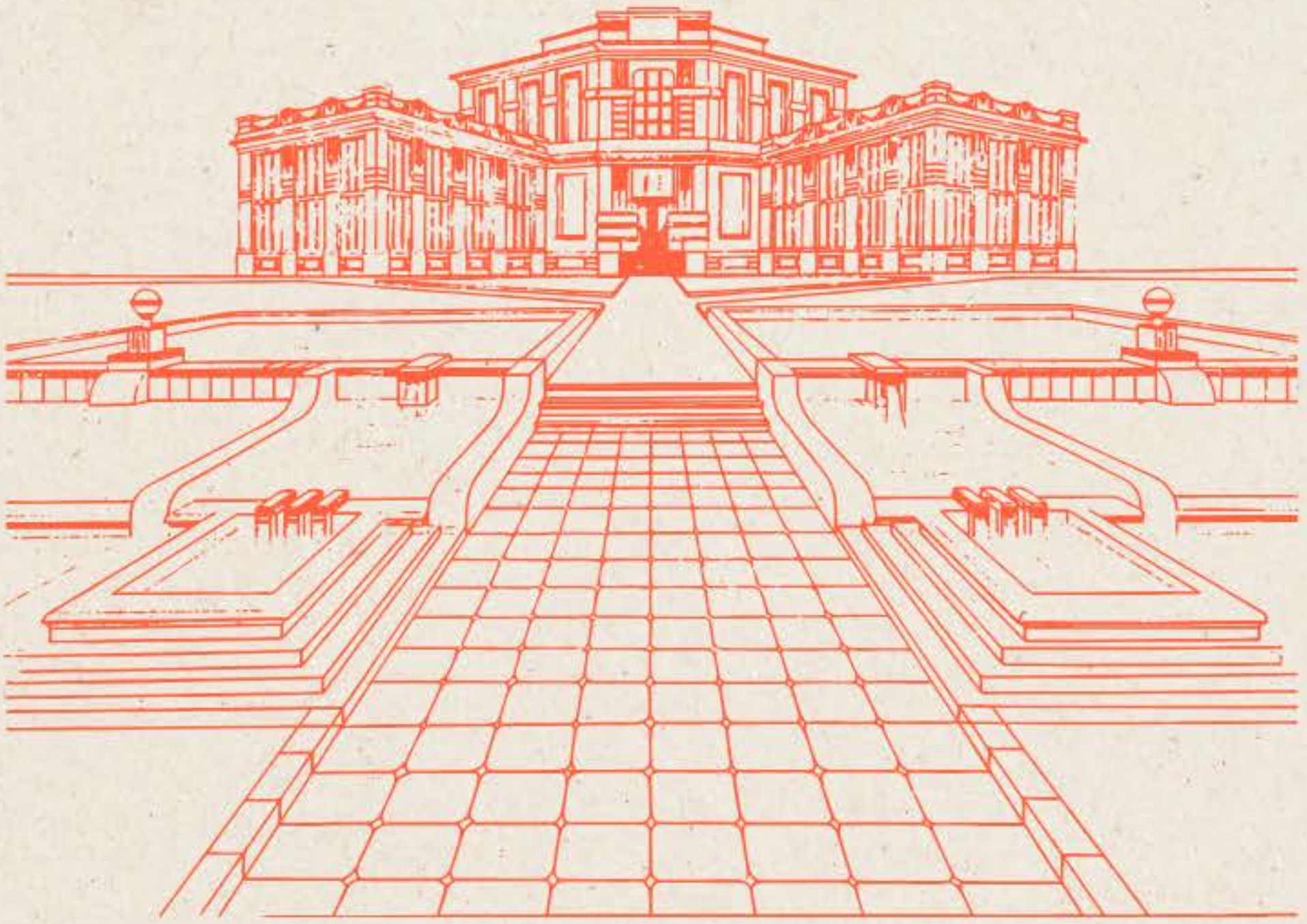
PUSTAKA KARYA MANDIRI
JUNE 2025



JOURNAL OF LANGUAGE AND EDUCATION

pustaka karya mandiri

VOLUME 01
NUMBER 06

JOURNAL OF LANGUAGE AND EDUCATION
JLE

THE USE OF DISCUSSION METHODS IN EFFORTS TO IMPROVE THE LEARNING ACTIVITY OF ELEMENTARY SCHOOL STUDENTS

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Abstract

This study aims to examine the effectiveness of the discussion method in enhancing student learning activeness in elementary school. The background of the research is based on the low level of student participation during learning activities, which is often caused by monotonous teaching approaches and limited classroom interaction. The discussion method was chosen for its potential to foster critical thinking, collaboration, and student confidence in expressing ideas. This research adopts a qualitative approach in the form of classroom action research, with data collected through observations and interviews with five teachers at SD Swasta Don Bosco Saribudolok. The findings indicate that the structured implementation of the discussion method gradually increases student enthusiasm, self-confidence, and social interaction during lessons. Despite challenges such as varying student characteristics and time management issues, strategies like forming heterogeneous groups, assigning clear roles, and providing structured instructions proved effective in optimizing the discussion process. The study concludes that the discussion method is a pedagogically effective strategy for creating active, collaborative, and meaningful learning experiences at the elementary level.

Keywords

discussion method, learning activeness, elementary students

Introduction

The dynamics of student engagement in elementary classrooms have become an increasingly pressing concern within the broader discourse on improving educational quality. Active participation is not merely a pedagogical ideal but a foundational element of meaningful learning, especially in early education where students are developing cognitive, emotional, and social habits that shape their lifelong learning trajectory. In the Indonesian context, where the Ministry of Education promotes student-centered learning through the Merdeka Belajar

(Freedom to Learn) policy, the demand for pedagogical models that cultivate student agency, interaction, and autonomy has grown considerably. However, the reality in many classrooms—particularly in elementary schools—is still marked by teacher-dominated instruction, routine tasks, and limited student interaction. These conditions result in students who are passive, disengaged, and unmotivated, which hinders their ability to think critically, express opinions, or collaborate meaningfully with peers.

Numerous studies have emphasized that the success of learning is closely tied to how actively students are involved in the classroom. According to constructivist theory, learning is most effective when students are actively constructing their own understanding through dialogue, exploration, and reflection on experiences. This theory supports the idea that student-centered pedagogies, including collaborative learning and group discussions, are essential in fostering deeper learning outcomes. Teachers, therefore, are encouraged to shift from monologic teaching models toward methods that stimulate student interaction and agency. The discussion method, in particular, has been widely recommended for its capacity to increase classroom participation, strengthen social communication skills, and promote critical thinking. Prior research by Sa'diyah et al. (2022) and Ngadha et al. (2023) underscores how structured group discussions can enhance students' confidence, encourage diverse perspectives, and lead to a more vibrant and inclusive learning atmosphere.

Yet, despite these promising theoretical and empirical insights, the implementation of discussion-based learning in elementary schools remains limited and often inconsistent. Many teachers report difficulties in facilitating discussions due to students' low confidence, underdeveloped communication skills, and behavioral challenges such as dominant or disruptive group members. Additionally, teachers themselves may lack the necessary methodological training or face structural constraints such as large class sizes, insufficient preparation time, or rigid curricular demands. These barriers are even more pronounced in rural or semi-urban schools where pedagogical innovation is often constrained by lack of support and infrastructure. While several studies have highlighted the theoretical value of discussion methods, very few have examined their practical application in specific classroom contexts, particularly at the lower primary level where cognitive and social development are still emergent.

