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Enhancing Elementary Students' Mathematical Reasoning through Realistic Mathematics Education: A Quasi-Experimental Study on 3D Geometry

Uliya Khoirun Nisa[1], Eko Kuswanti[2], Khoirotun Nadiyyah[3], Muhamad Nurulhayah[4]
[1,2,3]Universitas Terbuka, Tangerang Selatan, Indonesia
[4]Universiti Islam Melaka, Melaka, Malaysia

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ABSTRACT

This study addresses the limited empirical evidence on the effectiveness of the Realistic Mathematics Education approach in improving elementary students' mathematical reasoning skills, particularly in three-dimensional geometry. The objective of this research is to examine whether the Realistic Mathematics Education approach significantly enhances fifth-grade students' mathematical reasoning abilities in learning three-dimensional geometry. The study employed an applied quasi-experimental design with a Non-Equivalent Control Group. Two fifth-grade classes at SD Muhammadiyah Ngijon 1 were selected as the experimental and control groups. Data were collected through pretest and posttest using a validated and reliable five-item essay test that measured students' mathematical reasoning skills. Data analysis was conducted using the Shapiro-Wilk normality test, Levene homogeneity test, Independent Samples t test, and normalized gain analysis. The findings revealed a statistically significant difference between the posttest scores of the two groups ($p = 0.031$), which is lower than the 0.05 threshold. The experimental group achieved an N-Gain score of 79.75 percent, categorized as effective, while the control group achieved 75.20 percent, categorized as quite effective. These results demonstrate that the Realistic Mathematics Education approach is more effective, both statistically and pedagogically, in improving students' mathematical reasoning skills in three-dimensional geometry through meaningful, real-life contextual learning.

Corresponding Author:

Uliya Khoirun Nisa
Faculty of Teacher Training and Education, Universitas Terbuka, Banten, Tangerang Selatan, Indonesia
Email: uliya.nisa@Ecampus.ut.ac.id

1. INTRODUCTION

Mathematics learning in elementary schools plays a strategic role in developing students' logical, analytical, and reasoning skills, which serve as an essential foundation for

21st-century skills. The modern educational paradigm emphasizes that mathematics is no longer viewed simply as a collection of arithmetic procedures, but rather as a means to develop reasoning, problem-solving, and decision-making skills in various real-life situations [1]. However, various international and national evaluation findings indicate that Indonesian students' mathematical reasoning skills remain low, particularly in solving contextual and spatial problems [2].

The 2022 Programme for International Student Assessment (PISA) results indicate that Indonesian students' performance in mathematics remains below the global average, particularly in areas requiring reasoning, interpretation, and conceptual understanding [3]. These findings align with national assessment reports indicating that most elementary school students are unable to develop logical arguments, identify patterns, or relate mathematical concepts to everyday life situations. This situation indicates that the main problem lies not solely in computational skills [4], [5], but rather in weak mathematical reasoning skills [6], the core of meaningful learning [7]. One major factor suspected of contributing to this problem is the dominance of conventional, teacher-oriented learning approaches [8]–[10]. Classroom mathematics learning practices are generally characterized by direct delivery of material, an emphasis on memorizing formulas, and routine, procedural exercises [11]. While this approach can improve calculation accuracy in the short term, it often fails to develop students' conceptual understanding and in-depth reasoning skills [12]–[14].

This problem becomes even more complex in geometry learning, particularly in the field of geometric shapes. Geometry demands visualization, abstraction, and an understanding of spatial relationships, which are closely related to mathematical reasoning [15]. However, in practice, learning about geometric shapes still tends to focus on the use of volume and surface-area formulas rather than on meaningful conceptual understanding [16]. As a result, students may be able to solve mathematical problems but struggle to explain reasoning, construct arguments, or apply concepts in new contexts. Recent research shows that mathematics learning disconnected from real-life contexts tends to be perceived by students as abstract and irrelevant, thereby decreasing motivation and engagement in learning [12]. In the context of spatial geometry, the lack of contextual learning experiences also hinders the formation of mental representations necessary for understanding three-dimensional structures [17], [18]. Therefore, a learning approach is needed that can bridge abstract mathematical concepts with students’ real-life experiences.

