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GAME-BASED LEARNING WITH MISSION CARDS IN ELEMENTARY SCHOOL

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ABSTRACT

This study aims to enhance student learning activity by applying the Game-Based Learning model assisted by mission card media in Natural and Social Sciences. The research approach used is Classroom Action Research (CAR), carried out in two cycles, each consisting of three sessions. The research subjects were 33 third-grade students at SDN 2 Cakranegara. Data were obtained through observations of students' learning activities. The results showed an increase in the average student activity from 59.53% in Cycle I to 79.53% in Cycle II. These findings indicate that the Game-Based Learning model with mission card media is highly effective in improving student engagement in the learning process. This study affirms the importance of game-based learning innovations as an effective way to enhance activity and learning motivation in elementary education.

Keywords: Game-Based Learning; Learning Activeness; Mission Card Media; Natural and Social Sciences

INTRODUCTION

Student engagement in the learning process is a crucial factor that reflects the success of teaching and learning activities. Learning approaches that encourage active student involvement enhance conceptual understanding and foster attitudes, critical thinking skills, and collaboration abilities, especially among elementary school students. Within the Merdeka Curriculum, which emphasizes student-centered learning, active participation is key in creating meaningful and enjoyable learning experiences.

However, based on preliminary observations in Class IIIA at SDN 2 Cakranegara, it was found that student engagement during learning remains relatively low. During classroom activities, students are passive, show little enthusiasm in answering questions, and demonstrate minimal participation in group discussions. This condition starkly contrasts with student behavior outside the classroom or during recess on the school playground. While playing, students display high enthusiasm, positive social interaction, and strong motivation to overcome challenges presented by the games they engage in. This observation suggests that students show greater interest and engagement during playtime than classroom learning.

Ideally, learning in elementary school should accommodate students' needs and developmental characteristics, including their tendency to learn through enjoyable experiences.

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Learning models incorporating play elements are considered effective in bridging the gap between students' worlds of play and learning. Letina (2021) states that Game-Based Learning has proven effective in enhancing student engagement and creating a positive learning environment, particularly in science and social studies. This model allows students to actively participate, learn from mistakes, and stay motivated through structured challenges.

Nevertheless, current classroom practices rely heavily on conventional teaching methods and fail to address students' need for engaging and interactive learning experiences. The discrepancy between the ideal condition and the actual situation in Class IIIA at SDN 2 Cakranegara highlights the need for innovation in instructional strategies. One promising strategy is implementing a Game-Based Learning model using mission card media, designed to integrate gameplay elements into learning while remaining focused on achieving learning competencies. Through this strategy, students are expected to become more active and motivated in the learning process, particularly in Science and Social Studies (Ilmu Pengetahuan Alam dan Sosial or IPAS).

The main objective of this research is to develop and implement a learning strategy that enhances student engagement through an adventure-based Game-Based Learning model utilizing mission card media in IPAS. This study is expected to contribute to developing innovative instructional models that effectively improve student engagement and learning outcomes.

LITERATURE REVIEW

Student engagement in learning is an essential indicator of the success of the learning process in elementary schools. The Game-Based Learning (GBL) model is an innovative approach that can enhance student engagement and learning motivation. According to Azan and Wong (2008), Game-Based Learning is an engaging game-based instructional model involving students in achieving specific learning objectives, such as developing their knowledge and skills. This approach allows students to learn through challenges and achievements embedded in games relevant to the instructional material being delivered (Rifai, 2019).

A study conducted by Hasanah (2023) demonstrated that implementing the Game-Based Learning model can increase students' motivation in social studies. The study concluded that the use of Game-Based Learning among Grade VIII students at MTs Lombok Kulon Bondowoso showed increased student motivation from Cycle I to Cycle II, with the average score rising from 70% to 85%. This indicates that Game-Based Learning is highly effective in improving students' motivation compared to conventional learning models. By utilizing Game-

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Based Learning, teachers can boost student motivation through games tailored to the lesson material.

Pranoto (2020), in his study, also explored the use of Game-Based Learning through the Quizizz platform to increase student engagement in sociology lessons. The results indicated that Game-Based Learning significantly enhanced student engagement. Students became more enthusiastic and actively involved in learning when this learning media was used. In addition, Wulandari et al. (2025) analyzed the impact of the GBL model on student learning outcomes in IPAS (Natural and Social Sciences) for Grade IV students at SD Negeri Campur Asri. The results revealed that GBL positively influenced learning outcomes, with the average score increasing from 44.13 in the pretest to 76.30 in the posttest. This demonstrates that GBL can improve students' understanding of the subject matter.