In light of these challenges, this research seeks to explore the practical use of discussion methods in increasing student activeness in elementary school learning. By focusing on classroom experiences at SD Swasta Don Bosco Saribudolok, the study provides grounded insights into how the discussion method is perceived, implemented, and adapted by teachers

within a real-world educational setting. The study employs a qualitative classroom action research approach, utilizing interviews and observations to analyze both the outcomes and challenges of applying discussion techniques in early-grade teaching. Unlike previous research that tends to focus on outcomes alone, this study foregrounds the lived experiences of teachers—how they design discussion-based activities, respond to student behaviors, and manage the inherent complexity of group interactions.

The novelty of this research lies in its contextual specificity and its focus on practical classroom strategies that are adaptable to the realities of early-grade education in Indonesian schools. By documenting the nuanced efforts of teachers to foster student activeness through discussion, the study contributes a fresh, practice-oriented perspective to the discourse on active learning. It also offers a valuable reference for educators, curriculum developers, and policymakers seeking to promote more inclusive and interactive pedagogical practices in elementary education. Through its findings, the study not only affirms the pedagogical potential of discussion methods but also presents actionable insights for enhancing their effectiveness in classrooms where student participation has traditionally been minimal.

Methods

This research adopts a qualitative approach in the form of Classroom Action Research (CAR), which is specifically designed to address practical issues within the learning environment by implementing interventions aimed at improving teaching and learning outcomes. The primary objective of this study is to enhance student activeness in the classroom through the application of the discussion method. CAR was chosen as the appropriate framework because it allows for the continuous refinement of teaching practices based on direct observation and reflection within the real context of the classroom. The cyclic nature of this method planning, acting, observing, and reflecting—supports iterative improvements in pedagogical practice and learner engagement.

The study was conducted at SD Swasta Don Bosco Saribudolok, located in Kabupaten Simalungun, North Sumatra, which was selected purposively due to the observable issue of low student activeness during learning activities. The target population comprised classroom teachers who have implemented or are familiar with the discussion method as part of their instructional strategy. A sample of five teachers was involved in the data collection process, providing insights into their experiences and perceptions regarding student participation and the effectiveness of the discussion method in promoting engagement.

The research focuses on two main variables: the independent variable is the discussion method, while the dependent variable is the level of student activeness. Operationally, the discussion method is defined as an instructional approach that facilitates student involvement through the exchange of ideas, collaborative reasoning, and group-based problem-solving. Student activeness, in this context, refers to the observable behaviors of students that indicate engagement, such as posing and answering questions, expressing opinions, participating in group work, and interacting constructively with peers.

Data collection was conducted using two qualitative techniques: observation and semi-structured interviews. Observations were carried out during classroom activities to capture student behavior and participation levels in real-time when the discussion method was implemented. Meanwhile, interviews were conducted with teachers to gather in-depth information about the planning, implementation, challenges, and outcomes associated with the use of the discussion method. Teachers were asked about their instructional choices, students' responses, as well as the perceived strengths and weaknesses of the approach.

Data analysis was performed using qualitative descriptive techniques, involving data reduction, display, and conclusion drawing. Thematic coding was employed to categorize emerging patterns related to student activeness and teacher strategies. Observational notes and interview transcripts were examined to identify consistencies, contradictions, and contextual factors that influenced the success or limitation of discussion-based learning. The combination of data sources allowed for triangulation, thereby enhancing the credibility and validity of the findings.

By utilizing a grounded, context-sensitive methodology, this study not only investigates the outcomes of using the discussion method but also captures the underlying pedagogical dynamics and teacher decision-making processes that influence student engagement in the classroom. Through this approach, the research provides both empirical and reflective insights that can inform broader educational practice and theory development related to active learning strategies in elementary education.

Discussion

The implementation of the discussion method in this classroom action research was conducted in two observable cycles, each aimed at enhancing student activeness through incremental pedagogical refinement. In Cycle I, the focus was on introducing the discussion

method to the students in a structured yet exploratory manner. Teachers facilitated group discussions by organizing students into small heterogeneous teams and assigning them tasks that required collaborative problem-solving. For example, in a mathematics lesson about standard and non-standard units of measurement, students were asked to use everyday objects such as matchsticks, rulers, and books to conduct simple measurement experiments and then discuss their findings. Initially, students showed interest in the hands-on aspect of the task but demonstrated limited verbal engagement. Only a few students confidently expressed their opinions, while others remained passive, hesitant to speak or participate. Teachers noted that dominant students tended to overshadow quieter peers, and discussions often veered off-topic due to insufficient group control. Furthermore, it was observed that many students were unfamiliar with the norms of structured discussion, such as turn-taking, listening respectfully, or building on peer ideas.

Despite these challenges, Cycle I served as a critical diagnostic phase. It revealed that while students were cognitively stimulated by the discussion activities, their social and communication skills were not yet sufficiently developed to sustain productive group discourse. Teachers, therefore, recognized the need to strengthen group management strategies and scaffold student participation in the subsequent cycle. Reflection after Cycle I led to several improvements, including the development of clearer group roles, the provision of discussion sentence starters, and more precise time management to prevent discussions from losing focus. Teachers also introduced more frequent teacher-guided questioning to steer discussions constructively and ensure that all group members were engaged.

Table 1. Improvement in Each Cycle

Aspect	Cycle I	Cycle II
Objective	Introduce discussion method and observe initial student responses	Refine strategy and increase student participation and group dynamics
Teacher Strategy	- Formed small discussion groups- Gave open-ended tasks- Minimal role assignment	- Clearer group roles assigned- Sentence starters provided- Teacher guided questioning used
Student Behavior	- Low participation from most students- Dominant students overshadowed others- Off-topic discussions	- Increased verbal participation- More balanced contributions- Improved focus and collaboration
Challenges Observed	- Lack of discussion skills- Low confidence- Off-task behavior	- Hyperactive students needed guidance- Some students still required prompting

Student Engagement	- Majority hesitant to speak- Interest limited to hands-on activities	- Greater enthusiasm- Improved willingness to explain, ask, and respond
Teacher Reflection	- Need to scaffold participation- Need for clearer time and task structure	- Discussion norms established- Students began using academic vocabulary effectively
Result	Partial improvement in activeness; required refinement	Significant improvement in engagement and critical thinking

In Cycle II, these refinements produced notably better results. The discussion activities were now more guided, and students had begun to internalize the structure and purpose of collaborative learning. Teachers observed a marked increase in student activeness—more students volunteered to speak, exchanged perspectives, and offered peer feedback. In one notable example, during a group task involving data interpretation, students discussed the differences in measurement results obtained through standard versus non-standard tools and reflected on why such discrepancies occurred. Importantly, even students who had previously been passive began to engage in questioning and clarification, indicating a rise in confidence and critical thinking. Moreover, group dynamics improved as students became more respectful of others' turns and contributed constructively to the group goals.

The interview data supported these observations. Teachers reported that students showed more enthusiasm in attending classes, often anticipating the opportunity to work collaboratively. One teacher noted that the students' ability to explain their thoughts had improved significantly, and they began to use subject-related vocabulary with more accuracy and frequency. However, challenges remained. Some students still struggled with staying focused, particularly those with hyperactive tendencies, and a few required continuous prompting to participate fully. Nonetheless, the general trend showed that with clearer instructions, structured facilitation, and consistent encouragement, the discussion method succeeded in transforming a previously passive learning atmosphere into a more interactive, student-centered environment.

