

The Application of Game-Based Learning Model Improves Slow Learner Students' Learning Outcomes in Mathematics Subjects in Elementary Schools

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Abstract: This study aims to describe the application of the Game Based Learning (GBL) model in improving the learning outcomes of slow learner students in Mathematics in elementary schools. The background of this study is the low learning outcomes of Mathematics in students with special learning needs, especially slow learners, who often have difficulty understanding abstract concepts and are less motivated to learn. The GBL model was chosen because it can provide a fun, interactive learning atmosphere and motivate students to be more actively involved in the learning process. The research method used is Classroom Action Research (CAR) which is carried out in two cycles with the stages of planning, action implementation, observation, and reflection. The subjects of this study were fifth grade students of SDN 002 Kembang who were identified as slow learners. The results of the study indicate that the application of the Game Based Learning model can improve the learning outcomes of slow learner students. This is indicated by an increase in the average value of learning outcomes in each cycle and an increase in student activity and motivation to learn. Thus, the Game Based Learning model can be an alternative effective learning strategy to help slow learner students understand Mathematics concepts in a fun and meaningful way.

Keywords: Classroom Action Research; Game Based Learning; Learning Outcomes; Mathematics; Slow Learners

1. Introduction

Obstacles in understanding lessons are specific experiential obstacles experienced by some students during their educational activities (Suryabrata, 2019). This condition can hinder their academic achievement and social-emotional development (Hutauruk, 2021). Various learning models have been developed to address learning difficulties, but there is no general agreement on which model is most effective (Rahman & Dewi, 2020). This study was designed to evaluate how effective learning models that use games are in improving the learning abilities of children classified as slow learners (Nugroho, 2022). Information from PISA 2018 shows that Indonesia's position is ranked 74th out of 79 participating countries, especially in the aspects of reading literacy, numeracy skills, and mastery of science. Based on the 2021 National Assessment (AN), more than 50% of elementary school students in Indonesia have not achieved minimum competencies in literacy and numeracy.

Diversity in student learning abilities within a class is commonplace. One group of students who often require special treatment are slow learners. Students with slow learning rates tend to absorb information more slowly than their peers. This often makes it difficult for them to understand subject matter, particularly abstract subjects like mathematics, particularly those related to the comparison of the properties of geometric shapes.

Inclusive education practices provide the widest possible opportunities for all students to obtain learning, provide more comprehensive support services in regular schools, provide

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assistance to educators and school management, strengthen interactions between Children with Special Needs (ABK) and regular students, place both in the same educational scope, and present more diverse teaching programs (Rachmawati, et al. 2016). Special education according to the provisions in the National Education system is explained as a relevant educational service for students who are hampered in learning due to physical, psychological, emotional, social factors, or for those who have very prominent intelligence and talent potential (Kustawan & Meimulyani, 2013).

Children categorized as slow learners are individuals with lower intelligence capacity than the general standard, but are not categorized as having intellectual disabilities. In the academic realm, children with slow learning abilities are usually identified through intelligence test results, with IQ scores ranging from 70 to 89 (Hadi, 2016: 36). Children who are categorized as slow learners often face obstacles, both in the academic realm and social interactions. From an academic perspective, they generally show a slower speed in understanding learning materials, especially in aspects of language, numerical calculations, and understanding certain concepts considered complex. Due to these cognitive limitations, slow learners often feel inferior and rarely socialize except with friends who are younger. With the provision of services through an inclusion system, it is hoped that students with special needs can maximize their potential (Al Darmono, 2016: 1). Based on data from Directorate of Special Education and Special Services (PKLK) Ministry of Education, Culture, Research and Technology, An estimated 15–20% of students in public schools exhibit characteristics of special learning needs, including slow learners. International Study Results – PISA (OECD, 2018). In Indonesia, approximately 71% of students are at Level 1 or below in mathematics, indicating an inability to interpret simple information.

Learning difficulties in children can be influenced by various factors, such as difficulty maintaining focus, weaknesses in remembering information, suboptimal thought processes, and social and emotional obstacles. The school environment typically demands that students complete assignments well, study diligently, and achieve high evaluation results. However, the reality on the ground shows that many students are hampered in completing their academic obligations due to being slow learners, which then gives rise to feelings of inferiority or worthlessness (Mulyadi, 2010: 123). Referring to the results of the PISA survey (OECD, 2019), the level of mathematical literacy of students in Indonesia is still relatively low. This situation becomes even more challenging for groups of students with learning disabilities, such as slow learners, who require more flexible, adaptive learning strategies that encourage active interaction between teachers and students. One strategy that is starting to receive attention is the use of game-based learning, which serves to increase enthusiasm and increase student engagement in the mathematics learning process (Plass, Homer, & Kinzer, 2015). However, its application in the context of slow learner students in elementary schools is still limited and needs to be explored further through research.

