

Efforts to Improve Literacy Skills of Grade 4A Students at SD Negeri 1 Cidahu Through a Game-Based Learning Approach

Irpan Abdul Rozak¹, Sarwandi^{2*}

¹Universitas Terbuka, Jakarta, Indonesia

^{2*}Universitas Sains dan Teknologi Indonesia, Pekanbaru, Indonesia

Email Correspondence: *sarwandi@usti.ac.id

Article Information

Submitted : 02-08-2026

Accepted : 17-08-2026

Published : 30-08-2026

Keywords:

Literacy Skills, Student Behavior, Elementary School, Game-Based Learning, Classroom Action Research

Abstract

This study aimed to improve the reading and writing literacy skills of Grade 4A students at SD Negeri 1 Cidahu by using a Game-Based Learning (GBL) approach designed to provide a pleasant learning experience while fostering active student engagement. The research employed Classroom Action Research (CAR), which was conducted in three cycles consisting of planning, implementation, observation, and reflection. Data were collected through literacy tests, observations of student behavior, and documentation during the learning process. The findings showed a significant increase in the achievement of the Minimum Mastery Criteria (KKM), from 64% in Cycle I to 88% in Cycle II and 96% in Cycle III. In addition, students' reading and writing skills improved. Students who previously could only copy words were able to write simple words independently. The GBL approach proved effective in improving basic literacy skills, particularly among students with lower abilities, while also having a positive impact on their social and emotional engagement. Therefore, GBL is highly recommended for wider application in literacy learning at the elementary school level.

Abstrak

Penelitian ini bertujuan untuk meningkatkan kemampuan siswa kelas 4A SD Negeri 1 Cidahu dalam membaca dan menulis dengan menggunakan pendekatan Game Based Learning (GBL) yang diciptakan untuk memberikan pengalaman belajar yang menyenangkan sekaligus memupuk keterlibatan aktif para siswa. Dalam penelitian ini, metode yang diterapkan adalah Penelitian Tindakan Kelas (PTK) yang dilaksanakan dalam tiga tahap, yang terdiri dari perencanaan, pelaksanaan, pengamatan, dan refleksi. Data dikumpulkan melalui tes tentang literasi, pengamatan perilaku siswa, dan dokumentasi selama proses pembelajaran. Temuan dari penelitian ini menunjukkan adanya peningkatan yang signifikan pada pencapaian Kriteria Ketuntasan Minimal (KKM), yaitu 64% pada siklus I, meningkat menjadi 88% pada siklus II, dan mencapai 96% pada siklus ke III. Selain itu, adanya peningkatan pada kemampuan membaca dan menulis siswa. Siswa yang sebelumnya hanya bisa menyalin kini mampu menulis kata-kata sederhana dengan mandiri. Pendekatan GBL terbukti efektif dalam meningkatkan kemampuan literasi dasar, terutama bagi siswa yang memiliki kemampuan rendah, serta memberikan dampak positif pada keterlibatan sosial dan emosional mereka. Dengan demikian, GBL sangat dianjurkan untuk diterapkan secara luas dalam pembelajaran literasi di tingkat dasar di sekolah-sekolah.

Kata Kunci: Keterampilan Literasi, Prilaku Siswa, Sekolah Dasar, Pembelajaran Berbasis Permainan, Penelitian Tindakan Kelas

1. INTRODUCTION

Basic literacy skills such as reading and writing are fundamental skills that elementary school students need to master from an early age. Literacy is not merely the ability to recognize letters and words, but also includes understanding the meaning of texts and expressing ideas in written form. Abidin, Mulyati, and Yunansah (2017) explain that literacy is not limited to reading and writing skills, but also encompasses other skills such as speaking, listening, and critical thinking. Literacy enables individuals to understand and communicate information and to participate actively in social and

democratic life. The literacy process is complex because it is strongly influenced by experience, culture, and prior knowledge.