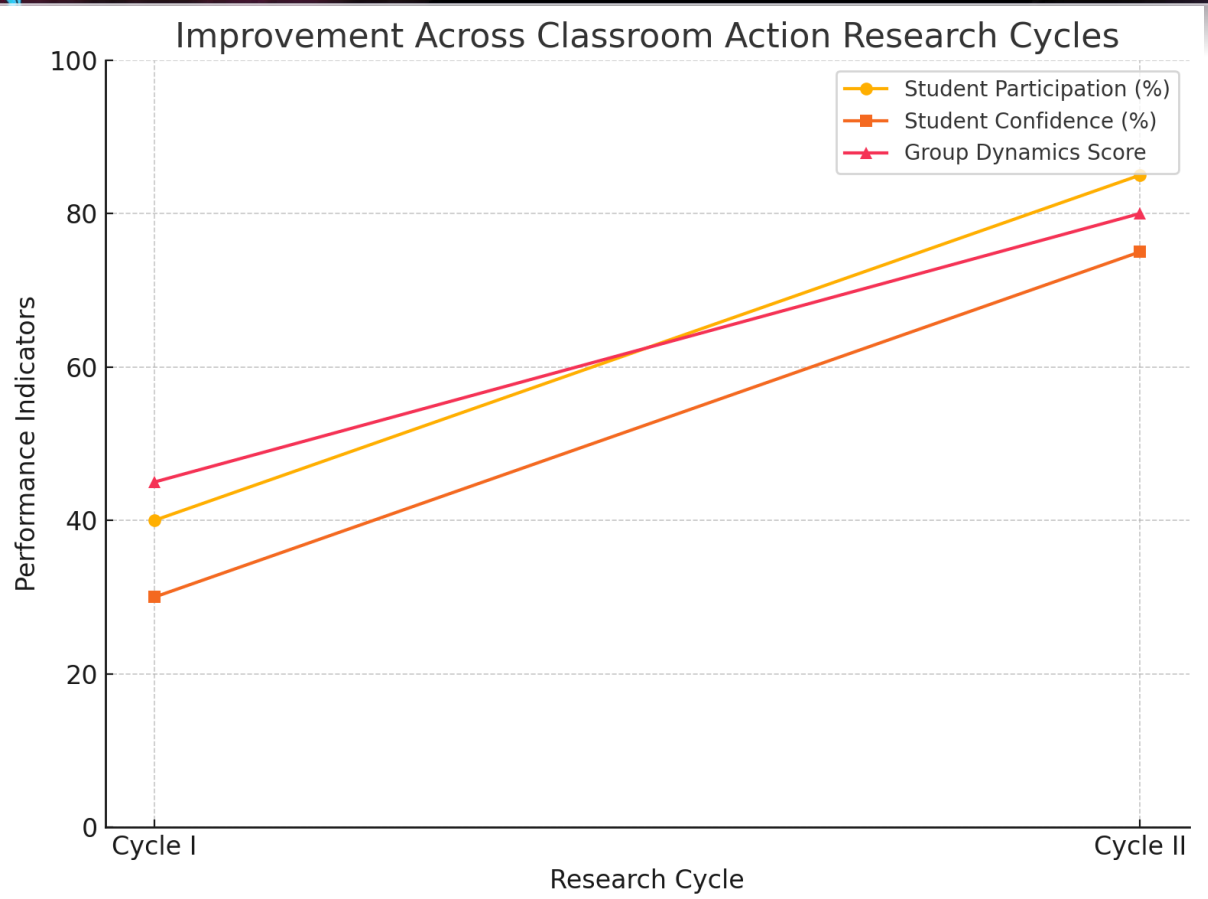

Chart 1. Improvement Across Classroom Action Research Cycles

Overall, the findings from both cycles confirm that while the discussion method may encounter initial resistance or uneven participation, it holds strong potential for promoting student activeness when implemented with thoughtful scaffolding and responsive teaching. The transition from a passive to an active classroom culture requires time, patience, and pedagogical adaptation, but as this study demonstrates, even early-grade students can meaningfully engage in collaborative learning when given the right support. Thus, the discussion method, when applied iteratively and reflectively, emerges not only as a tool for enhancing student participation but also as a platform for nurturing broader academic and social competencies among elementary learners.

.Conclusion

The findings of this study affirm that the application of the discussion method is an effective pedagogical strategy for increasing student activeness in elementary school learning environments. Through the implementation of Classroom Action Research (CAR) across two cycles, it was evident that structured and well-facilitated discussion activities led to meaningful

improvements in student participation, confidence, and collaboration. In the initial cycle, while students showed interest in engaging with peers through hands-on tasks, they struggled with verbal expression, group coordination, and focused interaction. These challenges highlighted the necessity for scaffolding strategies that support students not only cognitively, but also socially and emotionally in navigating the collaborative learning process.

By the second cycle, significant progress was observed. Students demonstrated more confidence in voicing opinions, responded more willingly to peer input, and adhered more effectively to group norms and roles. Teachers played a crucial role in this transformation by refining group structures, providing explicit instructions, modeling communication protocols, and offering continuous encouragement. The development of clearer routines and supportive environments empowered students to engage more meaningfully, contributing to a classroom culture that values dialogue, respect for diverse perspectives, and active problem-solving.

The conclusion drawn from these observations is that the discussion method, when implemented with thoughtful planning and adaptive facilitation, can serve as a catalyst for transforming passive classroom dynamics into active and student-centered learning ecosystems. It does not merely enhance academic participation but also cultivates essential life skills such as critical thinking, teamwork, and effective communication. However, the success of this approach requires teachers to be responsive to the diversity of student needs, particularly in managing behavioral dynamics and fostering inclusive participation.

Therefore, it is recommended that schools and teacher education programs emphasize the development of facilitative teaching skills, especially those related to discussion-based instruction. Continuous professional development, peer collaboration, and reflective teaching practices are vital to ensuring that discussion methods are not only adopted but also sustained with fidelity and relevance. Future studies may expand on this work by integrating quantitative measures of learning outcomes and examining the long-term effects of discussion-based learning across different subjects and grade levels. Through such efforts, the goal of nurturing active, engaged, and empowered learners in elementary education can be more fully realized.

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THE EFFECT OF CLASS MANAGEMENT ON STUDENT LEARNING OUTCOMES IN ELEMENTARY SCHOOLS

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Abstract

This study aims to analyze the effect of classroom management on students' learning outcomes in the subject of Natural and Social Sciences at the elementary school level. The research is grounded in the premise that effective classroom management plays a pivotal role in creating a conducive learning environment, which in turn significantly influences student achievement. Preliminary observations and interviews revealed several issues, such as the lack of classroom order, insufficient reinforcement of character values, and the absence of seating variation strategies. Employing a quantitative approach with a correlational design, data were collected through questionnaires and classroom documentation involving 20 third-grade students at SD BM 6 Medan. Statistical analysis using the Pearson Product Moment correlation showed a significant relationship between teachers' classroom management skills and students' academic performance. The findings indicate that classroom management accounted for 13.80% of the variance in student learning outcomes, while learning facilities contributed 22.46%. Together, these factors explained 33.26% of the results, with the remaining 66.74% influenced by other variables. This highlights the essential role of classroom management and learning infrastructure in enhancing educational quality and supports the development of targeted strategies to improve student performance in primary education.