The comparison and characteristics -of plane figures at the elementary school level cover basic concepts such as types of sides, angles, symmetry, and simple surface area. However, slow learners often struggle to grasp these abstract concepts through conventional textual or lecture methods. Research on inclusive learning strategies reveals that students with learning disabilities require more structured learning patterns, presented in stages, and complemented by interactive approaches to strengthen their spatial thinking skills. Without appropriate

learning strategies, they tend to struggle to describe and compare geometric attributes of plane figures, resulting in superficial and less lasting understanding.

The application of Game-Based Learning (GBL), such as the use of Wordwall educational media or traditional games, has proven successful in increasing students' interest and understanding of the concept of plane figures. For example, a recent study by Fikriya (2025) at SDN 1 Jogosimo revealed an increase in the average learning completion rate on the material on the characteristics of plane figures from 73.9% (cycle I) to 91.3% (cycle III) through Wordwall-based GBL. Similarly, the GBL model at SDI Bahrul Ulum revealed significant results—Wilcoxon test $p < 0.05$ —this approach is effective in improving general mathematics learning outcomes, which confirms the potential of GBL to strengthen the understanding of plane figures. Specifically for slow learners, the use of Wordwall-mediated GBL has also been shown to increase learning motivation and conceptual understanding, thus creating a more enjoyable and inclusive learning atmosphere. The application of GBL in learning the material on comparison and characteristics of plane figures in elementary schools, especially for slow learners, offers significant learning innovation. By using media like Wordwalls or other educational games, GBL not only improves spatial and cognitive understanding but also stimulates students' interest in learning. This model bridges the gap between the needs of slow learners and the demands of the curriculum, making it a revolutionary and inclusive alternative in elementary mathematics education.

An educator in an inclusive school context needs to determine teaching methods that not only adapt the content to the learning objectives but also consider the diversity of students' characteristics and learning styles. Differences in learning styles and characteristics in an inclusive classroom are certainly related to the variations between regular students and students with special needs. Although the number of students with special needs is smaller than that of regular students, teachers' attention to them must not be diminished. Furthermore, teachers must frequently repeat material presentations to provide reinforcement, especially for students with special needs who are categorized as slow learners.

Therefore, educators need to prepare learning resources that not only create an engaging and enjoyable atmosphere but also choose a game-based learning approach to encourage active engagement and encourage student enthusiasm for learning during classroom activities. This is certainly based on the limitations of students with special needs (slow learners). Educators are required to determine appropriate and effective learning models that can attract the attention of all students, both regular students and those with special needs, so that they do not feel marginalized. Thus, teachers must prepare learning media that not only provide joy but are also easy to understand for all students in the class. This is clearly based on the weaknesses of students with special needs (Slow Learners). Teachers need to be able to choose effective and appropriate learning tools to attract the attention of not only regular students, but also students with special needs so they do not feel neglected.

New breakthroughs are needed in designing learning approaches that meet the demands of today's digital generation. It is hoped that these learning strategies will boost motivation and improve students' academic achievement. Furthermore, this study focuses specifically on the variables influencing the successful implementation of the developed approach.

Students categorized as slow learners are children with slightly below-average intellectual abilities (IQ 70–85), who often experience difficulties in understanding subject matter and

require longer learning times, as well as continuous repetition to grasp basic concepts. Academically, they often struggle with reading, arithmetic, understanding complex instructions, and generalizing from the information learned. According to research by Rahmawati & Nugraheni (2023), *slow learners* require more concrete, visual, and contextual learning to achieve minimum academic goals. They typically lag behind their peers, and conventional learning without modified methods actually exacerbates their academic gap..

2. Preliminaries or Related Work or Literature Review

Theory of Slow Learners

Understanding Slow Learners

Slow learner is a term that refers to individuals, especially children, who have lower learning abilities than most, but are not classified as intellectually disabled. They usually have an IQ between 70-89, so they have difficulty maintaining a learning rhythm in a regular classroom, but can still make academic progress with the right teaching methods (Patel & Mehta, 2022). Slow learner children usually need additional time, repetition, and real learning techniques to understand the concepts being taught.