Nugraheni (2022) also examined the implementation of Game-Based Learning using a maze game to improve the learning outcomes of Grade II students at SDN Krenceng I. The study showed an increase in the class average score from 51.6 in the pre-cycle to 78.3 in Cycle II, with a classical completeness rate of 82.6%. This indicates that game-based media in GBL can significantly enhance student learning outcomes. Students became more active and enthusiastic in learning, resulting in improved academic performance. This indicates that incorporating game media alongside learning models can effectively support increased student engagement.

Based on the reviewed studies, it can be concluded that Game-Based Learning is highly effective in improving student engagement and learning outcomes. However, most of these studies have not integrated adventure-style games or the specific use of mission card media in applying the Game-Based Learning model. Moreover, the application of GBL in IPAS (Natural and Social Sciences) remains limited. Therefore, further research is needed to explore the potential of Game-Based Learning in this context. This could serve as a reference for teachers seeking solutions to improve student engagement in learning.

The gap identified in previous research lies in the suboptimal implementation of adventure-style games, the use of mission card media within the Game-Based Learning model, and the limited application of GBL in IPAS subjects at the elementary level. However, both components have the potential to increase student engagement and participation significantly. The novelty of this research lies in developing an adventure-based GBL model complemented with mission card media, specifically designed to enhance student engagement in IPAS learning. This approach offers an innovative instructional strategy for teachers and is expected to create

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a more interactive, challenging, and enjoyable learning experience, thereby positively influencing students' active participation throughout the learning process.

METODOLOGY

This study employs a quantitative approach with a Classroom Action Research (CAR) design. This approach was chosen because the aim is to improve and enhance student engagement using the Game-Based Learning (GBL) model with mission card media. According to Kemmis and McTaggart (1988), Classroom Action Research is a form of reflective inquiry conducted by teachers to improve teaching practices in the classroom systematically through action and reflection. The quantitative approach was selected to measure the impact of the intervention using statistical analysis.

This study's subjects were all 33 students of Class IIIA at SDN 2 Cakranegara. The subjects were selected generally, considering class characteristics that aligned with the research objectives. The research instrument used was a student learning engagement observation sheet. This observation sheet was developed based on indicators of learning engagement, such as learning readiness, active participation in discussions, task completion, and involvement in learning activities. The development of the instrument followed the content validity procedures suggested by Sugiyono (2017).

The research procedure consisted of several main stages: (1) Development of research instruments, including validation by experts to ensure content feasibility; (2) Implementation of learning interventions using the Game-Based Learning model with mission card media; (3) Data collection through direct observation of student engagement during the learning process; (4) Presentation of observation data in the form of frequency distribution tables. Each cycle in this study included the planning, implementation, observation, and reflection stages, which were in line with the CAR model by Kemmis and McTaggart.

Data obtained from the observation sheets were analyzed using descriptive quantitative techniques to illustrate the level of student engagement before and after the classroom intervention. Data analysis included calculating the mean, percentage, and improvement scores between cycles. Additionally, a simple correlation analysis was conducted to determine the relationship between using the Game-Based Learning model with mission cards and student engagement. If the assumptions were met, simple linear regression analysis was used to support further the suspected influence between the intervention variable and student engagement outcomes (Creswell, 2014). The analysis results were then interpreted to draw conclusions and assess the effectiveness of the implemented intervention.

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Summary Table of Average Engagement per Cycle and Meeting:

Cycle		Average Activeness (%)
Cycle I	Meeting 1	59.0
	Meeting 2	64.5
	Meeting 3	69.7
Cycle II	Meeting 4	74.6
	Meeting 5	76.5
	Meeting 6	79.4

RESULT AND DISCUSSION

Based on observations of 33 students in Class IIIA at SDN 2 Cakranegara, the average student engagement was measured over six meetings, divided into two cycles. In Cycle I, the average student engagement increased gradually. In the first meeting, the engagement rate was recorded at 59.53%, then increased to 64.53% in the second meeting, and reached 69.53% in the third meeting.