According to Teale et al. in Padmadewi and Artini (2018, p. 1), literacy includes reading and writing skills as well as the ability to understand and produce discourse. Saryono et al. (2017) state that reading and writing skills have existed since ancient times and constitute important elements of functional literacy that greatly influence everyday life. Literacy skills are essential not only for understanding information but also for supporting thinking, empathy, and effective communication. Thus, these skills constitute a major asset for dealing with various challenges in the modern era.

According to Sanki, Listyarini, Kholifah, and Purnamasari (2025), reading ability is an important foundation for elementary school students, supporting the development of effective reasoning skills through language commonly used in daily routines. However, in reality, based on observations in Grade 4A at SD Negeri 1 Cidahu, many students had not yet developed these abilities optimally. It was recorded that 11 students were unable to complete writing tasks properly and their handwriting was still untidy, while 1 student did not write at all. This provides a clear indication that students still face difficulties in basic literacy activities.

The same condition was found in reading activities. As many as 8 students were able to read but were not yet able to understand the content of the text. These difficulties not only hindered their educational development but also affected their self-confidence and classroom participation. Factors contributing to low literacy skills included conventional and less engaging teaching methods. This caused students to become less motivated to participate in literacy learning. In fact, learning motivation has a significant influence on students' success in developing language skills (Purcell-Gates et al., 2012). Therefore, a learning approach that can stimulate students' interest and active engagement is needed.

One approach that has been shown to be effective in improving students' motivation and learning outcomes is Game-Based Learning (GBL). Game-Based Learning incorporates game elements into the learning process, creating an enjoyable and interactive atmosphere. Carvalho and Coelho (2021) state that GBL is an approach that uses games to enrich the learning process and encourage better conceptual understanding. The implementation of GBL for Grade 4A students at SD Negeri 1 Cidahu is expected to help them understand literacy materials in a more enjoyable way.

The implementation of Game-Based Learning also enables student-centered learning, in which teachers function as facilitators who guide students to actively construct their own knowledge. In the context of literacy, games can be designed to practice letter recognition, syllable reading, sentence construction, and short-story writing. Parental support also remains an important factor; therefore, collaboration between teachers and parents needs to be established to ensure that children receive consistent practice and encouragement both at school and at home. Thus, literacy problems can be addressed comprehensively and sustainably. According to LuChung Chin and Effandi Zakaria (2015), game-based learning provides students with opportunities to learn independently in enjoyable conditions. Such an engaging environment has the potential to increase their motivation and curiosity during the learning process (Winatha & Setiawan, 2020).

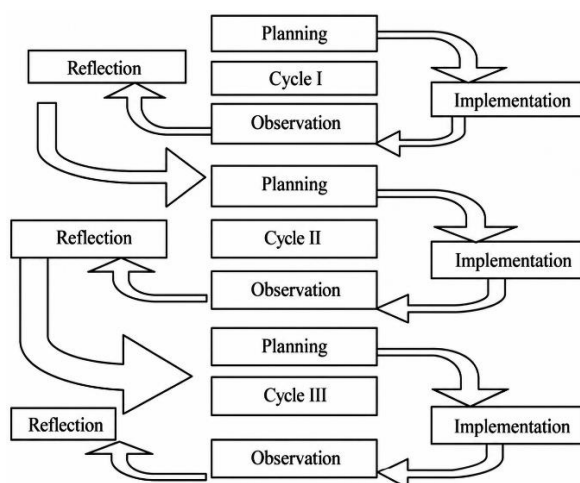
Based on this background, it is important to conduct research focusing on the implementation of Game-Based Learning (GBL) to improve students' literacy skills, particularly at the upper elementary level. Basic literacy, including reading and writing skills, is a crucial foundation for learning in elementary education. Unfortunately, many students in the early upper grades still experience difficulties in mastering basic literacy skills. They often show passive attitudes toward learning, have low motivation, and become bored easily when learning is conducted using traditional methods without variation in strategy. Therefore, innovation in learning approaches is needed to enliven the classroom atmosphere, stimulate students' interest, and effectively improve their understanding of basic literacy.

