proven to increase student activity and engagement in the classroom, as well as encourage an increase in learning interest, particularly in subjects considered difficult or challenging, such as mathematics(Rahayu & Rukmana, 2022). However, in Indonesia, particularly at the madrasah ibtidaiyah level, research on the effectiveness of this medium remains very limited. Few quantitative studies have systematically evaluated how the use of Bamboozle influences students' interest in learning, especially in the local context with limited educational facilities and infrastructure.

Based on the results of observations conducted at MI Nurul Huda 3 Bogor City, it was found that students' interest in learning mathematics is still relatively low. When learning takes place, some students seem to pay less attention to the teacher who is explaining the material. Teachers still use conventional methods, such as reading LKS books without utilizing interesting learning media. From the teacher's diary, it shows that the average score for mathematics is still below the completion standard, only 40.48% of students achieve completion, while the rest have not reached the minimum score. This shows that students' interest in learning mathematics is still low. Interest in learning is one of the important aspects that affect students' learning success. Interest in learning is a person's desire or tendency to learn which is marked by enthusiasm and attention to the material being taught. Students who have a high interest in learning tend to be more active, diligent, and have a high learning spirit compared to students who have a low interest in learning.

However, although these results demonstrate the effectiveness of Baamboozle, there are still several challenges and gaps in the research. Most previous studies have focused on improving learning outcomes or critical thinking skills, but few have specifically examined the effect of Baamboozle on interest in learning mathematics in MI environments, particularly at MI Nurul Huda 3 in Bogor City(Shiddiq et al., 2025; Wardani & Kiptiyah, 2024). Additionally, previous studies generally used experimental designs limited to one or two classes, so the generalizability of the results still needs to be expanded. This study aims to fill this gap by quantitatively examining the effect of Baamboozle learning media on students' interest in learning mathematics at MI Nurul Huda 3 in Bogor City. With this approach, it is hoped that it can contribute new insights into the development of more effective and enjoyable mathematics learning strategies, as well as enrich the literature on the use of interactive digital media at the MI level.

To overcome these problems, teachers need to use technology-based learning media such as Baamboozle. Baamboozle is a web-based interactive quiz platform that allows students to learn in a more enjoyable way. With quiz games designed to increase student engagement, baamboozle provides a stimulus in the form of challenges that encourage students to be more active in learning. According to Skinner's behaviorism learning theory, positive reinforcement given in cake games can increase students' motivation and interest in learning(Putria et al., 2024)

Method

This study uses a quantitative approach with a Quasi Experimental Design research type. The research design used is the Nonequivalent Control Group Design(Miller et al., 2020). In this design, two groups are compared—an experimental group that receives a treatment and a control group that does not—without random assignment of participants to groups. This design is often used in educational settings where randomization is not feasible, such as intact classroom groups. The approach allows the researcher to examine the causal effect of an intervention (in this case, the use of Baamboozle as a learning medium) by comparing the outcomes between these two pre-existing groups. Both groups undergo pretest and posttest measurements to assess changes over time and to determine the significance of any observed differences. This method is particularly suitable for real-world classroom environments where practical constraints prevent fully randomized experiments.

This study measures initial abilities using a pretest and measures final abilities using a posttest. This study was conducted in two groups, namely the experimental group and the control group. The population of this study was grade II students at MI Nurul Huda 3 Bogor City totaling 42 students. The sample used was nonprobability sampling with a purposive sampling design(Andrade, 2021). The sample was divided into two classes, namely class II A as a control class not using learning media totaling 21 students and class II B as an experimental class using baamboozle learning media totaling 21 students. The main instrument used was a student learning interest questionnaire that had been tested for validity and reliability. Data were collected through preliminary and post-test learning interest tests. Data analysis was carried out using normality tests, homogeneity tests, and then independent sample tests to test the significance of changes in learning interest after treatment was give(Manik et al., 2023)

