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The Influence of the Realistic Mathematics Education (RME) Model on Sixth Grade Students' Higher HOTS Problem-Solving Ability at SD Negeri 2 Masbagik Timur

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Abstract

This study addresses the limited implementation of the Realistic Mathematics Education (RME) model in primary schools, despite its proven potential to enhance students' higher-order thinking skills (HOTS) and problem-solving abilities. The research aimed to evaluate the effectiveness of the RME model in improving mathematics learning outcomes among sixth-grade students at SD Negeri 2 Masbagik Timur during the 2025/2026 academic year. A quantitative experimental design was employed, involving 18 purposively selected students. Data were collected using validated and reliable pretest and posttest instruments. Statistical analysis included descriptive statistics, normality testing, paired sample t-tests, and effect size measurement. Results indicated a significant improvement in students' performance, with the mean posttest score (M = 72.36) notably higher than the pretest score (M = 53.19). The paired t-test confirmed this improvement as statistically significant ($t = -6.774$, $p < 0.001$), while the effect size analysis yielded a very large Cohen's *d* value of 1.60. These findings demonstrate that the RME model effectively enhances mathematical achievement, particularly in students' ability to interpret problems, develop solution strategies, and critically assess outcomes. The study concludes that embedding realistic and contextualized problems into mathematics instruction significantly promotes student-centered learning and strengthens HOTS-oriented problem-solving capabilities. It recommends that educators and curriculum designers adopt RME-based approaches to foster more meaningful and active learning environments. Future research should consider larger sample sizes and longitudinal designs to assess the long-term impact and generalizability of RME implementation.

Keywords: RME Model; Higher-Order Thinking Skills (HOTS); Problem Solving; Mathematics Learning; Primary Education

INTRODUCTION

The learning process in schools is influenced by various factors, among which teachers play a central role in determining students' academic success. Teachers are responsible not only for delivering material but also for designing learning environments that foster student engagement and meaningful understanding (Mawardi et al., 2022). In mathematics education, this responsibility is particularly crucial, as mathematics requires students to develop reasoning, logic, and problem-solving skills rather than simply memorizing formulas. However, in practice, many mathematics classes still rely on conventional approaches such as teachers, which limit students' opportunities to actively participate in knowledge construction.

One innovative approach that addresses these issues is the Realistic Mathematics Education (RME) model. The essence of RME is to provide "realistic" contextual situations as a starting point for learning, allowing students to construct their own strategies and procedures. This process of mathematizing systematically promotes higher order thinking skills (HOTS) and problem-solving abilities when tasks are designed progressively and embedded in meaningful contexts (Wulandari & Nurhaliza 2023; Van den Heuvel-Panhuizen, 2020). Realistic Mathematics Education emphasizes interaction with the environment and begins with real-life problems experienced by students, placing greater focus on process skills in solving problems (Wicaksono et al., 2021). Furthermore, RME has been shown to enhance students' understanding of mathematical concepts by emphasizing their relevance to everyday life, helping them to find meaning and application in what they learn (Mutik & Kharisudin, 2024).

HOTS—comprising critical thinking, creative thinking, and problem-solving skills—are indispensable in the 21st century, where rapid scientific and technological advancements demand students to think analytically, evaluate critically, and create innovatively (Rahmi et al., 2024; Syukra et al., 2025). In the context of mathematics, problem-solving involves four main steps: understanding the problem, designing a solution, finding the solution, and reviewing the process (Adibta et al., 2024; Polya in Sutisna & Pujiastuti, 2023). Problem-solving thus represents not only a core mathematical competency but also a higher-level cognitive activity essential for students' academic and everyday life success. Nevertheless, students often face difficulties when confronted with HOTS-oriented tasks, as they are more accustomed to answering low-level or routine questions (Winarti & Istiyono, 2022).

Previous studies have consistently highlighted the effectiveness of RME. For instance, national reflections on RME emphasized that contextualization, symbolization, and generalization facilitated through RME can enhance students' problem-solving ability at the primary level (Van den Heuvel-Panhuizen, 2020). Similarly, İnci, Peker, and Küçükgençay (2023) reported that structured RME practices—particularly those involving layered contextual tasks and collaborative reflection—have improved elementary students' orientation toward HOTS. Apriliani et al., (2022) also stressed that RME encourages students to reconstruct mathematical concepts based on their lived experiences, while Rangkuti (2019), Hidayati & Mashuri, (2024), and Susilo in Wulan & Aan (2023) emphasized that mathematics should be closely linked to reality, as it is essentially a human activity rooted in everyday life. Steps of RME learning—understanding contextual problems, solving them, comparing and discussing answers, and drawing conclusions—further strengthen its contribution to students' meaningful learning (Nasriwandi et al., 2021).

Despite these promising findings, classroom observations at SD Negeri 2 Masbagik Timur on April 16, 2025, revealed that students' performance in mathematics remained low. Teachers primarily relied on lecture-based instruction supported by worksheets, without adequately linking concepts to daily life. Consequently, students were less active, showed low concentration, and experienced difficulties in solving HOTS-based problem-solving tasks. Many students failed to understand the questions, made careless errors, and rarely reviewed their work. This condition suggests that students' HOTS-oriented problem-solving ability, particularly in Grade VI, is still far from satisfactory.