One learning approach relevant to addressing students’ low mathematical reasoning abilities is Realistic Mathematics Education (RME). This approach is based on the view that mathematics is not simply a collection of abstract symbols and procedures, but rather a human activity that develops through interaction with the realities of everyday life [19]–[21]. Therefore, in RME, learning begins with contextual problems close to students’ experiences, so that mathematical concepts do not emerge suddenly in formal form but develop gradually through the exploration of real-life situations. Through this process, students can construct their own understanding of mathematical concepts by linking concrete experiences with symbolic representations.

Conceptually, RME places context as the starting point for the learning process, which is then developed through modeling activities [22], [23]. The contextual problems used serve as a bridge between the real world and mathematics, enabling students to mathematize gradually. In the initial stages, students interpret real-world situations using informal strategies known as horizontal mathematization [24]. Subsequently, through discussion, reflection, and generalization, these strategies develop into more formal mathematical representations through vertical mathematization [25]–[27]. Thus, learning does not stop at solving practical problems but continues until a systematic conceptual structure is formed. The theoretical foundation of this approach aligns with social constructivism theory, which emphasizes that knowledge is actively constructed through interaction with the environment and social collaboration [28], [29]. In the context of mathematics learning, student interaction, the use of models, and reflection on the resulting solutions are crucial for building conceptual understanding. The processes of horizontal and vertical mathematization enable students to move from informal understanding to formal representation in a meaningful manner [29], [30]. Through this process, students not only learn problem-solving procedures but also develop the reasoning structures underlying mathematical concepts, thus making learning more in-depth and understanding-oriented.

Various empirical studies over the past few years have shown that applying the Realistic Mathematics Education approach has a positive impact on various aspects of mathematics learning. RME has been shown to improve students' conceptual understanding because the learning process begins not with formal symbols, but with meaningful, real-life experiences [31], [32]. Furthermore, this approach has also been reported to improve problem-solving skills, learning engagement, and student motivation through exploratory activities that position students as active participants in the learning process [33], [34]. In the context of geometry learning, the use of contextual objects such as packaging, simple buildings, or everyday objects helps students develop spatial visualization and understand the characteristics of geometric shapes more concretely [35]. This is particularly important in spatial geometry, which inherently demands the ability to imagine, manipulate, and interpret three-dimensional shapes. The RME approach enables students to see spatial figures not only as mathematical objects but also as representations of real phenomena that have meaning in everyday life [15]. Thus, learning becomes more relevant and has the potential to foster the formation of more stable cognitive structures compared to learning that focuses solely on formulas and procedures [14], [36], [37].

However, although various studies have demonstrated the effectiveness of RME in improving learning outcomes and conceptual understanding, significant gaps remain in the existing literature. Most previous research has focused more on improving general abilities such as mathematical literacy, academic achievement, or broad spatial abilities [38], [39]. Studies specifically examining how the RME approach contributes to the development of mathematical reasoning skills, particularly in the context of spatial figures at the elementary school level, are still relatively limited. In fact, mathematical reasoning is the core of higher-order thinking skills, enabling students to understand relationships among concepts, construct logical arguments, and draw conclusions from evidence.

This study was designed to specifically examine the effectiveness of the Realistic Mathematics Education approach in improving elementary school students' geometric reasoning skills regarding geometric shapes, using a quasi-experimental design. This focus is expected not only to provide empirical evidence on the role of contextual learning in developing mathematical reasoning processes but also to enrich the theoretical foundation for how meaningful learning experiences can support the construction of deeper conceptual understanding. Furthermore, in practical terms, the findings of this study are expected to serve as a reference for teachers and curriculum developers in designing geometry lessons that are more relevant, contextual, and oriented toward strengthening students' thinking skills.