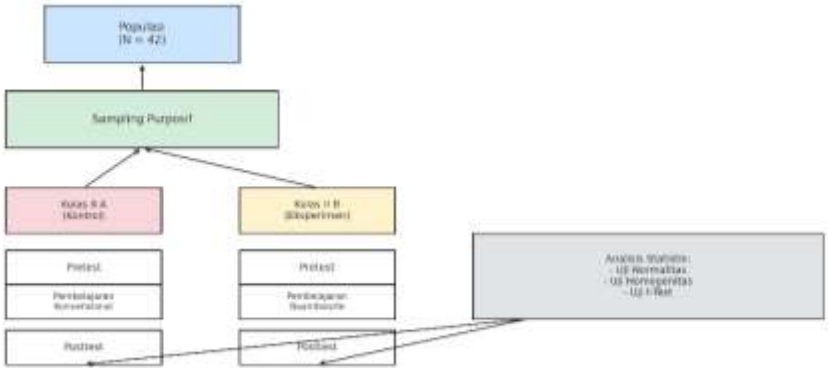

Figure 1. quantitative research flowchart with quasi-experimental design

Result and Discussion

Result

The results of the study showed that the use of baamboozle learning media had an effect on increasing students' interest in learning mathematics. This can be seen from the difference in the average value of the experimental and control classes as follows:

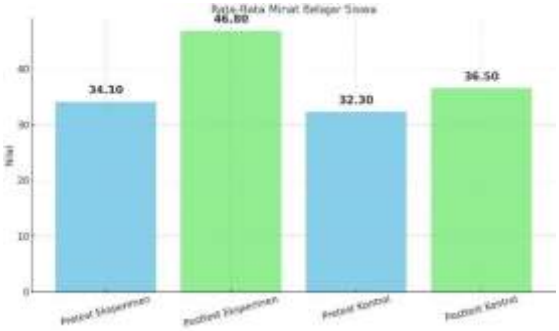

Figure 1. Average Learning Interest

Based on the Figure, the average learning interest above shows that there is a difference in increasing learning outcomes between the experimental and control groups. The experimental group had an average pretest score of 34.10 increasing to 46.80 in the posttest, with a difference of 12.70 points. Meanwhile, the control group had an average pretest score of 32.30 increasing to 36.55 in the posttest with a difference of 4.25 points. The significant increase in the experimental group shows that the application of interactive media such as baamboozle has a positive impact on students' interest in learning.

Based on the diagram shown earlier, it is clear that the treatment in the form of using Baamboozle learning media given to the experimental group had a more significant impact on increasing students' interest in learning compared to the control group who did not receive similar treatment. The increase in the average posttest scores in the experimental group shows that students were more enthusiastic, actively involved, and showed greater interest in participating in mathematics learning when using this interactive media.

This data visualization reinforces the findings of the statistical test, which shows a significant difference between the two groups. The diagram illustrates a sharper trend in learning interest in the experimental class, proving that game-based media such as Baamboozle can create a more enjoyable learning environment and stimulate active student participation. Conversely, in the control group, the graph shows a more gradual or stagnant increase, indicating that conventional teaching methods are less effective in fostering students' emotional engagement and motivation optimally.

Thus, the diagram not only shows numerical results but also serves as a visual representation of the effectiveness of innovative, technology-based learning approaches in concretely increasing students' interest in learning. These findings emphasize the need for teachers to be more adaptive in integrating digital learning media that are appropriate for the characteristics of students in today's digital age.

This influence is strengthened through the results of the statistical analysis of the independent samples test as follows:

Table 1. Independent Samples Test

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
minat_belajar	Equal variances assumed	2.251	.142	-8.050	38	.000	-10.250	1.273	-12.828	-7.672
	Equal variances not assumed			-8.050	33.901	.000	-10.250	1.273	-12.838	-7.662

Based on the results of the Independent Samples Test in the table above, the Sig. (2-tailed) value is 0.000. This value is smaller than the set significance level of 0.05 (0.000 < 0.05). Thus, the alternative hypothesis (Ha) is accepted and the null hypothesis (Ho) is rejected, so it can be concluded that there is a significant influence on the baamboozle learning media on students' learning interest in mathematics learning.

The conclusions of this study reinforce the argument that integrating game-based learning media such as Baamboozle can create a more engaging, interactive, and enjoyable learning experience for students. Through this medium, students are not only engaged cognitively but also emotionally, as the more gamified presentation method can spark enthusiasm and motivation for learning. Therefore, the results of this study provide strong empirical evidence that the use of Baamboozle significantly increases students' interest in learning mathematics and has the potential to be adopted more widely in elementary education.

