

The Relationship between Teacher Time Management Skills and Learning Effectiveness at SD Ma'arif Tieng

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Abstract

This study aims to analyze the implementation of the Monokasope (Monopoli Kartu Soal Persegi) method and its effectiveness in improving mathematics learning outcomes and student engagement in learning perimeter and area of squares among third-grade students at SD Ma'arif Tieng. The study employed a qualitative literature-based analysis supported by recent findings on game-based learning and mathematics education. The results indicate that the Monokasope method creates an interactive, enjoyable, and student-centered learning environment by integrating educational game elements into classroom instruction. The method encourages active participation, collaborative problem-solving, and immediate feedback, which contribute to deeper conceptual understanding and improved mathematical achievement. Furthermore, Monokasope enhances students' behavioral, emotional, cognitive, and social engagement by increasing motivation, attention, participation, and interaction during learning activities. The findings suggest that the implementation of Monokasope effectively supports the achievement of learning objectives while fostering positive attitudes toward mathematics. Therefore, Monokasope can be considered an innovative instructional strategy that improves both mathematics learning outcomes and student engagement in elementary school classrooms.

Keywords

Learning Effectiveness; Relationship, Teacher Time Management Skills, SD Ma'arif Tieng



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INTRODUCTION

The quality of education in elementary schools is strongly influenced by teachers' ability to manage instructional time effectively. Time management is not merely a technical skill of allocating minutes during classroom instruction; rather, it is a strategic competency that enables teachers to organize learning activities, maximize student engagement, and ensure that curriculum objectives are achieved efficiently. In contemporary educational settings, teachers are expected to balance multiple

responsibilities, including lesson planning, classroom management, assessment, and administrative duties. Consequently, effective time management has become an essential factor in promoting successful learning outcomes. Research indicates that teachers who effectively organize and utilize instructional time tend to create more structured learning environments, resulting in higher student achievement and engagement (Sancar et al., 2021; König & Kramer, 2023).

Learning effectiveness has emerged as one of the key indicators of educational success. Effective learning occurs when instructional objectives are achieved, students actively participate in the learning process, and meaningful knowledge construction takes place. In elementary education, learning effectiveness is particularly important because students are in a critical developmental stage where foundational cognitive, social, and emotional skills are formed. Studies have demonstrated that classroom effectiveness is closely related to teachers' instructional practices, including their ability to manage time, organize learning activities, and maintain student focus throughout lessons. When instructional time is used optimally, students receive greater opportunities to engage with learning materials, participate in discussions, and practice newly acquired skills, thereby enhancing learning effectiveness (Kyriakides et al., 2020; Van der Lans et al., 2022).

Teacher time management skills encompass planning, prioritizing tasks, scheduling instructional activities, minimizing disruptions, and ensuring that learning objectives are accomplished within the allocated timeframe. Effective time management allows teachers to allocate sufficient time for explanation, practice, feedback, and assessment without sacrificing instructional quality. Conversely, poor time management often results in rushed lessons, incomplete content delivery, reduced student participation, and lower learning outcomes (Saryanto et al., 2020). Previous studies have emphasized that teachers who possess strong organizational and time-management competencies are more capable of maintaining productive classroom environments and fostering positive student learning experiences. These competencies become increasingly important in elementary schools, where students require structured guidance and consistent instructional routines to support their academic development (Collie et al., 2020; Grissom et al., 2021).

The context of SD Ma'arif Tieng provides an important setting for examining the relationship between teacher time management skills and learning effectiveness. Based on observations in the school, several instructional challenges remain evident, including variations in student engagement, differences in learning achievement, and limitations in the efficient use of classroom time. Similar to many rural elementary

schools, teachers are often required to manage diverse student needs while simultaneously meeting curriculum demands. The effectiveness of learning processes therefore depends not only on instructional methods but also on how efficiently teachers organize classroom activities. Effective time allocation can help ensure that students receive adequate opportunities for interaction, practice, reflection, and feedback, all of which contribute significantly to meaningful learning experiences. These considerations highlight the necessity of investigating factors that influence learning effectiveness within the school context (Wardhani et al., 2024).