Game-Based Learning is one learning method considered capable of addressing these challenges. By incorporating various games into the learning process, GBL can create an enjoyable atmosphere, increase learning motivation, and encourage active student participation. Prastowo (2019) notes that engaging and interactive learning is more easily accepted by children, particularly those in the early school years. At this developmental stage, children tend to learn better through play, exploration, and visual stimulation.

The GBL approach, which incorporates educational games, enables students to participate actively, learn independently, and work collaboratively.

2. RESEARCH METHODOLOGY

This study employed Classroom Action Research (CAR) with the aim of improving the literacy skills of Grade 4A students at SD Negeri 1 Cidahu through a Game-Based Learning (GBL) approach. This method was selected because it provides teachers with opportunities to plan and implement innovative and enjoyable learning activities, as well as to directly observe and evaluate their effects in the classroom. Through this approach, the researcher could gain a better understanding of how structured games could increase student participation, motivate students to learn, and improve their basic literacy comprehension.



Picture 1. Classroom Action Research Cycle

The research subjects were 25 Grade 4A students at SD Negeri 1 Cidahu during the 2025/2026 academic year, second semester, consisting of 10 male students and 15 female students. The students came from neighboring families, and their parents' occupations were generally similar, namely farmers and casual daily laborers. Data collection employed several methods, including written tests in the form of performance tests, subjective tests consisting of short-answer questions, and non-test observations of students' attitudes while participating in the learning process. The instruments for the written and performance tests were prepared in the form of student worksheets containing work instructions that required students to demonstrate skills corresponding to the learning objectives.

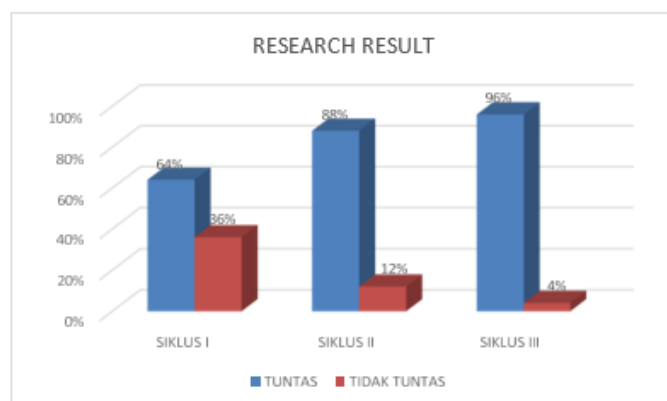
Non-test observation of student activities involved observing students' initial interest in participating in the learning process, their activeness during learning activities, and their final attitudes during the closing activity, which included reinforcement of learning outcomes. The quantitative data consisted of scores obtained from written tests administered in each cycle, with results compared across cycles. Data analysis was conducted by recording the highest and lowest scores, calculating cumulative scores and averages, determining the highest and lowest values, calculating the percentage of achievement, and comparing the results with the KKM. Qualitative data were obtained from observations and analyzed descriptively and quantitatively.

3. RESULTS AND DISCUSSION

The following diagram shows the development of students' literacy skills during the implementation of Classroom Action Research in three phases. The diagram presents information from each implementation cycle to provide an initial picture of the impact of the Game-Based Learning (GBL) approach on the teaching and learning of literacy in Grade 4A at SD Negeri 1 Cidahu. The improvement shown in the diagram is not merely numerical, but reflects changes in students' learning behavior from previously passive to more active and enthusiastic. Through games designed according to students' needs and characteristics, reading and writing activities became more enjoyable and easier to understand, while also increasing students' confidence. How were the games implemented, and to what extent did they affect students' literacy skills?

Table 1. Learning Outcome Data

No.	Description	Cycle I	Cycle II	Cycle III
1	Average score	69	77	84
2	Students achieving mastery	16	22	24
3	Percentage	64%	88%	96%
4	Students not achieving mastery	9	3	1
5	Percentage	36%	22%	4%



Picture 2. Classroom Action Research Results Diagram

The results of this study demonstrate that the use of the Game-Based Learning (GBL) method through three action cycles produced positive results in the reading and writing abilities of Grade 4A students at SD Negeri 1 Cidahu. Students' literacy learning outcomes increased in each cycle: in Cycle I, 64% of students met the Minimum Mastery Criteria (KKM), in Cycle II, 88% met the KKM, and in Cycle III, 96% met the KKM.