2. METHOD

Research Design

This study employed a quantitative research approach with a quasi-experimental method using a Non-Equivalent Control Group Design, a design that involves two intact class groups without random assignment of participants [40]. The study subjects were two fifth-grade classes at SD Muhammadiyah Ngijon 1, with class VA as the experimental group receiving instruction using the Realistic Mathematics Education (RME) approach and class VB as the control group receiving conventional instruction. This design was chosen because it is methodologically appropriate for educational settings where randomization is impractical or ethically constrained, allowing researchers to examine causal relationships within naturally existing classroom structures [41]. Although random assignment was not used, including pretest measurements in both groups helped control for initial differences and strengthened the study's internal validity.

Instruments and Data Collection

The instrument used in this study was a five-question essay test designed to measure students' mathematical reasoning abilities in spatial shapes. This instrument underwent content and construct validation procedures prior to implementation. Construct validity was tested using the Pearson Product-Moment correlation, and reliability was assessed using Cronbach's Alpha, with coefficients above 0.70 indicating acceptable internal consistency [42]. In addition, an item difficulty and discrimination index analysis was conducted to ensure that each question item appropriately measured students' reasoning abilities across varying ability levels. The development of the instrument was aligned with established indicators of mathematical reasoning, including the ability to formulate conjectures, provide logical arguments, identify patterns, and draw conclusions.

1

Data collection process

The data collection process was carried out in two stages, namely pretest and posttest. The pretest was administered before the treatment to measure students' initial abilities, while the posttest was administered after the treatment to assess changes in students' mathematical reasoning. Learning in the experimental group was conducted using the RME approach, which emphasizes real-world contexts, modeling, and student interactions in solving mathematical problems [19]. Meanwhile, the control group received learning using conventional methods that focused more on memorizing formulas and practicing routine questions. To ensure consistency in implementation, the treatment was delivered for the same instructional duration in both groups, and the learning objectives were kept equivalent across groups, differing only in instructional approach.

Data Analysis Technique

The data obtained were analyzed through several stages. First, a normality test was performed using the Shapiro-Wilk Test to assess normality, as it is recommended for small to moderate sample sizes. Second, a homogeneity-of-variance test was conducted using Levene's Test to assess whether the variances between the experimental and control groups were equal. After the assumptions of normality and homogeneity were met, a hypothesis test was conducted using the Independent Samples t-test to determine whether there was a statistically significant difference between the posttest mean scores of the experimental and control groups. The level of significance was set at $\alpha = 0.05$. Furthermore, to determine the magnitude of the instructional effectiveness, a normalized gain (N-Gain) analysis was performed using Hake's formula, which measures the proportion of actual improvement relative to the maximum possible improvement [43]. The interpretation of the N-Gain value is based on the established classification, namely:

$$N - Gain = \frac{Posttest\ score - Pretest\ score}{Maximum\ score - Pretest\ score}$$

Interpretation of N-Gain scores in this study refers to the following categories: less than 40% is categorized as ineffective, 40–55% is classified as less effective, 56–75% is quite effective, and above 76% is considered effective. All statistical analyses were performed at the 5% significance level using SPSS software.

3. RESULTS AND DISCUSSION

3.1. Results

Based on the Shapiro–Wilk normality test results, the purpose was to determine whether the pretest and posttest data were normally distributed. A summary of the results of the normality test is presented in Table 1.

Table 1. Data Normality Test Results

Tes	Class	Sig.	Result	Conclusion
Pretest	Control	0,068	0,068>0,05	Normal
Pretest	Exsperiment	0,081	0,081>0,05	Normal
Posttest	Control	0,104	0,104>0,05	Normal
Posttest	Exsperiment	0,088	0,088>0,05	Normal

Based on Table 1, the significance values (Sig.) for the control class pretest (0.068), experimental class pretest (0.081), control class posttest (0.104), and experimental class posttest (0.088) are all greater than 0.05 ($\alpha = 0.05$). Therefore, it can be concluded that the data in both groups meet the assumption of normality, allowing further parametric statistical analysis.