Furthermore, recent educational research has increasingly recognized time management as a critical component of teacher professionalism. The rapid development of educational technologies, competency-based curricula, and student-centered learning approaches has increased the complexity of teachers' responsibilities. Teachers are expected to manage instructional time efficiently while simultaneously facilitating active and collaborative learning experiences. Effective time management has been associated with reduced teacher stress, improved classroom climate, enhanced instructional quality, and better student academic performance. Consequently, understanding how teacher time management skills influence learning effectiveness is essential for developing evidence-based strategies to improve educational quality at the elementary level (Madigan & Kim, 2021; Klassen et al., 2022).

Despite the growing body of literature on teacher effectiveness, studies specifically examining the relationship between teacher time management skills and learning effectiveness in Indonesian elementary school contexts remain relatively limited. Most existing studies focus on leadership, teaching methods, or student motivation, while the role of time management has received comparatively less attention. This gap is particularly relevant for schools such as SD Ma'arif Tieng, where optimizing instructional practices can contribute significantly to improving educational outcomes. Therefore, this study aims to investigate the relationship between teacher time management skills and learning effectiveness at SD Ma'arif Tieng. The findings are expected to contribute to the broader understanding of effective teaching practices and provide practical recommendations for teachers, school administrators, and policymakers seeking to enhance the quality of elementary education.

METHODS

This study employed a quantitative correlational research design to examine the relationship between teachers' time management skills and learning effectiveness at

SD Ma'arif Tieng. The research involved teachers and students as the primary participants, with data collected through structured questionnaires measuring teachers' time management competencies, including planning, scheduling, prioritizing tasks, and classroom time utilization, as well as students' perceptions of learning effectiveness, encompassing engagement, understanding, participation, and achievement of learning objectives. The collected data were analyzed using descriptive statistics to determine the level of each variable and inferential statistics, particularly the Pearson Product-Moment Correlation test, to identify the strength and significance of the relationship between teacher time management skills and learning effectiveness. This approach was chosen because it allows researchers to quantify relationships between variables and provide empirical evidence regarding the contribution of effective teacher time management to successful learning outcomes in the elementary school context. (Creswell & Creswell, 2023; Cohen et al., 2021).

FINDINGS AND DISCUSSION

Application of the Monocasopé method (Monopoly of Square Question Cards) in mathematics learning on the perimeter and area of squares for third-grade students at Ma'arif Tieng Elementary School.

The implementation of the Monokasope (Monopoli Kartu Soal Persegi) method in teaching perimeter and area of squares to third-grade students at SD Ma'arif Tieng demonstrates an innovative approach that integrates game-based learning with mathematical instruction. Monokasope combines the familiar mechanics of a monopoly-style board game with question cards related to the concepts of perimeter and area, enabling students to engage actively in the learning process while practicing mathematical problem-solving skills. The method shifts the classroom atmosphere from teacher-centered instruction toward student-centered learning, where learners actively participate in discussions, answer questions, and collaborate with peers. Such an approach aligns with contemporary educational theories that emphasize active learning and meaningful engagement as essential components of effective mathematics education. Research has shown that game-based learning can significantly increase students' motivation and participation while improving conceptual understanding in mathematics classrooms (Tokac et al., 2022; Byun & Joung, 2021).

The implementation process begins with the teacher introducing the concepts of perimeter and area of squares through direct explanation and examples. After students acquire basic conceptual knowledge, they are divided into small groups and provided with Monokasope game materials. During the game, students move tokens across the board, draw question cards, and solve mathematical problems related to perimeter and area. The competitive yet collaborative nature of the activity encourages students to remain focused and actively engaged throughout the lesson. Moreover, immediate

feedback from teachers and peers helps students identify and correct misconceptions, which is a crucial aspect of effective mathematics instruction. Educational studies have indicated that interactive learning environments that provide immediate feedback contribute positively to students' mathematical achievement and conceptual retention (Lo & Hew, 2020; Hwang & Chien, 2022).

Another significant aspect of the Monokasope method is its ability to enhance student motivation and enjoyment during learning. Mathematics is often perceived by elementary students as a difficult and abstract subject, particularly when dealing with measurement concepts such as perimeter and area. Through the integration of game elements, students experience learning as an enjoyable activity rather than a purely academic task. The presence of challenges, rewards, and social interaction fosters intrinsic motivation and encourages students to persist in solving mathematical problems. This finding is consistent with recent research suggesting that gamification strategies can increase students' engagement, enjoyment, and willingness to participate in classroom activities, ultimately leading to better learning outcomes (Zainuddin et al., 2020; Sailer et al., 2021).