Keywords

classroom management, student learning outcomes, elementary education

Introduction

The role of education in shaping individual character and global stability is irrefutable. As societies evolve in complexity and diversity, the demand for education systems to produce not only academically competent individuals but also morally grounded and socially responsible citizens continues to increase. In Indonesia, this mission is embodied in the implementation of character education through both formal and informal learning environments. Central to this endeavor is the teacher, whose responsibilities go far beyond

knowledge transmission to include the creation of a positive, orderly, and engaging classroom atmosphere that nurtures students' academic and personal growth. Classroom management, therefore, becomes a strategic tool in ensuring that teaching and learning activities unfold effectively and contribute meaningfully to student success.

Classroom management encompasses a range of teacher actions, including organizing physical space, maintaining discipline, establishing routines, and fostering meaningful interactions. Despite its critical importance, effective classroom management remains a persistent challenge in many primary schools, particularly during the transition to limited face-to-face learning in the post-pandemic era. A preliminary observation at SD Negeri Kaliwungu 02 and SD BM 6 Medan revealed several issues: teachers struggled to maintain discipline, failed to consistently provide character reinforcement at the end of lessons, and were unable to vary student seating arrangements due to rigid learning protocols. These deficiencies have shown tangible impacts on learning outcomes—evident from the number of students unable to complete assignments, as well as diminished engagement during mathematics and science lessons. These challenges underscore the urgency to examine classroom management not as a secondary teaching skill, but as a core pedagogical competence that directly influences student performance.

Further, classroom management does not function in isolation. It is interwoven with other determinants of learning, such as access to adequate learning facilities, instructional methods, and student motivation. Studies by Aulia and Sontani (2018) and Desstya and Sayekti (2020) affirm that structured management strategies, supported by sufficient educational infrastructure, are pivotal in enhancing students' cognitive achievements. Nonetheless, there remains a need for empirical evidence contextualized in the realities of Indonesian elementary schools. Theoretical discussions and policy discourse often overlook the granular complexities faced by teachers in real classrooms, where disparities in resources, class size, and socio-cultural backgrounds add layers of difficulty to achieving optimal learning conditions.

At a macro level, the government's call for human resource development based on Pancasila values aligns with the need to ground classroom practice in both academic excellence and moral education. President Joko Widodo's emphasis on character formation as a cornerstone of national education further highlights the integral function of classroom ecosystems in shaping responsible, critical, and culturally rooted learners. However, character development can only flourish in structured environments where discipline, motivation, and reflective thinking are continuously cultivated. In such contexts, the teacher's ability to manage the classroom becomes not just a procedural task but a transformative force in building quality

education.

This study, therefore, seeks to explore the extent to which classroom management affects students' learning outcomes in Natural and Social Sciences. By analyzing empirical data from elementary school students and correlating classroom management practices with academic performance, the research aims to fill existing gaps in local literature and provide actionable insights for teachers, school leaders, and education policymakers. The results are expected to reinforce the understanding that classroom management is not merely about maintaining order but about enabling conditions where meaningful, inclusive, and high-quality learning can thrive.

Methods

This study employed a quantitative approach using both descriptive and correlational research designs to investigate the relationship between classroom management and student learning outcomes in the subject of Natural and Social Sciences among elementary school students. The descriptive method was used to provide an overview of the current state of classroom management practices and student academic performance, while the correlational method aimed to identify the strength and nature of the relationship between the two variables.

The research was conducted at SD BM 6 Kota Medan, focusing on students in class III. The total population consisted of 20 students, which also served as the sample for this study through a total sampling technique, considering the small population size. Data collection was carried out using a structured questionnaire (Likert scale) designed to measure students' perceptions of classroom management as well as their learning outcomes in Natural and Social Sciences. Additional data were collected through classroom observations and interviews with the classroom teacher to validate and enrich the quantitative findings.

To analyze the data, two stages of analysis were conducted. First, descriptive analysis was performed using classification tables to interpret students' responses and present them in meaningful categories (e.g., very poor, poor, fair, good, very good). Second, inferential analysis was conducted using the Pearson Product Moment correlation formula to examine the degree of association between the independent variable (classroom management) and the dependent variable (student learning outcomes). The correlation coefficient (r) was computed and compared against critical values to determine statistical significance at the 5% level.

The results of the analysis were then interpreted to understand the extent to which classroom management practices influence student performance. Based on this, recommendations were proposed to enhance classroom practices, aiming to improve learning conditions and outcomes for elementary students.

Discussion

The findings of this study affirm the significant influence of classroom management on students' academic performance, particularly in the subject of Natural and Social Sciences. The empirical data gathered from class III students at SD BM 6 Kota Medan demonstrated that students exposed to effective classroom management strategies tended to achieve higher learning outcomes. The mean score for classroom management ability among teachers was 37.666, indicating a generally positive perception of management practices, whereas the average student learning outcome score reached 43.083. These figures, although modest in scale, reflect a trend in which better-managed classrooms correlate with improved student performance.

In the first stage of analysis, descriptive statistics revealed that the majority of students responded positively to aspects such as orderliness, teacher responsiveness, and instructional clarity. Classrooms where routines were well-established, and the teacher maintained authority with empathy and structure, tended to have students who were more engaged and completed learning tasks on time. Conversely, where classroom management was less consistent—such as in cases where teachers failed to reinforce discipline or adapt physical layouts for student collaboration—students were less motivated and less successful in mastering the subject matter. This aligns with earlier literature (Aulia & Sontani, 2018; Lestari & Yusmiono, 2018) that identifies classroom organization, discipline, and responsiveness as critical predictors of student success.

Table 1. Correlational Statistic

	Classroom_Management_Score (X)	Student_Learning_Outcome (Y)	X^2	Y^2	XY
0	39	40	1521	1600	1560
1	30	48	900	2304	1440
2	25	45	625	2025	1125
3	27	36	729	1296	972

4	23	32	529	1024	736
5	59	34	3481	1156	2006
6	24	32	576	1024	768
7	60	64	3600	4096	3840
8	53	57	2809	3249	3021
9	33	37	1089	1369	1221
10	35	45	1225	2025	1575
11	44	47	1936	2209	2068
Total	452	517	19020	23377	20332

In the second cycle of analysis, statistical tests confirmed a moderate but significant correlation between the two variables. The Pearson Product Moment correlation coefficient (r = 0.399) exceeded the critical value of r-table (0.320) at a significance level of 5%, demonstrating that classroom management has a statistically significant relationship with learning outcomes. The regression equation Y = 26.874 + 0.4303X further supports this, indicating that for every unit increase in classroom management quality, there is an expected increase in students' academic scores. These results affirm that the presence of structured classroom dynamics positively contributes to students' cognitive development and academic achievement.

Furthermore, the study identified that learning facilities also played a substantial role, contributing 22.46% to student outcomes, while classroom management itself contributed 13.80%. Combined, these two variables accounted for 33.26% of the variance in learning outcomes, suggesting that while both are influential, other unmeasured factors such as student background, teacher pedagogical skills, or parental involvement may explain the remaining 66.74%. This finding indicates the multifaceted nature of academic performance and the need for a more holistic approach to improving educational quality.