Table 2. Results of Data Homogeneity Test

Class	Sig.	Result	Conclusion
Pretest control and experimental class	0,200	0,200>0,05	Homogen
Posttest control and experimental class	0,144	0,144>0,05	Homogen

After that, a homogeneity test was conducted using Levene's Test for Equality of Variances, and the results are presented in Table 2. The significance value for the pretest data was 0.200, while for the posttest data it was 0.144. Since both values are greater than 0.05, the variance between the experimental and control groups can be considered statistically homogeneous. Thus, the assumption of homogeneity of variance required for the Independent Samples t-test was satisfied. A comparison of the average posttest values for mathematical reasoning ability between the control and experimental classes is shown in Figure 1 below.

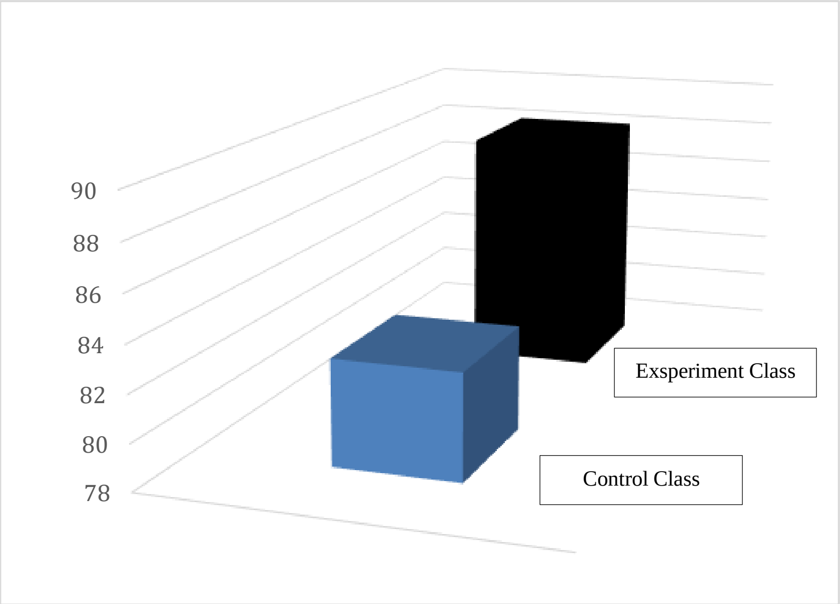

Figure 1. Posttest Average Diagram for Class V Students

Based on Figure 1, the experimental class's average posttest score is higher than the control class's. This result shows that the experimental class's mathematical reasoning ability is higher than that of the control class, as evidenced by their scores. After that, an analysis was carried out on the sig. value obtained from the independent sample t-test. The output of the independent sample t-test can be seen in Table 3 below:

Table 3. Independent t-test output

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Hasil	Equal variances assumed	2,202	0,144	-2,214	55	0,031	-5,842	2,639	-11,132	-0,553
	Equal variances not assumed			-2,202	49,892	0,032	-5,842	2,653	-11,171	-0,514

Based on Table 3, the Sig. value of Levene's Test is 0.144 > 0.05, indicating that the assumption of equal variances is met. Therefore, the interpretation of the t-test results is based on the "Equal variances assumed" row. The Sig. (2-tailed) value in this row is 0.031 < 0.05, which indicates that there is a statistically significant difference in mathematical reasoning ability between students taught using the RME approach and those taught using conventional methods. The negative mean difference (-5.842) indicates that the experimental group achieved higher posttest scores than the control group. These findings provide empirical evidence that the RME approach is more effective than conventional instruction at improving students' mathematical reasoning. After establishing a statistically significant difference between groups, an N-Gain analysis was conducted to determine the magnitude of instructional effectiveness.