Discussion

Based on the results and discussion presented in the research article entitled The Effect of Baamboozle Media on Students' Interest in Learning Mathematics at MI Nurul Huda, a clear picture emerges of the significant influence of using Baamboozle media on increasing students' interest in learning mathematics. The research results indicate that students who participated in learning activities using Baamboozle media experienced a higher increase in learning interest compared to those who did not use the media. The experimental group achieved an average posttest score of 46.80, while the control group scored only 36.55. The t-test revealed a significance level of 0.000 (< 0.05), indicating a significant difference between the two groups.

This shows that the differences occur not by chance, but rather the influence of the use of baamboozle learning media. The use of baamboozle learning media can create a more enjoyable, interactive learning atmosphere and encourage active participation of students in learning activities. This media also provides a different learning experience from conventional methods, so that it can arouse students' curiosity and increase their concentration during learning. In accordance with Skinner's behaviorism theory, providing positive reinforcement through games and interactions can increase students' motivation and active participation in the learning process. (Zega & Tangkin, 2023)

The main advantage of Bamboozle is its ability to build teamwork and create a competitive yet enjoyable learning environment. However, there are several challenges, such as limitations on the number of characters in question creation and the lack of an individual assessment system, making it difficult to objectively evaluate student learning achievements.(Majdi & Faizatina, 2025)

These results are in line with the learning motivation theory proposed by (Vansteenkiste et al., 2022) through Self-Determination Theory, which states that intrinsic motivation will grow when three basic individual needs are met: the need for competence, autonomy, and social connectedness. Baamboozle enables students to feel competent because they can answer questions correctly, feel autonomous because they can freely choose answers independently, and feel socially connected because the game can be played in groups or individually. This combination is the key strength in increasing students' interest in mathematics, which has long been perceived as difficult and intimidating.

First, the need for competence is met when students feel capable of answering questions presented in the form of interactive quizzes, thereby gaining confidence and tangible academic achievement (Shaik et al., 2023). Second, the need for autonomy is supported by giving students the freedom to choose answers and problem-solving strategies that suit their individual abilities and learning styles (Černe, 2022). Third, the need for social connection is realized through group-based game activities, fostering a sense of cooperation, camaraderie, and positive interaction among students (Mazida & Andari, 2022).

The combination of these three aspects makes Baamboozle not only a fun teaching aid, but also a tool for creating a learning environment that supports students' intrinsic motivation. This is particularly relevant in Mathematics lessons, which are often perceived as challenging and uninteresting. By incorporating feelings of success, freedom to learn, and social connections, Baamboozle offers a practical solution to overcome students' psychological barriers and foster a greater interest in Mathematics.

This significant increase in learning interest not only shows the success of the media in delivering the material, but also illustrates the change in students' attitudes towards subjects that were previously considered difficult or boring. In education, learning interest plays an important role in influencing how students interact with learning materials, as well as how much effort they make to achieve learning

goals(Arif et al., 2025). Thus, the use of baamboozle media in mathematics learning can be used as an alternative effective learning strategy to increase students' interest in learning. Especially in subjects that are often considered difficult such as mathematics. Teachers are expected to be more creative in choosing and utilizing appropriate learning media to support a more innovative and enjoyable teaching and learning process for students.

In addition to supporting the proposed hypothesis, these findings open up a broader discussion about the importance of digital-based learning media that is not only oriented towards academic results, but also towards affective aspects such as interest and motivation to learn. Baamboozle, as a quiz-based platform, has proven capable of overcoming the boredom of conventional methods that have dominated mathematics learning in elementary schools and Islamic elementary schools. The learning process becomes more engaging, filled with enthusiasm, and increases the likelihood of active student participation, even for those who are typically passive in the classroom(Winaningsih et al., 2022).

However, these positive results did not appear in a vacuum. Several factors are thought to have contributed to the impact. For example, the high level of student enthusiasm for new media (novelty effect), the ability of teachers to manage the game so that it remains in line with learning objectives, and the openness of the school environment to technological innovation(Li & Xue, 2023). These factors act as amplifiers for the success of Bamboozle's implementation in the experimental class. However, the novelty effect should also be considered in the long term. There is a possibility that learning interest may fluctuate if the media is not regularly updated or varied.(Avci, 2022)

In an academic context, the results of this study contribute to the expansion of literature on digital interactive media, particularly those that support game-based learning approaches in primary education. This study not only statistically confirms the effectiveness of Bamboozle but also presents a pedagogical narrative illustrating how learning experiences can be transformed through appropriate media. These findings could serve as a starting point for further research to explore the duration of effects, their relationship with cognitive learning outcomes, and how game personalization can enhance learning outcomes more comprehensively.