In Cycle II, student engagement showed a more substantial improvement. The average engagement in the fourth meeting was 74.53%, increased to 76.53% in the fifth meeting, and peaked at 79.53% in the sixth meeting. This pattern indicates a positive impact from implementing the Game-Based Learning model using mission card media in enhancing students' learning engagement.

The increase in average student engagement from one cycle to the next shows that the use of the Game-Based Learning model with mission card media can create a more engaging learning environment and promote student involvement in IPAS (Natural and Social Sciences) learning activities. In Cycle I, the average engagement was still in the moderate category, indicating that students were adjusting to the newly introduced learning model.

Entering Cycle II, the increase in engagement became more significant, which can be interpreted as a result of students' improved understanding of the game-based learning mechanism and the growth of intrinsic motivation fostered by participating in the assigned missions. The fact that the average engagement reached nearly 80% by the end of Cycle II indicates that most students actively and optimally participated in the learning process.

These results align with previous research findings stating that game-based approaches can enhance student participation and learning motivation (Rahman et al., 2023). Thus, implementing the Game-Based Learning model with mission card media effectively improves student engagement in Natural and Social Sciences learning.

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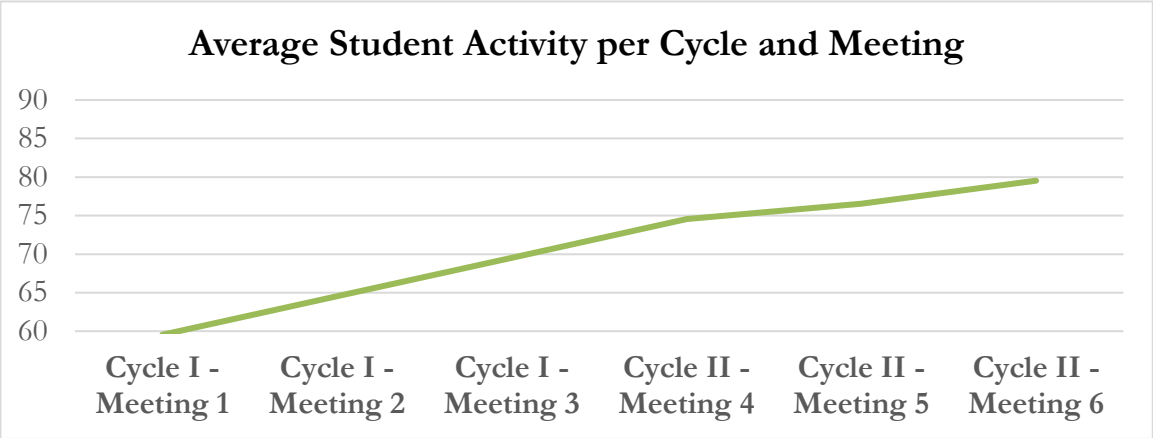
Based on the graph showing the progression of student engagement, there was a consistent increase from Cycle I to Cycle II. At the beginning of Cycle I, student engagement was still in the moderate category, with an average of 59.53%. This value increased by 5% in the second meeting to 64.53%, and again by 5% in the third meeting to 69.53%. This growth indicates that the initial implementation of the Game-Based Learning model with mission card media began to influence student involvement in the learning process positively.



In Cycle II, student engagement showed a more notable increase. In the fourth meeting, the average engagement rose to 74.53%, followed by 76.53% in the fifth meeting, and reached 79.53% in the sixth meeting. This demonstrates that student engagement continued to improve with the game-based learning method, particularly with the support of mission card media that provided meaningful challenges during the learning process.

Overall, this upward trend highlights the effectiveness of the learning strategy in increasing student engagement. The more frequently students are involved in meaningful game-based activities, the greater their intrinsic motivation becomes. These findings are consistent with research by Rahman et al. (2023), which states that game-based media in learning significantly enhances students' cognitive, affective, and psychomotor engagement.

CONCLUSION

Based on the research results, it can be concluded that applying a Game-Based Learning model supported by mission card media effectively enhances student learning activity in Natural and Social Sciences. The data indicate an increase in average activeness from 59.53% in Cycle I to 79.53% in Cycle II. This improvement reflects the effectiveness of game-based models, especially those that integrate mission-based challenges, in encouraging active participation, enthusiasm, and interactive learning. Therefore, the GBL model with mission card media can

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be a valuable and innovative alternative for enhancing student engagement in elementary IPAS learning.

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