Table 4. N-Gain Test Results

Class Value N-Gain Percentage Description

Class	Value *N-Gain*	Percentage	Description
Experiment	79.7480	80%	Effective
Control	75.1967	75%	Quite Effective

Based on Table 4, the experimental class achieved an N-Gain of 79.7480 (80%), while the control class achieved 75.1967 (75%). Referring to the established effectiveness criteria, the experimental class falls into the "Effective" category (above 76%), whereas the control class falls into the "Quite Effective" category (56–75%). Although both groups experienced improvement, the experimental group demonstrated a higher magnitude of normalized gain, indicating that the RME approach provides greater instructional impact on students' mathematical reasoning abilities in spatial geometry material.

3.2. Discussion

The findings of this study indicate that the Realistic Mathematics Education (RME) approach is more effective in enhancing the mathematical reasoning abilities of fifth-grade elementary school students in spatial geometry material compared to conventional learning methods. This is evidenced by the N-Gain value of the experimental class, which reached

79.75% (category "Effective"), while the control class reached 75.20% (category "Quite Effective"). This finding confirms that mathematics instruction grounded in students' real-life contexts can have a greater impact on the development of their mathematical reasoning abilities.

Effectiveness of the RME Approach on Mathematical Reasoning Ability

Mathematical reasoning is a fundamental competency that should be developed from the elementary level because it serves as the foundation for conceptual understanding, higher-order thinking skills, and problem-solving abilities in everyday life (Coryton, 2024). In this context, the present study demonstrates that the Realistic Mathematics Education (RME) approach significantly improves elementary school students' mathematical reasoning abilities. This is supported by the difference in posttest results between the experimental and control groups, which is statistically significant ($p = 0.031 < 0.05$), as well as the N-Gain value of the experimental group, which reached 79.75% and is included in the "effective" category. The RME approach was developed with the philosophy that mathematics is not merely a collection of formulas to be memorized, but rather a human activity that emerges from real experiences [44]. In practice, this approach emphasizes meaningful real-life contexts as the starting point for learning, which students gradually mathematize through reflection, discussion, and modeling. This process is known as horizontal and vertical mathematization, which is the transformation of contextual problems into more abstract and formal mathematical representations [45]. Thus, students not only memorize procedures but also build deeper and more meaningful conceptual understanding.

The effectiveness of RME in this study is reflected in the students in the experimental group's ability to identify relationships among concepts, develop problem-solving strategies, and provide logical arguments for the solutions they find. This supports the findings of Wibowo et al. (2022), who found that students who learn with the RME approach tend to be better able to engage in inductive and deductive reasoning when solving mathematics problems than students who learn conventionally [46]. Mathematical reasoning is not only seen in the final answer but also in the thinking process, the relationships among concepts, and the ability to explain solutions logically (Laurens et al., 2018). In the context of spatial geometry, the RME approach offers distinct advantages because it can associate three-dimensional geometric concepts with concrete objects familiar to students in their daily lives. For example, the concepts of volume and surface area of cubes and cuboids are introduced through the context of food boxes, cardboard boxes, or buildings in the surrounding environment [47]–[49]. Students are then asked to estimate, measure, and model these shapes in mathematical units. According to Novita and Prahmana (2023), context-based spatial learning and concrete manipulatives can improve spatial reasoning, which is a major component in geometric thinking [18].

In addition to improving cognitive abilities, learning with the RME approach also has an impact on students' affective domains. Active interaction in group discussions, joint modeling, and involvement in constructing conceptual understanding enhance students' confidence, motivation, and positive mathematical disposition. This finding strengthens the statement that mathematical reasoning is not only related to intellectual abilities but is also influenced by attitudes, motivation, and a supportive learning environment. Overall, the results indicate that the RME approach is highly effective in enhancing elementary school students' mathematical reasoning abilities, especially in spatial geometry [35]. This approach does not focus solely on final answers but rather on a comprehensive mathematical thinking process grounded in real-life experiences and active student participation [50], [51].