Practically speaking, teachers in madrasahs and elementary schools can use Baamboozle as an alternative learning medium that is fun, inexpensive, and easily accessible. This platform can be used as a light yet meaningful formative assessment tool or as a strategy to creatively begin and conclude learning. With increased student interest in learning, it is hoped that overall learning outcomes will also show a positive trend.

The use of Baamboozle provides teachers with the flexibility to package learning dynamically without having to rely on complex infrastructure. With just basic devices such as laptops or mobile phones and an internet connection, teachers can create a learning environment that is both competitive and collaborative. Through this approach, student engagement in the learning process increases significantly, as they feel challenged and enjoy the learning activities.

It is hoped that as students' interest in learning increases through platforms like Baamboozle, overall learning outcomes will also improve. This means that the use of interactive digital media not only enriches teaching methods but also positively impacts the achievement of learning objectives, particularly in subjects traditionally considered challenging, such as mathematics.

Thus, it can be concluded that the findings of this study strongly support the proposed hypothesis and provide a tangible contribution to the development of effective, interactive, and enjoyable digital-based learning strategies. Baamboozle is not just an ordinary quiz medium but also serves as a pedagogical bridge connecting academic goals with students' psychological needs in learning mathematics with greater enthusiasm and engagement.

This platform not only facilitates concept mastery but also sparks enthusiasm and active student engagement. Baamboozle helps create a positive and motivating learning environment where students feel valued, capable, and socially connected throughout the learning process. With this approach, mathematics often perceived as abstract and challenging can be presented in a more contextual, enjoyable, and meaningful way. Overall, Baamboozle demonstrates significant potential as a digital learning tool capable of addressing 21st-century pedagogical challenges, particularly in meeting the learning needs of the digital generation, which requires a balanced blend of emotional and cognitive engagement in every learning process.

Kesimpulan

Based on the results of the research that has been conducted, it can be concluded that the use of Baamboozle learning media has a significant effect on increasing students' interest in learning in Mathematics subjects at MI Nurul Huda 3 Bogor City. The data shows that the average posttest score of the experimental class that used Baamboozle was 46.8, while the control class that did not use Baamboozle only reached an average score of 36.5. The statistical test results through the t-test showed a significance value of 0.000 (<0.05), so the alternative hypothesis (Ha) was accepted and the null hypothesis (Ho) was rejected. This proves that Baamboozle as an interactive learning media is effective in increasing students' interest in learning. The use of Baamboozle provides a more enjoyable and interactive learning experience, so that it can attract students' attention and increase their involvement in the mathematics learning process. Therefore, it is recommended for teachers to utilize digital learning media such as Baamboozle to support more innovative and meaningful learning, especially in overcoming students' low interest in learning mathematics.

Referensi

Amran, A., Suhendra, S., Wulandari, R., & Farrahatni, F. (2021). Hambatan Siswa dalam Pembelajaran Daring pada Mata Pelajaran Matematika pada Masa Pandemik Covid-19 di Sekolah Dasar. *Jurnal Basicedu*, *5*(6), 5179–5187. https://doi.org/10.31004/basicedu.v5i6.1538

Andrade, C. (2021). The Inconvenient Truth About Convenience and Purposive Samples. *Indian Journal of Psychological Medicine*, *43*(1), 86–88. https://doi.org/10.1177/0253717620977000

Arif, M. N., Parawansyah, M. I., Huda, F. H., & Zulfahmi, M. N. (2025). Strategies to develop students' learning interest through a deep learning approach. *Jurnal Muassis Pendidikan*, *4*, 8–16.