This improvement reflects significant development in each cycle, including understanding letters and words, reading fluency, reading comprehension, and simple writing skills. Students' writing skills developed from merely copying words to being able to write simple words appropriate to the context of the reading material. This demonstrates that the Game-Based Learning approach was effective not only in improving reading skills but also in strengthening students' writing abilities at the early literacy stage.

The implementation of Game-Based Learning (GBL) as a learning approach to improve literacy skills among Grade 4A students at SD Negeri 1 Cidahu showed positive results. Consistent with the theory proposed by Prastowo (2019), enjoyable and interactive learning can increase student motivation and engagement. By using games as learning media, students not only learned to read and write but also developed their fine motor skills, which are an important component of early literacy.

Well-designed games, such as matching pictures with words and playing with letters and words, provided solutions to the challenges faced by students in reading and writing. Game-Based Learning also encouraged students to become more active in learning activities, which could increase their self-

confidence. One of the main challenges in literacy learning in lower grades is students' limited interest in reading, which affects their participation in learning activities. However, interactive games can motivate students to read in an enjoyable atmosphere. In this study, the use of Educaplay with the game 'Matching Pictures with Words' in Cycle II successfully attracted students' attention through strong visual support. Their interest in the pictures helped students connect words with their meanings in a concrete way.

Arrahman et al. (2024) emphasize that technology-aligned Game-Based Learning can significantly increase reading interest because it offers challenges and learning experiences that are consistent with the learning styles of the digital generation. This was demonstrated in the present study, in which learning outcomes increased from 64% in Cycle I to 88% in Cycle II and 96% in Cycle III.

Game-Based Learning improves basic literacy through interactive experiences. One of the main strengths of Game-Based Learning lies in its ability to provide interactive learning experiences. The 'Frog Jump' game in Cycle III required students to find the correct answer in order to proceed to the next step. This encouraged students to think critically, remember the material, and learn directly from their mistakes. The game was not merely a form of entertainment but also served as a means of reflection and literacy reinforcement through decision-making and repetition.

Ulfa et al. (2022) support these findings by stating that the application of Game-Based Learning can improve basic literacy skills because it presents content in an engaging and accessible form. In this study, learning mastery increased to 96% in Cycle III, indicating that Game-Based Learning supported the achievement of early literacy objectives.

The implementation of Game-Based Learning affected not only academic aspects but also students' social-emotional development. Through games, students learned to cooperate, take turns, appreciate their peers' efforts, and manage their emotions when winning or losing.

Susaniari and Santosa (2024), in their systematic review, concluded that Game-Based Learning can increase motivation, reduce learning anxiety, and strengthen collaborative interactions among students. This was observed in the classroom when students began supporting one another during games and showed happiness when they successfully answered questions correctly.

Diana, H. (2022) states that games used in Game-Based Learning make learning more contextual and enjoyable, particularly when students can connect game activities with their real-life experiences. This is particularly important in lower-level education because students at this stage still think concretely. According to Najuah, Sidiq, and Simamora (2022), educational games serve as learning media that not only deliver material but also help build understanding and develop students' skills. These games encourage students to engage in the learning process actively and enjoyably. In addition, digital educational games, such as Android-based applications, are also effective as learning evaluation tools because they allow flexible access at any time. The Educaplay platform enables teachers to create games that correspond to local contexts and students' learning needs, such as introducing vocabulary related to objects in the surrounding environment, daily activities, or the school environment. This makes the learning process not only meaningful but also personalized for each student.

Although the implementation of Game-Based Learning (GBL) had a positive and significant effect on improving students' literacy skills, its implementation in the learning process was not free from challenges that need to be considered. One of the main challenges was limited time for learning activities. Not all designed games could be implemented comprehensively in a single learning session because of time constraints, particularly in elementary education where students have limited attention spans. This required teachers to be highly selective in choosing games that were most relevant and aligned with the learning indicators for each meeting.