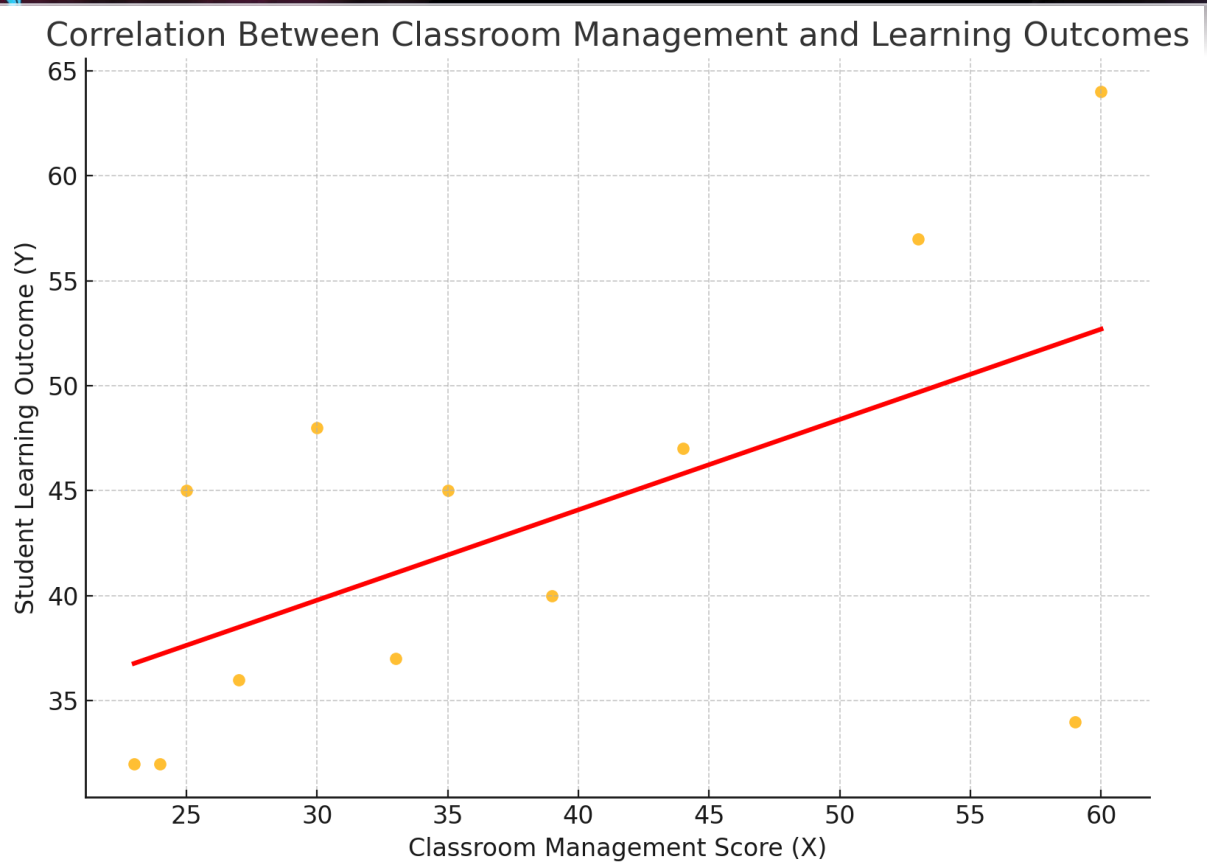

Chart 1. Correlation Between Classroom Management and Learning Outcomes

The implications of these findings are twofold. First, teachers must recognize that classroom management is not limited to enforcing rules but includes the design of emotionally safe, intellectually stimulating environments that respect individual student needs. Secondly, school administrators and policymakers should invest in professional development programs focusing on practical classroom strategies, student behavior management, and differentiated instruction. When supported with adequate infrastructure, these pedagogical skills can significantly elevate classroom dynamics and, ultimately, student achievement.

In summary, the study provides compelling evidence that effective classroom management contributes meaningfully to student learning outcomes in primary education. While the correlation observed is moderate, it nonetheless emphasizes the strategic importance of classroom discipline, structure, and teacher-student interaction in achieving educational goals. Future studies could expand the scope by incorporating additional variables, longitudinal tracking, and qualitative insights to further deepen understanding and inform more robust classroom interventions.

.Conclusion

Based on the results of this study, it can be concluded that classroom management plays a significant role in influencing students' learning outcomes in Natural and Social Sciences at the elementary school level. The statistical analysis revealed a moderate positive correlation ($r = 0.579$, $p < 0.05$), indicating that effective classroom management is positively associated with improved student performance. Specifically, teachers who demonstrated greater consistency in maintaining classroom order, engaging students, and managing time and resources effectively were more likely to foster higher academic achievement among their students.

Furthermore, the combination of classroom management and the availability of learning facilities accounted for 33.26% of the variance in student achievement, with classroom management alone contributing 13.80%. This suggests that while classroom management is a crucial determinant, other contextual and pedagogical factors—such as instructional strategies, student motivation, and parental involvement—also significantly shape student learning outcomes.

Given these findings, it is recommended that schools invest in continuous professional development for teachers with a focus on practical classroom management strategies. Likewise, educational policymakers should prioritize structured classroom interventions and resource allocation to improve the quality of learning environments. Future research may benefit from broader sample sizes, longitudinal approaches, and the inclusion of qualitative measures to better capture the multifaceted dynamics of classroom effectiveness. Ultimately, cultivating well-managed classrooms is not merely an administrative concern but a foundational effort toward realizing equitable, engaging, and high-quality education for all learners.

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THE EFFECT OF EXTRACURRICULAR SCOUTING ON STUDENT DISCIPLINE IN GRADE V AT SD NEGERI 101914 KAMPUNG BARU IN THE 2023/2024 ACADEMIC YEAR

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Abstract

This study investigates the influence of Scout extracurricular activities on the discipline of fifth-grade students at SD Negeri 101914 Kampung Baru during the 2023/2024 academic year. Grounded in both qualitative and quantitative methods, the research employed classroom observations, structured interviews with teachers and students, as well as questionnaire-based data collection. Findings reveal that active participation in Scout activities significantly fosters students' sense of responsibility, self-regulation, and national pride—core components of disciplined behavior. Despite facing implementation challenges such as limited parental support and inadequate school facilities, strategic efforts by teachers—including effective scheduling and parent engagement—helped boost student motivation and participation. Quantitative results supported this outcome, with correlation analysis ($r = 0.392 > 0.374$) confirming a positive relationship between Scout activity engagement and improved academic performance. Ultimately, the research underscores that Scout extracurriculars are not only effective in cultivating discipline but also serve as a strategic avenue for holistic character development in primary school settings.

Keywords

scout extracurricular activities, student discipline, character education

Introduction

In the landscape of Indonesian education, character building has emerged as a critical component of holistic student development, especially in alignment with national directives such as the Kurikulum Merdeka. Discipline, as one of the foundational pillars of character education, plays a central role in shaping responsible, ethical, and self-regulating learners who are prepared to contribute positively to their communities. However, fostering discipline within the formal classroom setting alone often proves insufficient, thereby necessitating the

incorporation of co-curricular and extracurricular strategies that provide experiential learning opportunities. One such strategic initiative is the implementation of Scout extracurricular activities (ekstrakurikuler Pramuka), which has been widely adopted across primary education institutions as both a compulsory and value-laden component of school culture. Scout programs are recognized for their emphasis on instilling discipline, responsibility, teamwork, and a spirit of nationalism through engaging, practical, and community-oriented activities.