The Influence of Realistic Context in Learning Spatial Figures

Effective mathematics learning requires a meaningful connection between abstract concepts and real-world experiences so that students can actively construct understanding from what they learn. In the context of three-dimensional geometry or spatial figures, integrating realistic contexts is particularly relevant given the material's inherently visual and spatial nature. The results of this study indicate that the Realistic Mathematics Education (RME) approach, which emphasizes contextual exploration, significantly supports the development of students' mathematical reasoning in spatial geometry.

The RME approach positions real-life context as the primary entry point in the mathematics learning process. In learning spatial figures, context is used to build an initial understanding of shape, volume, and surface area through exploration of concrete objects frequently encountered in students' daily lives. Students in the experimental group in this study, for example, were introduced to various objects, such as food boxes, drink bottles, cans, and plastic balls, to familiarize them with the shapes of cubes, blocks, cylinders, and spheres [32]. Through observation, measurement, and discussion, students build an understanding of each shape's characteristics and relate them to more abstract mathematical concepts. The principle underlying this context is horizontal mathematization, the process of transforming real-world situations into initial mathematical models that can be analyzed and further developed [45]. This process makes learning more meaningful because students can see the direct use of mathematics in their lives. Students are not only given formulas for volume and surface area, but are also invited to discover, verify, and interpret the concepts in context.

Previous research supports this finding. Novita and Prahmana (2023) showed that the use of concrete objects and real situations in geometry learning encourages the development of students' spatial reasoning, namely the ability to imagine, manipulate, and interpret objects in space [18]. They found that students who learned geometry with a realistic approach had a better understanding of shape identification and were able to apply these concepts to solve practical problems. Meanwhile, [52] stated that learning spatial shapes in real-world contexts can reduce misconceptions students often encounter, such as errors in distinguishing between sides, edges, and vertices.

Comparison with the Conventional Approach

The results of this study reveal a statistically significant difference between the Realistic Mathematics Education (RME) approach and the conventional learning approach in improving elementary school students' mathematical reasoning abilities in spatial geometry learning. The higher average posttest scores and N-Gain scores in the experimental group indicate that the RME approach makes a greater contribution to the development of students' reasoning abilities than procedural, one-way learning methods. This finding strengthens the criticism of conventional learning, which has so far been widely applied in various elementary schools in Indonesia. The conventional approach to mathematics learning generally emphasizes teacher-centered instruction, characterized by direct information delivery, using expository teaching methods, routine exercises, and an emphasis on procedural memorization of formulas (Hasanah, 2024). In this model, the teacher plays a central role as the main source of knowledge, while students tend to be passive recipients of information with limited involvement in concept exploration and reflective thinking about the material being studied. Although this pattern may improve students' mastery of procedural techniques, it often fails to foster deep conceptual understanding and limits the development of mathematical reasoning skills. [12].

In the context of spatial geometry, the conventional approach often teaches volume and surface area formulas directly, without building an understanding of their origins. Students memorize formulas and apply them mechanically, without understanding the relationships among shape, size, and context. This causes students to have difficulty when faced with problem-based questions, especially those that require visual representation and spatial reasoning [53]. In contrast, the RME approach facilitates students' understanding of geometric concepts through concrete experiences, collaborative discussions, and contextual explorations, enabling them to construct meaning independently.

Theoretical and Practical Implications

This study provides significant theoretical and practical contributions to the development of mathematics learning, particularly in strengthening mathematical reasoning through context-based instruction in elementary education in Indonesia. By proving the effectiveness of the Realistic Mathematics Education (RME) approach to improving students' mathematical reasoning abilities in spatial geometry material, the findings reinforce the theoretical perspective that mathematical knowledge is actively constructed through contextual and experiential learning processes, rather than being passively acquired through procedural instruction [15], [31]. Theoretically, the findings extend and empirically support the social constructivism paradigm underlying the RME approach, particularly in fostering students' reasoning through meaningful contextual interaction. In constructivism, knowledge is considered to be constructed by individuals through interaction with the environment, experience, and social collaboration [28], [54]. The RME approach, which uses real contexts and horizontal and vertical mathematization processes, provides students with space to develop conceptual understanding and mathematical thinking independently and gradually. The results of this study strengthen the theory that mathematical reasoning does not develop solely from procedural exercises, but rather from the processes of exploring meaning, reflection, and argumentation supported by relevant contexts [48].