Game selection needed to consider the level of difficulty, learning objectives, and students' readiness to receive material through play. In addition, teachers needed to adjust the pace of learning because students' varying ability levels within one class could not be treated identically. Some students showed very good responses and could follow the game flow well, while others still required greater attention to develop optimally. Students with low literacy skills required more intensive guidance, both individually and in small groups, so that they would not fall behind in the learning process. This encouraged teachers to apply differentiated learning strategies and develop skills for managing a dynamic and inclusive classroom. These challenges did not reduce the effectiveness of Game-Based Learning; instead, they emphasized the importance of the teacher's role as a creative and adaptive facilitator.

Overall, the findings indicate that the Game-Based Learning approach was effective in improving the literacy skills of Grade 4A students at SD Negeri 1 Cidahu. The learning process became more engaging and less monotonous, thereby increasing students' active involvement in reading and writing. Enjoyable learning experiences through games helped students build confidence and increased their curiosity about texts and new vocabulary. When implemented consistently, Game-Based Learning can help students overcome various basic literacy challenges, from letter recognition to understanding simple reading content. It not only provides academic benefits but also supports students' social-emotional development through cooperation, communication, and empathy during games. On this basis, Game-Based Learning can serve as an adaptive and contextual literacy learning strategy, particularly for students in the early grades who are still at the concrete thinking stage. In the future, this approach has the potential to continue developing in both physical and digital forms to enrich the variety of learning methods appropriate to 21st-century students' needs.

4. CONCLUSION

The research findings indicate that the use of the Game-Based Learning (GBL) approach was able to improve the literacy skills of Grade 4A students at SD Negeri 1 Cidahu. The study was conducted systematically through three cycles, comprising planning, implementation, observation, and reflection. In its implementation, the teacher designed and applied various engaging educational games, such as matching pictures with words and other interactive games that stimulated students' reading and writing skills. The games were adapted to the needs and learning characteristics of the students so that they were easier to understand and more enjoyable. Through this method, the learning atmosphere became more dynamic and less monotonous. Students participated directly in literacy activities without feeling pressured, which made them more confident and motivated to learn. The Game-Based Learning approach also helped teachers create more varied and relevant learning experiences, thereby supporting the achievement of basic literacy learning objectives. The results show that the use of Game-Based Learning significantly improved students' literacy skills. In the first cycle, 64% of students met the Minimum Mastery Criteria (KKM), increasing to 88% in the second cycle and reaching 96% in the third cycle. This development was evident not only in reading aspects, such as letter and syllable recognition and reading comprehension, but also in students' writing skills. Students who had previously only been able to copy words gradually demonstrated the ability to write simple words independently and appropriately in context. Thus, the Game-Based Learning approach was effective in improving students' literacy skills in both academic and social-emotional development. This method is suitable for continued use in literacy learning, particularly in the early grades, because it can address low student interest and participation in reading and writing. Therefore, Game-Based Learning can be used as an effective alternative for improving literacy skills among lower-grade students. This approach not only addresses existing problems but also creates a pleasant, innovative, and enthusiastic learning atmosphere, which in turn improves the quality of literacy learning in elementary schools. Consistent implementation of Game-Based Learning in every classroom learning session is needed to achieve optimal results. This can be achieved by designing games that are relevant and appropriate to students' developmental levels. Teachers need to integrate GBL into various aspects of literacy learning, from letter recognition to writing sentences or stories.