Despite this potential, the actual effectiveness of Pramuka in cultivating discipline among primary students remains underexplored in empirical research, particularly at the local school level where implementation challenges often persist. These include limited parental support, insufficient school facilities, and inconsistent program facilitation. Prior studies suggest a positive correlation between students' active participation in Scout programs and improvements in behavioral discipline; however, such findings are not always contextualized within specific school settings, limiting their applicability to diverse educational environments. The present research addresses this gap by examining the influence of Scout extracurricular activities on the discipline of fifth-grade students at SD Negeri 101914 Kampung Baru in the 2023/2024 academic year. By adopting a mixed qualitative approach involving interviews with teachers and students, direct observations, and documentation analysis, this study provides a nuanced account of how Scout engagement contributes to the development of disciplined behavior in young learners.

This investigation does not merely aim to confirm assumed benefits of Pramuka programs but rather interrogates the mechanisms, challenges, and contextual variables that influence their outcomes. It explores how discipline manifests in students' daily behaviors as a result of sustained exposure to Scout activities and how educators and parents perceive and support this transformation. Furthermore, this study identifies the practical strategies employed by teachers to overcome obstacles in program implementation, including communication with parents and adaptive scheduling, which are critical to sustaining student motivation and participation. In doing so, the research contributes to both academic literature and educational practice by presenting evidence-based insights and recommendations for enhancing the disciplinary function of extracurricular programs in Indonesian primary schools. Through this lens, the study affirms the relevance of co-curricular models like Pramuka in shaping not only students' individual character but also the broader culture of discipline within school communities.

Methods

This research employed a qualitative approach to explore and describe the influence of Scout extracurricular activities on the discipline of fifth-grade students at SD Negeri 101914 Kampung Baru during the academic year 2023/2024. The qualitative method was chosen to capture in-depth insights into students' behaviors, perceptions, and character development as influenced by their participation in Pramuka activities. Data were collected through a combination of classroom and activity observations, semi-structured interviews with teachers and students, as well as documentation analysis related to the implementation of extracurricular programs at the school. The purposive sampling technique was used to select participants, specifically focusing on students who regularly participated in Scout activities and teachers who supervised or observed their behavioral development.

The research process began with direct observation of Scout activities to examine students' involvement, punctuality, cooperation, and adherence to rules. These observations were recorded systematically using a field note protocol. To complement these findings, interviews were conducted with both classroom teachers and selected students to gather perspectives on how Scout activities contributed to behavioral and character change, particularly in terms of discipline, responsibility, and teamwork. Interviews with teachers aimed to uncover the strategies employed to integrate character education through extracurricular programs, as well as the challenges they faced—such as lack of parental support or time constraints. Meanwhile, student interviews explored their motivations, experiences, and perceptions regarding the impact of Pramuka on their daily behavior in school and at home.

Discussion

The findings of this study indicate a significant and positive influence of Scout extracurricular activities on the development of student discipline among fifth-grade learners at SD Negeri 101914 Kampung Baru. Through a series of observations, interviews, and document analysis, it became evident that students who consistently participated in Pramuka activities demonstrated more disciplined behaviors, such as arriving on time, following instructions, taking responsibility for their duties, and exhibiting mutual cooperation with peers. The nature of Scout activities—rooted in structured routines, teamwork, leadership roles, and national values—provides a practical and experiential platform for students to internalize principles of discipline in a way that is both engaging and meaningful. The data revealed that discipline was not merely enforced as a rule but emerged organically through students' repeated exposure to situations that demanded self-regulation, accountability, and mutual respect. This

aligns with the core objective of character education as mandated in the national curriculum and reinforced through extracurricular programming.

Interviews with classroom teachers highlighted that while the implementation of Pramuka provided clear benefits, its success depended heavily on consistent facilitation and the creation of a supportive environment. Teachers noted that Scout activities helped bridge the gap between formal instruction and character development by offering real-life applications of values such as honesty, responsibility, and perseverance. However, teachers also identified challenges that could hinder the optimal impact of Pramuka, most notably the lack of parental support and limited infrastructure. Some parents were hesitant to permit their children's participation due to safety concerns, schedule conflicts, or a lack of understanding of the program's value. Additionally, the school's limited access to outdoor facilities and equipment sometimes restricted the variety and depth of activities conducted. Despite these obstacles, teachers employed strategic measures such as parent engagement initiatives and adaptive scheduling to increase participation and minimize disruption.

From the students' perspective, Pramuka was perceived not only as a fun and active break from regular classes but also as a space where they could develop leadership and collaboration skills. Many students reported that the experiences they gained—such as organizing group tasks, respecting hierarchies within Scout units, and enduring physically demanding exercises—instilled a sense of responsibility and pride. They felt more prepared to face academic and social challenges within and beyond the school context. These subjective accounts were reinforced by observational data, which showed increased engagement, task completion, and respectful behavior during and after Scout activities. Notably, the discipline formed through Pramuka seemed to transfer into classroom behavior, supporting the hypothesis that structured extracurriculars can serve as a complementary pathway to academic success and behavioral refinement.

