

THE EFFECT OF GAME-BASED LEARNING METHODS IN INCREASING STUDENTS' INTEREST IN LEARNING MATHEMATICS AT SD NEGERI 067243 MEDAN SELAYANG

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Abstract

This study investigates the impact of the Game Based Learning (GBL) method on enhancing students' learning interest in mathematics at SD Negeri 067243 Medan Selayang. Learning interest is a crucial factor influencing students' engagement and academic outcomes, particularly in mathematics, a subject often perceived as abstract and challenging. The research is grounded in the context of the Merdeka Curriculum, which emphasizes flexible and student-centered learning. Using a qualitative descriptive method, data were collected through classroom observations and structured interviews with two class teachers. Findings reveal that the GBL method significantly increases students' enthusiasm and engagement during mathematics lessons, as it creates an enjoyable and interactive learning environment. However, the study also identifies challenges, such as the tendency of students to become overly focused on the game itself, sometimes at the expense of achieving learning objectives. Despite this, both teachers agree that the benefits of GBL—such as improved student motivation, collaboration, and classroom dynamics—outweigh its limitations. The study recommends that educators strategically integrate GBL at appropriate stages in instruction to balance enjoyment with educational rigor, thus maximizing its potential to cultivate lasting interest in mathematics learning.

Keywords

game based learning, learning interest, mathematics education

Introduction

The urgency to reform teaching strategies in primary mathematics education is increasingly evident as traditional instructional models fail to fully engage students in meaningful learning. Mathematics, often perceived as abstract and difficult, has become one of the subjects most prone to student disinterest, especially among elementary-level learners.

This disinterest is not merely a matter of preference but a pedagogical concern that directly impacts student achievement and long-term academic attitudes. Learning interest itself is a psychological construct closely associated with intrinsic motivation, attention, and persistence in learning activities. When students exhibit high interest, they are more likely to participate actively, retain knowledge effectively, and develop a positive orientation toward learning. Yet, despite its importance, cultivating this interest remains a persistent challenge in many Indonesian classrooms.

The advent of the Merdeka Curriculum in Indonesia has introduced a pedagogical shift toward more student-centered and contextually responsive teaching. Within this framework, Game Based Learning (GBL) emerges as a promising strategy that blends entertainment and education through structured game mechanics to increase engagement and motivation. GBL aligns well with the learning needs of young children who naturally gravitate toward play as a mode of understanding the world. When designed effectively, GBL has the capacity to enhance not only students' motivation but also their collaborative and problem-solving skills. Prior research, such as that conducted by Isti Septianing et al. (2024), confirmed that GBL boosts motivation and helps students achieve learning targets more consistently. Similarly, findings from Studi Manajemen Informatika et al. (2021) reinforce the role of playful learning in improving both academic engagement and student-teacher interaction quality.

Despite its acknowledged benefits, the implementation of GBL in real classroom settings is not without drawbacks. Teachers have observed that while GBL increases enthusiasm, it may also divert students' focus away from content mastery to game elements, potentially undermining the attainment of learning objectives. These contradictions highlight the need for careful planning and pedagogical balancing. Moreover, much of the existing literature addresses the effects of GBL in general contexts, leaving a gap in localized, subject-specific investigations—especially within Indonesian public elementary schools under the evolving Merdeka Curriculum. This research addresses that gap by focusing on SD Negeri 067243 Medan Selayang, aiming to examine how GBL affects students' learning interest in mathematics specifically. The novelty of this study lies in its in-situ exploration of teacher perspectives and classroom practices, offering practical insights into how GBL can be optimized to foster both enjoyment and academic focus in primary mathematics instruction.

Methods

This study employs a qualitative descriptive research design aimed at exploring the influence of the Game Based Learning (GBL) method on students' learning interest in mathematics. The qualitative approach was selected to capture in-depth insights into real classroom experiences, focusing on perceptions, behaviors, and contextual factors that may not be quantifiable but are essential for understanding pedagogical impact. Descriptive analysis was used to interpret non-numerical data collected through field observations and interviews, allowing the researchers to construct a coherent narrative around the implementation of GBL and its effect on student engagement.

The research was conducted at SD Negeri 067243 Medan Selayang, located on Jalan Bunga Sedap Malam XI, Kecamatan Medan Selayang, Kota Medan. The study was carried out over a two-month period, from March to April 2024. This site was selected based on initial observations that indicated a low level of interest among students in learning mathematics, coupled with the school's openness to pedagogical innovation.

Data collection involved two primary techniques: classroom observation and structured interviews. Observations were focused on the learning environment, student engagement, and the delivery of mathematics instruction using GBL. These observations provided contextual evidence of how the GBL method was integrated and how students responded behaviorally. In parallel, structured interviews were conducted with two classroom teachers who had experience applying GBL in mathematics instruction. The interview questions were designed to elicit detailed responses regarding the frequency of GBL use, perceived changes in student interest, observed classroom dynamics, and both the advantages and limitations of the method.