To maximize results, it is recommended that teachers use a variety of engaging games that actively involve students in every stage of learning. The use of technology, such as applications or digital devices, can also be incorporated into game-based learning strategies. According to Prananda et al. (2024), Game-Based Learning is an approach that utilizes game elements, such as challenges and rewards, to create engaging and motivating learning experiences. This approach has been shown to reduce boredom during learning and increase active student engagement. Teachers need to receive more intensive training related to the implementation of Game-Based Learning. Such training should cover aspects of game design that are aligned with the curriculum and literacy learning objectives. Teachers should also be equipped with knowledge of how to assess and monitor students' progress during game activities. With adequate training, teachers can become more confident in implementing Game-Based Learning, designing effective games, and optimizing their role as facilitators in the learning process. Collaboration between teachers and parents should be strengthened in a more structured manner. Teachers can hold regular meetings with parents to provide information about children's literacy development and offer suggestions regarding how parents can support literacy activities at home. In addition, assignments or exercises involving parents in learning, such as playing literacy-based games at home, can increase learning effectiveness. To support the implementation of Game-Based Learning, it is recommended that more game-based learning resources be developed. These resources may include learning applications, board games, cards, or interactive teaching materials that utilize technology. The games should be adapted to students' literacy development and designed to accommodate different learning styles. This aims to make learning more engaging and less monotonous while encouraging students to continue learning in an enjoyable manner. Evaluation of the implementation of Game-Based Learning should be conducted periodically to assess its effectiveness in improving students' literacy skills. Evaluation can be carried out through direct classroom observation, students' work, and interviews with students and parents. Reflection on the learning process is also important so that teachers can improve less effective methods and optimize activities that have been successful. Continuous evaluation will help determine whether the strategies used are appropriate to students' needs or whether changes are necessary in the implementation of Game-Based Learning. By implementing these recommendations, literacy development in Grade 4A at SD Negeri 1 Cidahu is expected to become more optimal, and Game-Based Learning can continue to serve as an effective, enjoyable, and beneficial learning method for elementary school students.

REFERENCE

- Abidin, Y., Mulyati, T., & Yunansah, H. (2017). *Pembelajaran Literasi: Strategi Meningkatkan Kemampuan Literasi Matematika, Sains, Membaca, Menulis*. Jakarta: Bumi Aksara.
- Carvalho, C. V. de, & Coelho, A. (2021). *Game-Based Learning, Gamification and Serious Games*. MDPI.
- Diana, H. (2022). Game Based Learning Berbantuan Media Board Game Klaster untuk Meningkatkan Kemampuan Literasi Siswa. *Jurnal Didaktika Pendidikan Dasar*, 6(2), 661–676. <https://doi.org/10.26811/didaktika.v6i2.622>
- Najuah, Sidiq, R., & Simamora, R. S. (2022). *Game Edukasi: Strategi dan Evaluasi Belajar Sesuai Abad 21*. Yayasan Kita Menulis.
- Padmadewi, N. N., & Artini, L. P. (2018). *Literasi di Sekolah: Dari Teori ke Praktik*. Nilacakra.
- Prananda, G., Judijanto, L., Stavinibelia, Aristanto, Ramadhona, R., & Lestari, N. C. (2024). Evaluasi Literatur terhadap Pengaruh Game Based Learning dalam Meningkatkan Motivasi Belajar Siswa. Pendas: *Jurnal Ilmiah Pendidikan Dasar*, 9(4).
- Sanki, H. A., Listyarini, I., Kholifah, P. N., & Purnamasari, I. (2025). Implementasi Game Based Learning untuk Meningkatkan Kemampuan Literasi dan Numerasi Siswa Sekolah Dasar. *Jurnal Penelitian Tindakan Kelas dan Pengembangan Pembelajaran*, 8(1).

- Saryono, D., Ibrahim, G. A., Muliastuti, L., Akbari, Q. S., Hanifah, N., Miftahussururi, Nento, M. N., & Efgeni. (2017). *Materi Pendukung Literasi Baca Tulis*. Kementerian Pendidikan dan Kebudayaan.
- Ulfa, E. M., Nuri, L. N., Sari, A. F. P., Baryroh, F., Ridlo, Z. R., & Wahyuni, S. (2022). Implementasi Game Based Learning untuk Meningkatkan Kemampuan Literasi dan Numerasi Siswa Sekolah Dasar. *Jurnal Basicedu*, 6(6), 9344–9355. <https://doi.org/10.31004/basicedu.v6i6.3742>
- Winatha, K. R., & Setiawan, I. M. D. (2020). Pengaruh Game-Based Learning terhadap Motivasi dan Prestasi Belajar. *Scholaria: Jurnal Pendidikan dan Kebudayaan*, 10(1).