According to Kaur and Saini (2023), *slow learners* exhibit limitations in short-term memory, information processing speed, and abstract problem-solving abilities. However, they do not exhibit significant behavioral disorders and thrive in supportive and structured learning environments. Meanwhile, Singh (2021) emphasizes the key characteristics of *slow learners*, including low motivation to learn, difficulty understanding complex verbal instructions, and a need for visual and repetitive learning.

Based on various perspectives from researchers, the conclusion is that individuals classified as slow learners have lower-than-average intellectual capacity but are still considered normal. They are not considered special needs children with severe disabilities, but rather require a more personalized, concrete, and hands-on learning approach. A proper understanding of the characteristics of *slow learners* is crucial for teachers to design appropriate learning strategies and encourage the optimal development of children's potential.

Characteristics of Slow Learners

Slow learners generally exhibit characteristics such as difficulty concentrating, slow conceptual understanding, a need for repetition, and a more personalized approach (Rahman & Dewi, 2020). Furthermore, they easily become bored and less motivated if learning methods are less engaging (Nugroho, 2022).

According to Hallahan and Kauffman (2006), students are *slow learners* In general, these individuals tend to have lower than average intelligence, with IQ scores between 70 and 85. They usually encounter difficulties in grasping abstract ideas, require longer learning periods, and require more intensive repetition of the material. According to them, children with these characteristics usually also experience difficulties in concentration and attention, so they need a more individual and practical learning approach to be able to understand the material well. Meanwhile, Kirk and Gallagher (1989) emphasizes that *slow learners* exhibit slow but steady cognitive development, allowing them to continue learning, albeit at a different pace than their peers. Another characteristic is the gap between their academic abilities and their chronological age. Another researcher, Lerner (2003), also explains that slow learners often

face challenges in basic skills such as reading, writing, and arithmetic, requiring specific learning methods to support their gradual academic development.

According to experts, slow learners are characterized by lower-than-average cognitive abilities, a relatively slow learning pace, and the need for more individualized learning methods tailored to their characteristics. By understanding these characteristics, educators are expected to design more flexible learning strategies that support the full development of slow learners' learning abilities in elementary school.

Slow Learner Learning Needs

According to (Sari & Prabowo, 2021), slow learners need more detailed and intensive guidance, diverse learning tools, and techniques that are in line with their individual capacities and interests. According to (Nugroho, 2022), the use of innovative learning strategies, such as games or concrete activities, can also help them better understand the material and increase their self-confidence.

According to Smith (2012), slow learners have special learning needs that emphasize simple, concrete, and repetitive instruction. Smith explains that learning for slow learners needs to be tailored to their learning pace, requiring teachers to be patient and able to provide step-by-step explanations. Furthermore, support in the form of visual aids, engaging learning media, and a comfortable learning environment are crucial factors in helping children understand the material.

A similar opinion was expressed by Munger (2011), who emphasized the need for individualized and remedial learning methods for slow learners. According to Munger, learning activities should be oriented toward hands-on practice and real-life experiences to help students absorb information more easily. He also highlighted the importance of teacher and parent involvement in providing additional guidance outside of school hours to help children review material they haven't yet mastered optimally.

Based on expert opinion, it can be concluded that the learning process for slow learners should focus on a flexible, hands-on approach that prioritizes practice. Teachers are required to develop strategies and media tailored to student characteristics, while also fostering effective interactions with parents to create ongoing learning support both at home and at school.

Game Based Learning (GBL)

Understanding Game Based Learning

According to (Pranata, 2020), Game-Based Learning (GBL) is an educational approach that utilizes game elements to achieve desired learning outcomes. As stated by (Putri & Wicaksono, 2021), with GBL, students not only play but also play an active role in solving problems, making decisions, and reflecting on the material they have learned. Based on Prensky's (2001) description, Game-Based Learning (GBL) can be understood as a learning approach that utilizes game activities as a medium and a way to achieve educational goals. Prensky emphasized that through play activities, students can interact actively, gain inspiration, and have the opportunity to practice certain competencies in a fun atmosphere. For slow learners, GBL is an effective method because it can help them understand the material through direct experience and repetition that is not boring.

According to Gee (2003), Game-Based Learning can create a dynamic learning environment and encourage students to solve problems step by step. Gee explained that game-focused learning methods provide opportunities for children to learn in a real-life context. This is especially helpful for slow learners, as they often encounter difficulties when trying to understand ideas that are not tangible. With Game-Based Learning (GBL), material can be divided into smaller, more easily understood segments through simple challenges presented in the game.