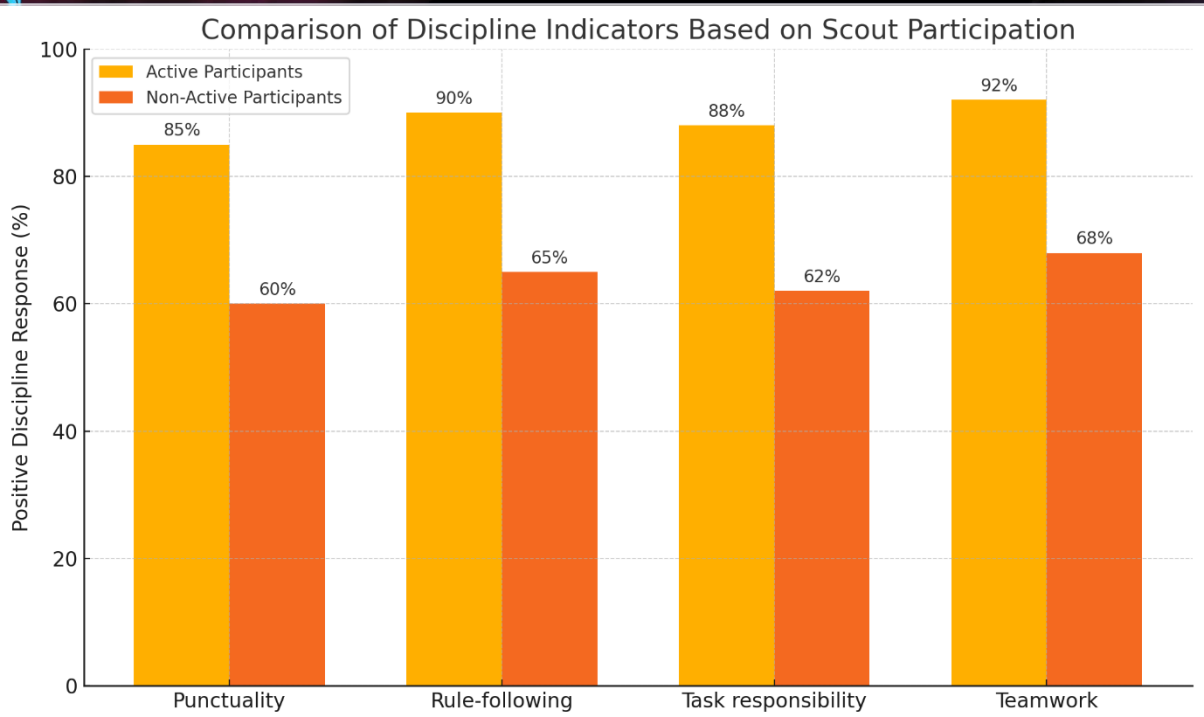

Chart 1. Comparison of Discipline Indicators

Moreover, the analysis of student questionnaire data using the Product Moment correlation method yielded a coefficient (r = 0.392) greater than the critical value in the r-table (0.374), indicating a statistically significant relationship between Scout participation and discipline. This quantitative finding substantiates the qualitative evidence, confirming that there is not only a perceived but also a measurable impact of Pramuka on student behavior. The holistic integration of both types of data provides a compelling argument for sustaining and improving the quality of Scout programs in schools. Ultimately, this study confirms that well-implemented Scout extracurricular activities are a powerful tool for cultivating disciplined, responsible, and socially engaged young learners, and should be regarded as a core element of character education within the broader framework of Indonesia's educational transformation.

.Conclusion

Based on the results of this study, it can be concluded that Scout extracurricular activities (ekstrakurikuler Pramuka) play a significant role in shaping and improving student discipline at the primary school level, specifically among fifth-grade students at SD Negeri 101914 Kampung Baru during the 2023/2024 academic year. The data derived from observations, interviews, documentation, and student questionnaires consistently reveal that students who actively participate in Pramuka tend to exhibit stronger behavioral traits such as punctuality, adherence to rules, responsibility, and effective teamwork. These findings are

further reinforced by the results of the correlation analysis, which demonstrated a statistically significant relationship between the level of participation in Scout activities and the degree of student discipline.

Despite facing challenges such as limited parental support and inadequate facilities, the study highlights that these obstacles can be mitigated through proactive strategies by educators, including parent engagement and better scheduling. The qualitative data also underline that Pramuka serves not only as a disciplinary tool but also as a character education platform that promotes broader values such as nationalism, leadership, and social responsibility. Therefore, it is recommended that schools continue to strengthen the implementation of Scout programs by investing in supporting infrastructure, enhancing teacher facilitation capacity, and fostering a collaborative relationship with parents. In doing so, extracurricular activities—particularly Pramuka—can become a powerful extension of formal education in cultivating disciplined, responsible, and character-driven students in alignment with the goals of Indonesia's Kurikulum Merdeka.

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JOURNAL OF LANGUAGE AND EDUCATION
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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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EFFORTS TO DEVELOP INTEREST IN LEARNING MATHEMATICS USING THE DISCOVERY LEARNING MODEL FOR STUDENTS OF GRADE IV AT SD KARTIKA I-1 MEDAN

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Abstract

This classroom action research aims to explore efforts to enhance students' interest in learning mathematics through the application of the Discovery Learning model in a fourth-grade class at SD Kartika I-1 Medan. The study was motivated by the low interest and achievement in mathematics among students, as evidenced by pre-test results where most students scored below the minimum competency standards. Using the Kemmis & McTaggart model, the research was conducted over two cycles consisting of planning, action, observation, and reflection. The implementation involved engaging students actively in the learning process through the six phases of Discovery Learning: stimulation, problem statement, data collection, data processing, verification, and generalization. Data were collected using tests, observations, and documentation. The findings indicate a significant increase in student engagement and mathematical achievement. The average score rose from 39.26 in the pre-test to 83.38 in the post-test, and the percentage of students reaching the "developing" and "very developing" categories improved notably. The study concludes that the Discovery Learning model is effective in fostering student motivation, confidence, and interest in mathematics at the elementary level.

Keywords

discovery learning, mathematics interest, classroom action research

Introduction

Education is a fundamental instrument for shaping a nation's future, and its quality is often measured by the strength of its primary education system. In the context of Indonesia, elementary education represents a critical phase where students begin to form essential cognitive frameworks and attitudes toward learning. Among the core subjects taught at this level, mathematics stands as a crucial discipline due to its role in developing logical reasoning,

analytical thinking, and problem-solving skills. According to the Indonesian Law No. 20 of 2003 concerning the National Education System, mathematics is a compulsory component of the school curriculum, expected to prepare students not only for academic success but also for real-life applications such as financial literacy, scientific understanding, and technological interaction. However, despite its significance, many elementary students perceive mathematics as an abstract, difficult, and even frightening subject. This perception is often the result of rigid and teacher-centered pedagogical practices that fail to make learning engaging or meaningful for young learners.

The gap between the intended learning outcomes and students' actual experiences is evident in the case of SD Kartika I-1 Medan. Based on preliminary data collected through pre-tests, a significant portion of fourth-grade students demonstrated low levels of interest and achievement in mathematics, with over 73% of them categorized as "less developed" or "in need of improvement," and none achieving scores in the "very developed" range. These findings suggest that conventional instructional models, primarily centered on lecture-based delivery, are insufficient in fostering motivation or deep understanding. Moreover, psychological barriers such as fear, anxiety, and low self-confidence further hinder students' ability to engage with mathematical concepts. It is crucial, therefore, to adopt a more student-centered and exploratory teaching approach that aligns with the constructivist view of learning—where students actively build their own understanding through hands-on experience, inquiry, and critical reflection.

In response to this pedagogical challenge, the present study explores the use of the Discovery Learning model as an alternative instructional strategy aimed at increasing students' interest in mathematics. Rooted in the constructivist learning theory, Discovery Learning encourages learners to engage with content actively by investigating problems, forming hypotheses, and drawing conclusions through guided exploration. As outlined by Iwantoro et al. (2022), the model emphasizes six critical stages—stimulation, problem statement, data collection, data processing, verification, and generalization—each designed to facilitate deep learning and active student participation. Prior studies such as those by Oktaviani et al. (2018), Maisari and Usman (2024), and Widyaningrum and Suparni (2023) have shown that the Discovery Learning model can significantly enhance both interest and academic performance in mathematics. These studies provide compelling evidence that when students are given the opportunity to discover concepts independently, they develop not only a better conceptual understanding but also a greater sense of ownership over their learning process.

This research is particularly novel and significant because it applies the Discovery

Learning model within a classroom action research (CAR) framework, allowing for iterative evaluation and refinement of instructional practices in real time. Using the Kemmis and McTaggart model, this study involves a cyclical process of planning, action, observation, and reflection, which enables the researcher to assess the impact of Discovery Learning on student interest over two cycles of implementation. The context-specific nature of this study—conducted within an Indonesian primary school—adds valuable insights into how global pedagogical innovations can be effectively adapted to local classroom realities. Ultimately, the research not only aims to improve learning outcomes in a specific school but also aspires to offer a replicable and evidence-based instructional model for other educators facing similar challenges. Through this study, it is hoped that mathematics instruction at the elementary level can become more engaging, student-driven, and effective in cultivating lifelong learning skills.