Asnawati, R., Widyastuti, W., Maulina, D., Anggoro, B. S., Ferdiansyah, M., & Izzati, N. (2022). Evaluating the Numeracy Cognitive Level of Indonesian Elementary School Students using the Minimum Competency Assessment. *Jurnal Pendidikan MIPA*, *23*(2), 428–436. https://doi.org/10.23960/jpmipa/v23i2.pp428-436

Aulia, R. P., Prihatin, J., & Siswati, B. H. (2023). HUBUNGAN ANTARA MINAT BELAJAR DENGAN KEBERHASILAN BELAJAR SISWA DENGAN PENERAPAN BUKU AJAR ELEKTRONIK SISTEM EKSKRESI BERBASIS BRAIN-BASED LEARNING (BBL) DILENGKAPI VIDEO DAN DIAGRAM ROUNDHOUSE. *Bio-Lectura : Jurnal Pendidikan Biologi*, *10*(1), 11–17. https://doi.org/10.31849/bl.v10i1.13435

Avci, D. (2022). Creating an Active Classroom Community with Bamboozle. *The National Teaching & Learning Forum*, *31*(6), 8–9. https://doi.org/10.1002/ntlf.30344

Čakāne, I., Namsone, D., & France, I. (2023). HOW STUDENTS ARE LEARNING TO REASON IN MATHEMATICS LESSONS. *SOCIETY. INTEGRATION. EDUCATION. Proceedings of the International Scientific Conference*, *1*, 541–552. https://doi.org/10.17770/sie2023vol1.7087

Černe, T. (2022). Use of Autonomy-Supportive or Controlling Motivational Style of Teaching with Special Education and Rehabilitation Teachers. *Revija Za Elementarno Izobraževanje*, *15*(4), 475–492. https://doi.org/10.18690/rei.15.4.475-492.2022

Dania, A. (2023). Game-Based Approach and Teacher Reflective Practice. In *Teaching Games and Sport for Understanding* (pp. 154–163). Routledge. https://doi.org/10.4324/9781003298298-17

Fadil, K. (2023). *Attadrib: Jurnal Pendidikan Guru Madrasah Ibtidaiyah Peran Guru Dalam Penanaman Sikap Anti Bullying Verbal Dalam Pembelajaran PKN di Sekolah Dasar*. *6*, 123–133.

Fadil, K., Fahri, M., Nurpajriah, S., Program,), Guru, S. P., Ibtidaiyah, M., Islam, A., Ibn, U., & Bogor, K. (2024). PENGUATAN PROFIL PELAJAR PANCASILA BAGI ANAK SEKOLAH DASAR MELALUI PROGRAM KAMPUS MENGAJAR. In *Communnity Development Journal* (Vol. 5, Issue 1).

Fadil, K., Muslimah, M., & Nawawi, K. (2025). Peningkatan Keaktifan Belajar Siswa pada Pembelajaran PKN Melalui Penerapan Metode Kerja Kelompok di MI Miftahul Athfal. *Jurnal AL-Muta`aliyah: Jurnal Pendidikan Guru Madrasah Ibtidaiyah*, *5*(2), 36. https://doi.org/10.51700/mutaaliyah.v5i1.875

Farikhin, F., Rofi'ah, S. H., Maghfirah, N. I., Subaidah, & Mufarohah, A. (2024). PERAN GURU PENDIDIKAN AGAMA ISLAM DALAM MEMBINA AKHLAKULKARIMAH SISWA(Studi Kasus di Sekolah Dasar Negeri Kepatihan 06 Jember). *ICHES: International Conference on Humanity Education and Society*, *3*(1). https://proceedingsiches.com/index.php/ojs/article/download/228/216

Gai Mali, Y. C., Kurniawan, D., Januardi, J. I., Swara, S. J., Lokollo, N. C. E., Picauly, I. A., Paramitha, N. G., Tanore, J. A., Dewani, M. S., & Pakiding, R. W. (2023). ISSUES AND CHALLENGES OF TECHNOLOGY USE IN INDONESIAN SCHOOLS: IMPLICATIONS FOR TEACHING AND LEARNING. *IJIET (International Journal of Indonesian Education and Teaching)*, *7*(2), 221–233. https://doi.org/10.24071/ijiet.v7i2.6310

Herawati, H., Septiarini, V. P., Hariyani, M., & Hayati, Z. (2024). Interactive animation media and students' learning interest in learning mathematics in elementary schools. *Journal of Didactic Mathematics*, *5*(3). https://doi.org/10.34007/jdm.v5i3.2390

Hilda, & Prasetyaningtyas, F. D. (2024). The Effectiveness of Baamboozle Game as a Learning Media for Flat Geometry in Improving Students' Problem-Solving Skills. *Journal for Lesson and Learning Studies*, *7*(3), 533–543. https://doi.org/10.23887/jlls.v7i3.82754