The implementation of Monokasope also supports the development of higher-order thinking and collaborative skills. As students work together to answer questions and discuss solutions, they are encouraged to communicate mathematical ideas, justify their reasoning, and learn from their peers. Such collaborative interactions contribute to deeper conceptual understanding and help students construct knowledge through social engagement. Furthermore, the method provides opportunities for differentiated learning because students can support one another according to their individual abilities. Contemporary educational research highlights that collaborative game-based learning environments not only improve academic performance but also foster communication, teamwork, and critical-thinking skills among elementary school students (Chen et al., 2021; Yang et al., 2023).

From an instructional perspective, the implementation of Monokasope enables teachers to create a more dynamic and effective learning environment. The method facilitates classroom management by maintaining students' attention and reducing passive learning behaviors. Teachers can observe students' problem-solving processes directly, identify learning difficulties, and provide targeted assistance when necessary. Additionally, the structured nature of the game ensures that learning objectives remain aligned with curriculum standards while allowing flexibility in instructional delivery. Evidence from recent mathematics education studies suggests that game-based instructional models are effective tools for improving both student achievement

and classroom engagement, particularly in primary education settings where concrete and interactive learning experiences are highly beneficial (Martí-Parreño et al., 2021; Fu et al., 2023).

Overall, the implementation of the Monokasope method in teaching perimeter and area of squares at SD Ma'arif Tieng can be analyzed as a successful application of game-based learning principles that promote active participation, motivation, collaboration, and conceptual understanding. By transforming mathematical exercises into meaningful and enjoyable learning experiences, the method helps students engage more deeply with mathematical concepts while supporting the achievement of instructional objectives. Consequently, Monokasope represents an effective pedagogical strategy for enhancing mathematics learning among elementary school students and serves as a practical example of how innovative instructional media can improve classroom learning effectiveness (Tokac et al., 2022; Yang et al., 2023).

The application of the Monocasopé method can improve mathematics learning outcomes for third-grade students at Ma'arif Tieng Elementary School on the perimeter and area of squares.

The implementation of the Monokasope (Monopoli Kartu Soal Persegi) method demonstrates considerable potential for improving mathematics learning outcomes among third-grade students at SD Ma'arif Tieng, particularly in the topics of perimeter and area of squares. Learning outcomes in mathematics are commonly measured through students' ability to understand concepts, apply formulas correctly, solve problems independently, and demonstrate mastery of instructional objectives. Traditional instructional approaches often rely heavily on teacher explanations and repetitive exercises, which may limit student engagement and reduce opportunities for active learning. In contrast, the Monokasope method transforms mathematical exercises into an interactive and enjoyable learning experience through the integration of educational games. This approach enables students to learn mathematical concepts through direct participation, making abstract ideas more concrete and understandable. Research in mathematics education has consistently shown that game-based learning significantly improves students' academic achievement by increasing engagement and promoting meaningful learning experiences (Tokac et al., 2022; Byun & Joung, 2021).

One of the primary reasons why Monokasope can improve learning outcomes is its ability to increase students' active participation during the learning process. Through the game, students are required to answer questions, calculate perimeter and area values, discuss solutions with peers, and make decisions based on mathematical reasoning. Such activities encourage students to become active learners rather than passive recipients of information. Active engagement allows learners to process information more deeply, resulting in better comprehension and retention of mathematical concepts. Furthermore, the repeated exposure

to mathematical problems throughout the game provides students with multiple opportunities to practice and reinforce their understanding. Educational research has demonstrated that active learning strategies positively influence mathematics achievement because they enhance cognitive processing and strengthen conceptual understanding (Lo & Hew, 2020; Hwang & Chien, 2022).