Methods

This study employed a classroom action research (CAR) design grounded in the Kemmis and McTaggart model, which emphasizes a cyclical and reflective approach to improving educational practices. The research was conducted in SD Kartika I-1 Medan, specifically in a fourth-grade classroom during the second semester of the 2024/2025 academic year. The choice of this school was based on its willingness to cooperate and the absence of prior studies addressing the same problem within the institution. The participants consisted of 34 students, who served as the primary subjects, while the fourth-grade homeroom teacher was involved as a collaborative partner in the implementation and observation process. The main objective of the study was to examine the effectiveness of the Discovery Learning model in enhancing students' interest in mathematics, particularly on the topic of geometric figures.

The methodological framework was organized into two action cycles, each comprising four key stages: planning, action, observation, and reflection. In the planning stage, the researcher collaborated with the class teacher to design the learning plan, which included formulating lesson plans (RPP), preparing student worksheets (LKPD), designing media and learning materials, and constructing assessment instruments. The research adopted a one-group pretest-posttest design to measure the impact of the intervention. Before the intervention, a pretest was administered to assess the students' baseline understanding and interest in mathematics.

In the action stage, the Discovery Learning model was implemented in accordance with its six procedural phases: stimulation, problem statement, data collection, data processing,

verification, and generalization. During classroom instruction, students were encouraged to actively explore mathematical problems, formulate their own hypotheses, and collaboratively seek solutions. The teacher acted as a facilitator, providing scaffolding only when necessary to support student-led inquiry. This hands-on and explorative approach marked a departure from the conventional lecture-based methods commonly used in the classroom.

The observation stage involved the systematic collection of qualitative and quantitative data to evaluate student engagement, participation, and academic improvement. Observational checklists were used to record student and teacher activities, while documentation such as photographs and field notes provided contextual insights. Quantitative data were obtained from learning achievement tests administered at the end of each cycle. Both sets of data served to triangulate findings and ensure reliability.

Finally, the reflection stage was carried out collaboratively between the researcher and the classroom teacher to assess the effectiveness of the implemented strategies. Based on the results of the first cycle, modifications were made to improve instructional delivery in the second cycle. The reflective process also informed decisions about whether to continue the intervention or conclude the research. The study was deemed successful when at least 75% of students reached the "developing" or "very developing" categories as defined by the KKTP (Kriteria Ketercapaian Tujuan Pembelajaran) rubric.

Data analysis was performed using both descriptive statistics and qualitative interpretation. The mean score, standard deviation, and classical completeness percentage were calculated to determine academic improvement from pretest to posttest. Qualitative data from observations were coded thematically to highlight behavioral changes and engagement levels. The study's rigor was enhanced through careful validation of instruments, including expert reviews of test items and observational rubrics to ensure content validity. Through this methodical and reflective approach, the research aimed not only to investigate the impact of the Discovery Learning model on student interest but also to provide a replicable model of instructional improvement for primary mathematics education in Indonesia.

Discussion

The results of this study demonstrate a significant improvement in students' interest and achievement in mathematics following the implementation of the Discovery Learning model. Prior to the intervention, the majority of Grade IV students at SD Kartika I-1 Medan showed

limited enthusiasm toward mathematics learning. This was clearly evident in the pre-test results, where the average score stood at 39.26, with no students achieving the highest category of learning mastery, and more than 70% categorized as "less developed" or "in need of improvement." Such a low performance baseline underscores a critical disconnect between conventional teaching methods—primarily lecture-based instruction—and the actual learning needs of young students, especially in abstract subjects like mathematics. The observation confirmed that students were disengaged during lessons, hesitant to ask questions, and lacked motivation to participate in class discussions. These initial findings corroborate previous research (Widyaningrum & Suparni, 2023; Oktaviani et al., 2018) which suggests that traditional pedagogies often contribute to the perception of mathematics as a rigid and unapproachable subject.

With the introduction of Discovery Learning, students began to take a more active role in the learning process. The method's structured phases—stimulation, problem formulation, data gathering, data processing, verification, and generalization—provided a scaffolded yet flexible learning environment where students could explore mathematical concepts through real-world problems and collaborative discussion. During Cycle I, it became apparent that students were gradually adjusting to the new model; participation began to increase, although some students still displayed hesitation when engaging with unfamiliar problems. Observational data highlighted modest gains in classroom interaction, and post-test results showed an improvement in performance. However, reflective evaluation at the end of the first cycle indicated that students needed more guidance in transitioning from traditional passive learning to an active discovery approach. This insight informed the planning for Cycle II, where modifications were made, including the use of more contextual learning media and clearer problem prompts that encouraged peer collaboration.

In Cycle II, the learning environment evolved noticeably. Students were more confident in articulating mathematical reasoning, group discussions became livelier, and classroom observations revealed that learners took initiative in asking questions and exploring alternative solutions. The post-test results validated this progress, with the average score increasing dramatically to 83.38. More importantly, over 85% of the students were now categorized under "developing" and "very developing" levels, indicating that both cognitive understanding and learning motivation had improved significantly. These findings support the theoretical underpinnings of the constructivist model, which posits that learners construct knowledge more effectively when they are engaged in active inquiry and reflection. The shift from a teacher-

centered to a student-centered paradigm allowed learners not only to grasp mathematical concepts more deeply but also to develop soft skills such as collaboration, critical thinking, and confidence in problem-solving.

Furthermore, the study aligns with empirical research such as that by Maisari & Usman (2024), who highlighted that integrating interactive tools like GeoGebra within Discovery Learning frameworks significantly increased student engagement and interest. Although this study did not integrate digital tools, it reaffirmed that the process of guided discovery itself—when implemented systematically—can transform students' attitudes towards learning. It also reinforces the view of Khasinah (2021), who argued that learning becomes more meaningful when students are given the autonomy to explore and reflect, rather than being passive recipients of knowledge.

The role of the teacher was instrumental throughout the process. As a facilitator, the teacher not only guided students in navigating through discovery phases but also provided emotional and cognitive support when students faced difficulties. The implementation of rewards during both cycles also helped to increase extrinsic motivation, particularly among students who initially lacked confidence. The dual strategy of combining structured autonomy with motivational reinforcement proved effective in building a more inclusive and dynamic learning environment. It is worth noting, however, that a small percentage of students still fell under the "less developed" category by the end of Cycle II. This indicates that while Discovery Learning is broadly effective, it may require additional differentiation or support mechanisms to accommodate learners with lower baseline skills or learning anxieties.

Overall, this study underscores the transformative potential of the Discovery Learning model in improving both interest and academic performance in elementary mathematics. By fostering an active, student-centered learning atmosphere, it contributes to the broader goals of the Merdeka Belajar curriculum, which emphasizes student autonomy, contextual learning, and the development of higher-order thinking skills. The implications for teaching practice are substantial: teachers should be encouraged and trained to adopt inquiry-based approaches and continuously reflect on their pedagogy through classroom action research. As demonstrated, even modest changes in instructional design—when informed by reflective cycles—can yield significant educational gains.

.Conclusion

The implementation of the Discovery Learning model in this classroom action research significantly improved students' interest and achievement in learning mathematics at SD Kartika I-1 Medan. The shift from passive to active learning through structured exploration, discussion, and problem-solving enabled students to engage more deeply with mathematical concepts and fostered greater motivation and confidence. The increase in average scores from 39.26 to 83.38 and the rise in students reaching the "developing" and "very developing" categories confirm the effectiveness of this approach. Thus, Discovery Learning proves to be a practical and impactful model for enhancing mathematics learning in primary education settings.

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