Referring to the views of these experts, the conclusion is that Game-Based Learning is an appropriate and relevant approach to accommodate the educational needs of slow learners. Through learning activities tailored to the content, students can learn in a more enjoyable, relevant, and experiential manner. Therefore, Game-Based Learning (GBL) is expected to contribute to increasing the enthusiasm, focus, and insight of slow learners in subjects.

Game Based Learner (GBL) Principles

According to (Rahman & Dewi, 2020) the basic principles of GBL include clear learning objectives, game rules, appropriate challenges, direct feedback, and a healthy competitive or collaborative atmosphere.

Meanwhile, Kiili (2005) emphasized the main principle of GBL: a balance between entertainment elements and educational objectives. According to him, a good game should not only be engaging and enjoyable, but also have clear and measurable learning objectives. Kiili emphasized that play activities should encourage students to think critically, collaborate, and solve problems incrementally. This aligns with the needs of slow learners, who require a concrete, gradual learning approach and direct learning experiences.

Based on expert opinion, the conclusion is that the principles of Game Based Learning emphasize the importance of active involvement, rapid response, and integration between entertainment elements and learning objectives. By applying these principles, GBL serves as an efficient approach to improve students' enthusiasm, thinking skills, and understanding, especially for those who require a special learning approach, such as slow learners.

Benefits of GBL

According to (Nugroho, 2022), the implementation of GBL can increase student learning motivation, deepen concepts more thoroughly, train critical analysis and problem-solving skills, and create an interesting learning atmosphere. According to (Sari & Prabowo, 2021), for slow learners, GBL can reduce boredom and increase active participation in learning Mathematics.

According to Prensky (2001), *Game-Based Learning* offers the primary benefit of increasing student motivation through a fun and interactive learning environment. Prensky explains that games can spark student interest by providing challenges, rewards, and opportunities to learn from mistakes without feeling pressured. This approach is particularly beneficial for slow learners who often feel bored or quickly lose focus when learning with traditional methods. With Game-Based Learning, the learning process becomes more lively and encourages students to participate actively.

According to Gee (2003), another benefit of *Game-Based Learning* is improving analytical, problem-solving, and collaboration skills. Gee argues that games teach students to plan

tactics, make choices, and learn independently in facing challenges. For *slow learners*, this benefit is especially important because they often need repeated practice in supportive situations. With games, students can learn contextually, making the subject matter easier to understand and remember.

Referring to expert opinion, it can be concluded that Game-Based Learning offers dual benefits: increasing learning motivation while honing cognitive skills through enjoyable and valuable experiences. By utilizing Game-Based Learning (GBL), teachers can help *slow learners* learn more effectively. Therefore, it is expected that their understanding will improve according to their individual learning potential and pace.

Effectiveness of Game Based Learning

Frontiers in Psychology (2021): A systematic literature review from an Activity Theory perspective examined 96 studies on the use of game-based learning for students with various disabilities (autism, hearing impairment, intellectual disability, etc.). This model analyzed components such as the subject (learner), technology, community, division of labor, and outcomes. Key findings:

GBL supports the development of analytical thinking, independent learning, and social and problem-solving skills.

Effective implementation is influenced by the involvement of teachers, parents, and design according to student characteristics.

Learning outcomes

According to (Sudjana, 2017) Learning success is realized through the transformation of students' behavior, knowledge, skills, or attitudes after participating in the learning process. According to (Hutauruk, 2021) Learning outcomes can be evaluated using various instruments, such as written tests, observations, or practical assignments. According to Bloom (1956), learning outcomes consist of competencies acquired by students after the learning process, which are divided into three main areas: cognitive (knowledge), affective (attitudes), and psychomotor (skills). Bloom emphasized that learning outcomes should not only be seen in the ability to remember information, but also in the ability to understand, apply, analyze, evaluate, and create. Therefore, it is crucial for teachers to design learning experiences that allow students to develop abilities in all three domains in a balanced manner.

According to Dimiyati and Mudjiono (2006), learning outcomes are a sign of the success of the learning process, observable from changes in student behavior. They explain that learning outcomes are influenced by two main aspects: internal aspects (students' interests, motivation, and learning abilities) and external aspects (learning environment, teaching methods, and learning media). Therefore, an appropriate teaching approach, such as the use of Game-Based Learning, can contribute to improving learning outcomes by adapting teaching techniques to the characteristics and needs of students.