The unit of analysis in this study was the teaching practice and student response in mathematics classes where GBL was applied. The informants—teachers, school administrators, and selected students—served as key sources for triangulating the observational data. Data were analyzed thematically, allowing the researchers to identify patterns, recurring themes, and contradictions in participant narratives. Through this process, the study aims to produce a reliable and holistic description of how GBL affects student motivation in the primary mathematics learning context, and to draw implications for its effective application in line with the principles of the Merdeka Curriculum.

Discussion

The implementation of Game Based Learning (GBL) within the context of mathematics instruction at SD Negeri 067243 Medan Selayang reveals a complex interplay between pedagogical innovation and the dynamics of learner engagement. Data collected through classroom observations and structured interviews indicate that GBL has a significant positive effect on students' learning interest; however, this effect is nuanced by contextual challenges and limitations that merit closer examination.

At its core, GBL functions by embedding educational content within the structure of games, thereby transforming passive instruction into interactive experiences. This shift resonates strongly with the nature of elementary learners, who often exhibit greater cognitive and emotional engagement when activities involve elements of play, challenge, and collaboration. Teachers interviewed in this study confirmed that students displayed higher enthusiasm, increased participation, and greater attentiveness during GBL sessions compared to conventional instruction. Notably, students were more likely to ask questions, express curiosity, and collaborate with peers during activities that incorporated game elements. This aligns with findings from Isti Septianing et al. (2024), who emphasized that GBL triggers motivational factors intrinsic to student agency and active learning.

However, the effectiveness of GBL is not uniform across all learning contexts or instructional moments. The interviewed teachers noted that while students' interest increased substantially during GBL activities, the cognitive focus occasionally shifted away from academic goals toward the mechanics of the game itself. This observation suggests a delicate pedagogical balance that must be maintained: the game must serve as a scaffold for learning—not a distraction from it. The implication here is that games must be designed and facilitated in such a way that they remain tightly aligned with instructional objectives, particularly in a subject like mathematics that demands conceptual clarity and procedural accuracy.

Another key insight from the study pertains to the strategic timing and integration of GBL within the lesson structure. Both teachers reported that GBL was most effective when used either mid-way through a lesson to rejuvenate waning attention or at the end of a topic as reinforcement. This temporal positioning allowed students to consolidate prior learning through play, while also providing a motivational 'break' from more cognitively demanding instruction. Yet, overreliance on GBL—without complementary direct instruction—risked weakening students' depth of conceptual understanding. This supports the argument advanced by Munjiat and Syaefunisa (2020) that while GBL enhances surface engagement, deeper

learning outcomes depend on how well the method is integrated with broader pedagogical strategies.

The findings also highlight a broader systemic issue: the preparedness of teachers to design and implement GBL effectively. While teachers recognized the value of the method, they expressed concern over the time required to prepare games that are both engaging and educationally rigorous. Additionally, the physical classroom environment and available resources often constrained the types of games that could be implemented. These logistical limitations point to the need for institutional support—such as training, resource development, and peer collaboration frameworks—that can enable educators to apply GBL consistently and meaningfully.

From a psychological standpoint, the increase in student interest can also be linked to the sense of autonomy and agency that games afford. When students are given the opportunity to make choices, solve problems, and see the immediate consequences of their actions (as they do in game-based tasks), they are more likely to experience intrinsic motivation. However, the study also uncovered a potential downside: students could become overly dependent on entertainment-based learning, potentially struggling to engage in more traditional instructional formats. This raises a critical pedagogical question: how can educators use GBL not as a crutch, but as a bridge toward fostering sustained, self-regulated learning habits?

Lastly, this study situates GBL within the broader vision of the Merdeka Curriculum, which champions learner autonomy, contextualization, and differentiated instruction. In this regard, GBL aligns well with national educational goals by making learning more responsive to students' developmental needs and interests. However, without robust frameworks for teacher training, curriculum alignment, and evaluation of learning outcomes, the adoption of GBL risks becoming sporadic and superficial.

In conclusion, while GBL emerges as a powerful tool for increasing learning interest in mathematics, its success hinges on thoughtful instructional design, teacher readiness, and curriculum coherence. Future research should explore longitudinal impacts of GBL on learning achievement, investigate its application across different subjects, and assess the scalability of its implementation in diverse school contexts.

.Conclusion

In conclusion, the application of Game Based Learning (GBL) in mathematics instruction at SD Negeri 067243 Medan Selayang has proven to significantly enhance students' interest and engagement in learning, transforming traditionally rigid classroom dynamics into more interactive and enjoyable experiences. Teachers observed heightened student enthusiasm, increased participation, and a more positive attitude toward mathematics when GBL was integrated effectively. However, challenges such as students' tendency to focus more on the gameplay than the learning objectives, as well as the additional preparation time required by teachers, underscore the importance of careful planning and balanced pedagogical strategies. While GBL aligns with the learner-centered principles of the Merdeka Curriculum, its full potential can only be realized through structured support, ongoing teacher development, and curriculum integration that ensures educational games remain purpose-driven. Ultimately, GBL should be viewed not merely as a novelty or supplementary tool, but as a transformative instructional method that, when implemented judiciously, can revitalize mathematics education and foster deeper, more sustained student motivation.

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