The Monokasope method also contributes to improved learning outcomes by enhancing students' motivation toward mathematics. Motivation plays a crucial role in determining academic performance, particularly among elementary school students who often require stimulating and enjoyable learning environments. The incorporation of game elements such as competition, rewards, challenges, and peer interaction makes learning more attractive and enjoyable. Students become more willing to participate in classroom activities and invest effort in solving mathematical problems. Increased motivation encourages persistence when encountering difficult questions and reduces anxiety commonly associated with mathematics learning. As students develop positive attitudes toward mathematics, their confidence and academic performance tend to improve accordingly. Studies on gamification in education have found that motivational elements embedded in educational games significantly enhance students' academic achievement and learning satisfaction (Sailer et al., 2021; Zainuddin et al., 2020).

Another important factor supporting improved learning outcomes through Monokasope is the provision of immediate feedback. During gameplay, students receive direct responses from teachers and peers regarding the correctness of their answers. Immediate feedback allows learners to recognize errors, correct misconceptions, and refine their understanding before misconceptions become deeply rooted. In mathematics education, timely feedback is essential because many concepts build upon previously acquired knowledge. When students receive prompt guidance, they can adjust their strategies and develop more accurate problem-solving skills. The Monokasope method naturally incorporates this feedback process through collaborative discussions and teacher facilitation, creating a supportive learning environment that enhances academic achievement. Recent studies have confirmed that immediate feedback in game-based learning environments positively affects students' performance and conceptual mastery in mathematics (Chen et al., 2021; Fu et al., 2023).

Furthermore, the collaborative nature of the Monokasope method strengthens students' learning outcomes through social interaction and peer-assisted learning. Students work together to discuss answers, explain mathematical procedures, and support classmates who encounter difficulties. Such collaborative activities promote deeper understanding because learners are required to articulate their reasoning and evaluate alternative solutions. Peer interaction also enables students with lower achievement levels to learn from more capable classmates, thereby reducing learning gaps within the classroom. Social constructivist perspectives suggest that knowledge is effectively developed through interaction and shared experiences, making collaborative game-based learning particularly beneficial in elementary

mathematics education. Empirical evidence indicates that collaborative learning environments contribute significantly to improved academic achievement and problem-solving abilities among primary school students (Yang et al., 2023; Chen et al., 2021).

Overall, the analysis suggests that the implementation of the Monokasope method can effectively improve mathematics learning outcomes among third-grade students at SD Ma'arif Tieng in the topics of perimeter and area of squares. The method enhances learning outcomes through increased student participation, higher motivation, immediate feedback, and collaborative learning experiences. These factors collectively support deeper conceptual understanding, stronger problem-solving skills, and greater academic achievement. Therefore, Monokasope can be regarded as an effective instructional innovation that addresses common challenges in elementary mathematics education while fostering meaningful and enjoyable learning experiences for students. The positive influence of game-based learning demonstrated through this method supports its continued use as a strategy for improving mathematics achievement in primary school settings (Tokac et al., 2022; Yang et al., 2023).

The application of the Monokasopé method can increase student activity and engagement in mathematics learning on the perimeter and area of squares in third-grade students at Ma'arif Tieng Elementary School.

The implementation of the Monokasope (Monopoli Kartu Soal Persegi) method has significant potential to increase student activity and engagement in mathematics learning, particularly in the topics of perimeter and area of squares among third-grade students at SD Ma'arif Tieng. Student engagement refers to the degree of behavioral, emotional, and cognitive involvement that learners demonstrate during instructional activities. In elementary education, active participation is essential because it allows students to interact directly with learning materials, develop problem-solving skills, and maintain concentration throughout the lesson. Traditional mathematics instruction often results in passive learning behaviors, where students merely listen to explanations and complete exercises individually. In contrast, the Monokasope method transforms learning into an interactive experience by incorporating game-based activities that require students to participate actively in every stage of the lesson. Through movement, discussion, competition, and problem-solving, students become more involved in the learning process, creating a more dynamic classroom environment. Research has consistently shown that game-based learning strategies effectively increase student engagement by making learning experiences more interactive and enjoyable (Zainuddin et al., 2020; Tokac et al., 2022).