Based on expert perspectives, the conclusion is that learning achievement reflects the transformation reflected in students' abilities, understanding, behavior, and skills after they complete the learning process. To achieve optimal learning outcomes, teachers must consider factors influencing learning success and choose appropriate strategies so that students, including slow learners, can effectively grasp the material and apply it to their daily lives.

Learning Outcome Indicators

According to (Sudjana, 2017) learning outcome indicators include mastery of the material (cognitive), skills in practicing or applying the material (psychomotor), and attitudes and interests towards the lesson (affective). According to (Nugroho, 2022) in the context of learning Mathematics for slow learners, indicators can be increased numeracy skills, active participation, and understanding of basic Mathematics concepts. Nana Sudjana (2009) states that learning achievement indicators are certain behaviors or abilities that can be measured and observed as evidence that learning objectives have been successfully achieved. Sudjana explains that indicators must be formulated clearly and operationally so that they can be used as a basis for assessing the level of student success. Generally, learning achievement indicators include cognitive, emotional, and psychomotor aspects, which are assessed through testing, observation, or assigned tasks. With the right indicators, teachers can assess students' level of understanding of the material and their ability to master the skills taught.

According to Winkel (2004), learning outcome indicators serve as guidelines for formulating assessments that align with learning objectives. Winkel emphasized that indicators should be formulated based on specific instructional objectives (IQO) to ensure more focused assessments. He also emphasized the importance of measurable and realistic indicators, especially for students with special needs such as slow learners, so that assessments can reflect students' actual abilities and provide useful information for teachers in designing follow-up learning.

Referring to the experts' perspectives, the conclusion is that learning achievement indicators are a crucial element in the learning process because they serve as measuring tools for assessing the achievement of educational goals. With clear, measurable indicators tailored to student characteristics, teachers can conduct objective evaluations and provide appropriate guidance to ensure optimal student learning outcomes, including slow learners.

Factors Influencing Learning Outcomes

Rahman & Dewi (2020) stated that learning achievement is influenced by internal factors, such as motivation, interest, cognitive capacity, and psychological conditions of students; as well as external factors, including teaching methods, learning media, the school environment, and teacher involvement. Meanwhile, Slameto (2010) emphasized that student learning outcomes are influenced by various factors, both triggered by personal aspects and environmental conditions. According to Slameto, internal factors include physical conditions, mental conditions such as interest, drive, abilities, and the level of intelligence of students. Meanwhile, external factors include the family environment, educational institutions, communities, and existing learning facilities and resources. He stated that the relationship between internal and external factors plays a crucial role in determining how successfully students achieve their learning goals.

Meanwhile, Dimiyati and Mudjiono (2006) added that teacher factors also play a significant role in influencing learning outcomes. Experts emphasize that teachers' expertise in designing appropriate teaching strategies, selecting engaging learning resources, and creating comfortable classroom conditions significantly impact student motivation and understanding. For slow learners, the teacher's role in implementing a flexible and patient approach is crucial to achieving optimal learning outcomes.

3. Materials and Method

This research is categorized as Qualitative Research. A qualitative approach is a type of research that applies procedures, steps, and techniques that emphasize various data and information obtained from respondents as subjects, so that they can express their own opinions and feelings in order to gain a comprehensive understanding of the research object (Creswell in Djam'an Satori & Aan Komariah, 2017, p. 24). Meanwhile, Creswell (2014) stated that quantitative research is a method that uses a deductive approach to test hypotheses while describing the cause and effect relationships found in the variables being studied. Typically, data collection in quantitative research includes surveys, experiments, and secondary data analysis.

4. Results and Discussion

Analysis of Learning Test Results

This research is based on the need to improve the learning outcomes of slow learners in Mathematics, particularly in the topic "Comparing Types of Flat Shapes." Slow learners are those whose cognitive abilities are below average, but are not categorized as disabled. They require more time to understand the subject matter and require a more flexible and contextual learning approach to achieve optimal learning outcomes.

In this study, the Game-Based Learning model was chosen because it has been proven to increase student engagement, creativity, and learning outcomes by directly involving them in real-life projects. In GBL, the learning process is student-oriented, involving students in identifying problems and collaborating in groups.