Kliziene, I., Paskovske, A., Cizauskas, G., Augustiniene, A., Simonaitiene, B., & Kubiliunas, R. (2022). The Impact of Achievements in Mathematics on Cognitive Ability in Primary School. *Brain Sciences*, *12*(6), 736. https://doi.org/10.3390/brainsci12060736

Lestari, R. D. (2023). *PENGGUNAAN MEDIA DIGITAL DALAM MENINGKATKAN KUALITAS PEMBELAJARAN PENDIDIKAN AGAMA ISLAM SISWA KELAS VIII DI SMP ISLAM PURBOLINGGO LAMPUNG TIMUR*. INSTITUT AGAMA ISLAM NEGERI (IAIN) METRO.

Li, J., & Xue, E. (2023). Dynamic Interaction between Student Learning Behaviour and Learning Environment: Meta-Analysis of Student Engagement and Its Influencing Factors. *Behavioral Sciences*, *13*(1), 59. https://doi.org/10.3390/bs13010059

Lin, C. (2023). Mathematics Learning and Intellectual Development of Elementary School Students. In *Intellectual Development and Mathematics Learning* (pp. 195–232). Springer Nature Singapore. https://doi.org/10.1007/978-981-19-8757-1_8

Liu, Z.-Y., Shaikh, Z. A., & Gazizova, F. (2020). Using the Concept of Game-Based Learning in Education. *International Journal of Emerging Technologies in Learning (IJET)*, *15*(14), 53. https://doi.org/10.3991/ijet.v15i14.14675

Majdi, M., & Faizatina, N. (2025). Development of ICT (Information And Communication Technology) Media of The Bamboozle Type Using The Discovery Learning Model in Indonesian Language Learning at Madrasah Ibtidaiyah. *The International Journal of Education Management and Sociology*, *4*(2), 102–108. https://doi.org/10.58818/ijems.v4i2.200

Manik, E., Affandi, A., Priadana, S., Hadian, D., & Puspitaningrum, D. A. (2023). *Comparison of normality testing with chi quadrat calculations and tables for the statistical value departement of elementary school education student at the University of Jember*. 020018. https://doi.org/10.1063/5.0111307

Mazida, L. I., & Andari, D. A. (2022). Implementasi Permainan Kooperatif untuk Meningkatkan Keterampilan Sosial dalam Pembelajaran Tematik. *Madrasah: Jurnal Pendidikan Dan Pembelajaran Dasar*, *14*(2), 177–188. https://doi.org/10.18860/mad.v14i2.11222

Miller, C. J., Smith, S. N., & Pugatch, M. (2020). Experimental and quasi-experimental designs in implementation research. *Psychiatry Research*, *283*, 112452. https://doi.org/10.1016/j.psychres.2019.06.027

Morgan, A. R. (2022). *The Relationship Between Motivation, Academic Achievement, and Engagement in Mathematics Using Digital Game-Based Learning* [Boise State University]. https://doi.org/10.18122/td.1980.boisestate

Nandang Mustafa, A. (2023). REFLECTION ON THE LATEST PISA RESULTS OF INDONESIA. *International Journal of Advanced Research*, *11*(05), 1223–1228. https://doi.org/10.21474/IJAR01/16988

Nokes, C. (2023). Effective Learning in the Modern Classroom. *Journal for Learning through the Arts: A Research Journal on Arts Integration in Schools and Communities*, *18*(1). https://doi.org/10.21977/D918154081

Putria, V. D. S., Yudi Hartonob, & Siti Nurkholipahc. (2024). Pengaruh Penggunaan Media Pembelajaran Baamboozle Pada Mata Pelajaran Sejarah Terhadap Hasil Belajar Siswa Kelas XII di SMA Negeri 5 Madiun. *Jurnal Pendidikan Dan Pembelajaran Khatulistiwa*, *7*(1), 2.