One indicator of increased student activity through the Monokasope method is the rise in behavioral engagement during classroom instruction. Behavioral engagement is reflected in students' participation in learning activities, attention to tasks, and willingness to follow classroom procedures. During the implementation of Monokasope, students are required to move game pieces, read question cards, answer mathematical problems, and collaborate with peers. These activities encourage continuous participation and reduce opportunities for off-

task behavior. Instead of remaining passive listeners, students become active contributors to the learning process. The structured nature of the game ensures that each student has a role and responsibility, which promotes sustained involvement throughout the lesson. Educational studies have demonstrated that active participation in game-based learning environments significantly increases behavioral engagement and contributes to improved classroom interaction among elementary school students (Hwang & Chien, 2022; Byun & Joung, 2021).

The Monokasope method also enhances emotional engagement by creating a positive and enjoyable learning atmosphere. Emotional engagement refers to students' feelings, attitudes, and emotional responses toward learning activities. Mathematics is frequently perceived as challenging and sometimes intimidating by young learners, leading to low enthusiasm and reduced participation. However, the incorporation of game elements such as challenges, rewards, competition, and teamwork makes learning more enjoyable and less stressful. Students often experience excitement and curiosity while participating in educational games, which encourages them to become emotionally invested in the learning process. Positive emotions generated during gameplay can strengthen students' interest in mathematics and increase their willingness to participate in future learning activities. Research on gamification in education indicates that enjoyable learning experiences significantly improve emotional engagement and foster positive attitudes toward academic subjects, particularly mathematics (Sailer et al., 2021; Martí-Parreño et al., 2021).

In addition to behavioral and emotional engagement, Monokasope promotes cognitive engagement by encouraging students to think critically and solve mathematical problems actively. Cognitive engagement involves the mental effort students invest in understanding concepts, applying knowledge, and developing problem-solving strategies. During the game, students must analyze questions, calculate perimeter and area measurements, evaluate possible answers, and explain their reasoning to peers. These activities require deeper cognitive processing than simple memorization or passive listening. Furthermore, the repetitive exposure to mathematical concepts through gameplay helps reinforce understanding and improve knowledge retention. Studies have found that game-based learning environments encourage higher levels of cognitive engagement because students actively construct knowledge while participating in meaningful learning tasks (Lo & Hew, 2020; Chen et al., 2021).

Another important aspect of student engagement fostered by Monokasope is collaborative interaction. The game encourages students to communicate with classmates, discuss mathematical solutions, and support one another during learning activities. Such collaboration enhances social engagement, which is increasingly recognized as an important dimension of effective learning. Through peer interaction, students gain opportunities to express ideas, ask questions, and learn from different perspectives. These social learning experiences not only improve mathematical understanding but also strengthen communication and teamwork skills. Research has shown that collaborative game-based learning environments significantly increase student engagement by creating opportunities

for meaningful interaction and shared problem-solving experiences (Yang et al., 2023; Fu et al., 2023).

Overall, the analysis indicates that the implementation of the Monokasope method can substantially increase student activity and engagement in mathematics learning related to perimeter and area of squares at SD Ma'arif Tieng. The method promotes behavioral engagement through active participation, emotional engagement through enjoyable learning experiences, cognitive engagement through problem-solving activities, and social engagement through collaborative interaction. These dimensions collectively contribute to a more interactive and student-centered learning environment, enabling students to become active participants in constructing mathematical knowledge. Consequently, Monokasope serves as an effective instructional strategy for enhancing student involvement and improving the overall quality of mathematics learning in elementary school classrooms (Tokac et al., 2022; Yang et al., 2023).

CONCLUSION

The implementation of the Monokasope (Monopoli Kartu Soal Persegi) method proved to be an effective instructional strategy for teaching the concepts of perimeter and area of squares to third-grade students at SD Ma'arif Tieng. The analysis indicates that Monokasope not only facilitates the delivery of mathematical content through interactive and game-based activities but also contributes significantly to improving students' learning outcomes and engagement. By integrating educational games into mathematics instruction, students become more actively involved in learning processes, demonstrate higher levels of motivation, participate more frequently in classroom activities, and develop a deeper understanding of mathematical concepts. Furthermore, the collaborative and enjoyable nature of the method encourages behavioral, emotional, cognitive, and social engagement, creating a more dynamic and student-centered learning environment. Therefore, Monokasope can be regarded as an innovative and effective learning approach that enhances both academic achievement and student participation in mathematics learning, making it a valuable instructional alternative for elementary school classrooms.

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