In SD Negeri 002 Kombeng, there are 5 students identified as *slow learners*. Based on the observation results, slow learner students have thinking skills and understanding of material below the average of 5 students. On February 10, 2025, the author conducted a Pre-Test to the 5 students. In Mathematics, slow learner students often experience difficulties in understanding abstract concepts such as addition and subtraction of large numbers, the use of counting strategies, and the application of concepts to story problems.

Based on the results of the pretest given to five slow learner students, all students obtained scores below the minimum completion standard set, which is 30 to 33. The lowest scores were obtained by Anggun, Deni, and Riski, each at 30, while the highest score was achieved by Bagas at 33. Citra was in the middle position with a score of 31. All students were declared incomplete, which indicates that their initial understanding of the mathematics material given was still very low. These results reflect a significant gap in understanding basic concepts, so that learning interventions are needed that are more interesting, concrete, and in accordance with the learning characteristics of slow learner students, such as the application of the *Game Based Learning* model to increase their motivation and involvement in learning.

Interview Results Analysis

Based on interviews with five *slow-learning students* after participating in math lessons using games, the students expressed feelings of happiness and enthusiasm. They felt the learning process was more engaging and less boring. Furthermore, they reported feeling more confident when answering questions after playing the math games. They stated that the games made them more willing to try and less afraid of making mistakes, as the learning environment became more relaxed and enjoyable.

Interview results also showed that students felt motivated every time they successfully obtained a correct answer through the game. This success made them even more enthusiastic about learning and understanding the material on comparing the characteristics of plane figures. The majority of students also stated that mathematical concepts were easier to understand because the presentation through the game was more concrete and interactive than the traditional lecture method. Therefore, it can be concluded that the implementation of the *Game-Based Learning model* has a positive effect on students' self-confidence, motivation, and understanding of this material.

Analysis of Observation Results

Based on the results of observations conducted on 5 slow learner students at SDN 002 Kombeng during Mathematics learning on the Comparative Characteristics of Spatial Shapes material using the Game Based Learning model, data obtained showed that students showed increased activeness in participating in the learning process. Before the action, students tended to be passive, especially in preparing learning equipment and answering teacher questions. However, after the application of game media, students appeared more disciplined in preparing learning equipment and answering teacher apperceptions more confidently.

Furthermore, students were more enthusiastic in paying attention to the teacher's motivational messages and in listening to the explanation of the objectives and lesson plan. Their engagement increased when students actively answered questions, asked feedback, and engaged directly in the use of game media. Students responded positively when the learning media was implemented, as they appeared enthusiastic, actively participated, and did not hesitate to discuss material they did not yet understand with the teacher. These results indicate that the Game-Based Learning model is able to increase student engagement in aspects such as preparation, attention, participation, and two-way interaction with the teacher

5. Conclusion

Based on the findings of the classroom research actions that have been implemented in two cycles, it can be summarized that the use of the game-based learning model has proven effective in improving the learning outcomes of students who experience difficulties, especially in mathematics lessons with a focus on the material of comparing the characteristics of flat shapes. Clear evidence is seen in the increase in the average value of student learning from before the action to after the action in cycle II, as well as increasing student participation and involvement during the learning process.

This conclusion answers the question of whether the Game Based Learning model is able to improve the learning outcomes of students who experience difficulties, while also fulfilling the research objective which aims to evaluate the effectiveness of the application of the model in mathematics learning at the elementary school level. With a real, fun teaching method, and involving active participation, this model has proven to be suitable to support the learning needs of students who require a special approach and visual-kinesthetic methods in understanding mathematical concepts. Based on the results of the classroom research action conducted with the title "Application of the Game Based Learning Model to Improve the Learning Outcomes of Slow Learner Students in Mathematics Subjects in Elementary Schools", several points can be concluded as follows:

The implementation of the Game Based Learning model has been proven to be successful in improving the learning achievement of students with low abilities in mathematics lessons, this can be seen from the increase in learning test scores from the first cycle to the second cycle as well as increased student participation during the learning process.

Learning methods that focus on games are able to create a learning atmosphere that is more interesting, fun, and motivates students with low abilities to be braver in asking questions and discussing. Students become more confident and actively involved in every learning activity.

Games help students with low abilities grasp mathematical concepts more easily, especially abstract topics like comparing the characteristics of geometric shapes. Through activities that combine play and learning, students can see concepts in action, facilitating comprehension.

Therefore, the application of the Game Based Learning model can be an effective learning strategy option to improve learning outcomes and the active involvement of students with low abilities in mathematics lessons at the elementary school level.

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