Rahayu, I. R., & Rukmana, D. (2022). THE EFFECT OF GAME-BASED LEARNING MODEL ASSISTED BY BAMBOOZLE ON THE MULTIPLICATION SKILLS OF ELEMENTARY SCHOOL STUDENTS. *Primary: Jurnal Pendidikan Guru Sekolah Dasar*, *11*(3), 806. https://doi.org/10.33578/jpfkip.v11i3.8964

Shaik, A. H., Prabhu, M., Hussain, S. M., & Poloju, K. K. (2023). An Interactive Design Tool for Assessing

Student understanding in Digital Environments. *SHS Web of Conferences*, *156*, 09004. https://doi.org/10.1051/shsconf/202315609004

Shiddiq, I., Sari, M., Nasution, Z. A., Purba, H. N., Kurniati, A., Junitri, A., Yanti, N., Rahayu, D., Wulandari, A., Wulandari, A., Lubis, B. P., Herpasyah, F., Putri, R. E., Puspita, A. D., Andini, N. D., Yulianti, D., & Syahputri, H. (2025). Implementasi Penggunaan Media Baamboozle untuk Meningkatkan Motivasi Belajar Matematika Kelas 4 SDN 11 Panai Hulu. *Indo-MathEdu Intellectuals Journal*, *6*(1), 532–539. https://doi.org/10.54373/imeij.v6i1.2501

Siagian, M. D. (2017). Pembelajaran Matematika Dalam Persfektif Konstruktivisme. *NIZHAMIYAH: Jurnal Pendidikan Islam Dan Teknologi Pendidikan*, *VII*(2), 61–73.

Sinha, T., Bai, Z., & Cassell, J. (2021). *A Novel Multimodal Approach for Studying the Dynamics of Curiosity in Small Group Learning*. https://doi.org/10.35542/osf.io/rfxwg

Tiwow, D. N. F., Tambingon, H. N., Joufree Rotty, V. N., Lomban, E. A., & Mangelep, N. O. (2022). THE INFLUENCE OF ADOBE FLASH-BASED LEARNING MEDIA ON INTEREST IN LEARNING MATHEMATICS. *Journal Of Education And Teaching Learning (JETL)*, *4*(3), 243–254. https://doi.org/10.51178/jetl.v4i3.906

Toker, A. (2022). Importance of Leadership in the Higher Education. *International Journal of Social Sciences & Educational Studies*, *9*(2). https://doi.org/10.23918/ijsses.v9i2p230

Vansteenkiste, M., Soenens, B., & Waterschoot, J. (2022). Catalyzing Intrinsic and Internalized Motivation. In *The Oxford Handbook of Educational Psychology*. Oxford University Press. https://doi.org/10.1093/oxfordhb/9780199841332.013.41

Voronina, O., Moskvina, A., & Yarmak, O. (2022). EDUCATION AS A TOOL TO IMPROVE THE COMPETITIVENESS OF THE ECONOMY. *Municipal Economy of Cities*, *2*(169), 7–14. https://doi.org/10.33042/2522-1809-2022-2-169-7-14

Wahyuningsih, E., Hidayati, F. H., Muflih, G. Z., & Fersellia, F. (2024). Problem-based learning with baamboozle edugame: Enhancing critical thinking skills and learning interest. *Journal of Advanced Sciences and Mathematics Education*, *4*(2), 113–124. https://doi.org/10.58524/jasme.v4i2.477

Wardani, M. E., & Kiptiyah, S. M. (2024). Game-Based Learning Model with Baamboozle Media Based on Artificial Intelligence Increases Student Engagement and Learning Outcomes. *Jurnal Ilmiah Sekolah Dasar*, *8*(2), 293–303. https://doi.org/10.23887/jisd.v8i2.67141

Wawan, W., & Retnawati, H. (2022). Empirical Study of Factors Affecting the Students' Mathematics Learning Achievement. *International Journal of Instruction*, *15*(2), 417–434. https://doi.org/10.29333/iji.2022.15223a

Winaningsih, E. T., Syarif, F., & Pahrurroji, P. (2022). Baamboozle's Effectiveness in Increasing Learning Motivation in Islamic Studies. *Tarbawiyah : Jurnal Ilmiah Pendidikan*, *6*(2), 123. https://doi.org/10.32332/tarbawiyah.v6i2.5385

Zega, Y., & Tangkin, W. P. (2023). IMPLEMENTATION OF LEARNING-BASED GAME METHOD TO IMPROVE ELEMENTARY STUDENTS' LEARNING ACTIVENESS. *Primary: Jurnal Pendidikan Guru Sekolah Dasar*, *12*(2), 473. https://doi.org/10.33578/jpfkip.v12i2.9727