From a practical perspective, the results of this study provide direct implications for improving mathematics learning practices in elementary schools. First, mathematics teachers need to be encouraged to integrate real-life contexts into everyday learning. These findings show that when students are faced with relevant and meaningful situations, they become more motivated and easily understand abstract concepts, such as volume and surface area of geometric shapes. Therefore, teacher training that emphasizes the design of contextual activities and the creation of learning media based on real objects is very important [55]. Second, these results imply the need to revise the Independent Curriculum's curriculum or its implementation strategy by strengthening the contextual dimension in each learning achievement. Currently, much learning is still oriented towards cognitive achievement through repeated practice questions. RME offers a more contextual and participatory approach, which is more in line with the spirit of the Independent Curriculum, which emphasizes differentiated learning, meaningful learning, and character building. Third, in assessment practices, teachers need to develop evaluation tools that not only measure students' final outcomes but also the thinking processes and problem-solving strategies they use [33], [56]. This is consistent with the RME approach, which emphasizes the process of mathematization rather than numerical answers alone. Assessments based on reasoning rubrics, project assignments, or student reflections can be used as alternatives to formative assessments in the context of contextual learning.

Limitations of the Study

Despite the significant findings, this study has several limitations that should be acknowledged. First, the research was conducted in a single elementary school, which may limit the generalizability of the results to broader educational contexts. Second, the study employed a quasi-experimental design without random assignment, which may introduce potential selection bias between the experimental and control groups. Third, the intervention's duration was relatively short, which may not fully capture the long-term impact of the RME approach on students' mathematical reasoning abilities. Therefore, the findings should be interpreted with caution when applied to different educational settings and student populations.

Future Research Directions

Future research is recommended to involve larger and more diverse samples across multiple schools to enhance the external validity of the findings. In addition, longitudinal studies are needed to examine the long-term effectiveness of the RME approach in developing mathematical reasoning skills. Further studies may also explore integrating digital technology, interactive learning media, and differentiated instruction within the RME framework to support 21st-century mathematics learning. Moreover, future research could investigate the effectiveness of RME across different mathematical topics and grade levels to provide more comprehensive empirical evidence.

4. CONCLUSION

This study shows that the Realistic Mathematics Education approach makes a stronger contribution to the development of elementary school students' mathematical reasoning skills in spatial geometry than conventional approaches. Through the integration of real-world contexts, the use of concrete objects, and active interaction in the learning process, students not only understand concepts procedurally but also build logical relationships between them in a more meaningful way. These findings reinforce the view that mathematics learning grounded in contextual experiences can support the development of reasoning through a gradual process of mathematization. Theoretically, this study provides empirical support for the social constructivism framework in mathematics learning, particularly in explaining how reasoning can develop through the interaction between real-world experiences and formal representations. In practice, the results indicate the importance of a contextual, student-centered learning design as a strategy to improve the quality of geometry learning in elementary schools, in line with the direction of educational transformation that emphasizes meaningful, life-relevant learning for students. However, this study has limitations such as the limited scope of the study site in one school and the use of a quasi-experimental design that does not fully control for external variables.

Furthermore, the study focused solely on spatial geometry, thereby failing to reflect the effectiveness of the RME approach across other mathematics topics. Therefore, further research is recommended to involve a larger sample, employ a more robust experimental design, and explore the integration of digital technology and process-based formative assessment within the RME framework. More broadly, this research provides a pedagogical foundation for developing mathematics learning that is more contextual, adaptive, and oriented toward strengthening students' thinking skills, thereby potentially supporting the sustainable improvement of numeracy literacy in the community.

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CONFLICTS OF INTEREST

The authors declare that there is no conflict of interest regarding the publication of this manuscript.

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