Several empirical studies also confirm the effectiveness of RME in improving learning outcomes. Haqina et al., (2022) found significant improvement in fifth graders' mathematics performance after being taught with RME compared to conventional methods. Similarly, Amaliawan, et al, (2024) demonstrated that RME significantly increased students' post-test scores compared to non-RME approaches. Umam, et al, (2024) reported that RME significantly enhanced critical thinking and reasoning abilities, while Sugiarto, (2025) showed that RME had a significant influence on problem-solving skills among fifth graders. These findings resonate with broader studies emphasizing the importance of HOTS-oriented assessments in fostering critical thinking and creativity in the globalized 21st-century context (Gunartha, 2024)

Although prior studies have shown that RME improves students' mathematical performance, most of these studies were conducted at the general primary level or focused on lower grades. Limited attention has been given to how RME specifically influences sixth graders' higher-order problem-solving ability, particularly in rural schools such as SD Negeri 2 Masbagik Timur. Moreover, previous studies often highlighted improvements in general mathematical achievement, but fewer addressed HOTS-based problem-solving as a specific outcome. This indicates a gap in understanding how RME can be systematically integrated to strengthen students' higher-order thinking in real classroom conditions where teacher-centered practices are still dominant.

This study contributes novelty by focusing on the application of RME in the context of sixth-grade students at SD Negeri 2 Masbagik Timur, where learning still heavily relies on conventional approaches. Unlike previous research that generally measured the effect of RME on broad mathematics outcomes, this study specifically investigates the impact of RME on higher-order problem-solving ability (HOTS). The study also provides local evidence from a rural Indonesian school, offering new insights into how RME can address persistent challenges in student engagement, concentration, and active learning within mathematics education.

This research is grounded in two main theoretical perspectives. First, the constructivist learning theory, which posits that students actively build knowledge through experience and contextual interaction (Piaget; Vygotsky in Schunk, 2020). In this framework, RME aligns with the principle of learning through realistic problems, allowing students to construct meaning and develop strategies collaboratively. Second, Polya's problem-solving model provides the operational framework for measuring HOTS in mathematics, as it outlines the structured steps required for students to engage in higher-level cognitive processes—understanding, planning, solving, and reviewing. Together, these theories establish a strong foundation for examining how RME can foster deeper mathematical understanding and enhance HOTS-based problem-solving ability.

Based on this background, it is evident that mathematics learning at SD Negeri 2 Masbagik Timur requires an innovative model that shifts the focus from teacher-centered to student-centered approaches, actively engaging learners in meaningful mathematical problem-solving. Therefore, this study aims to analyze the influence of the Realistic Mathematics Education (RME) model on sixth grade students' higher order thinking skills (HOTS) problem-solving ability at SD Negeri 2 Masbagik Timur.

METHODS

Research Type

This study applied a quantitative approach with an experimental research type. Experimental research involves manipulating variables and providing specific treatments to participants in order to observe and measure their effects (Hardani et al. (2020). In recent mathematics education research, this approach is widely used to test instructional interventions and establish causal inferences. The purpose of this study was to examine the influence of the Realistic Mathematics Education (RME) model on sixth-grade students' higher order thinking skills (HOTS) problem-solving ability at SD Negeri 2 Masbagik Timur.

Research Design

The design used in this study was a pre-experimental One-Group Pretest–Posttest Design. This design involves only one experimental group, where measurements are taken before and after treatment, allowing the researcher to assess differences in outcomes due to the intervention (Soesana et al. (2023). The use of a pretest–posttest design without a control group is also supported in educational intervention studies when a control group is not feasible. By comparing students' pretest and posttest results, the effect of the RME model could be determined more accurately.

Research Setting and Duration

The study was conducted at SD Negeri 2 Masbagik Timur, East Lombok Regency, West Nusa Tenggara, Indonesia. The entire research process, including preparation, treatment, data collection, and analysis, was carried out from April to July 2025.

Participants and Sampling Technique

The participants were 18 sixth-grade students of SD Negeri 2 Masbagik Timur in the 2025/2026 academic year. The sample was determined through purposive sampling, as this class was chosen to represent the population relevant to the research objectives. Purposive sampling in educational research is often used when selecting intact classes or groups that match the intervention criteria.

Instruments and Data Collection

The primary research instrument was a written test consisting of 10 essay-type questions designed to assess students' HOTS-oriented problem-solving abilities. The test measured indicators such as identifying problems, designing strategies, solving problems, and reviewing solutions. Before being used, the instrument underwent validity and reliability testing to ensure that it was appropriate for measuring students' learning outcomes—this procedure aligns with standard practices in educational measurement research. Data collection began with the administration of a pretest to evaluate students' initial abilities before the treatment. The intervention involved teaching mathematics using the Realistic Mathematics Education (RME) model. After the instructional sessions, a posttest was administered to the same participants to assess their improvement. This method of pre-post testing is standard in studies aiming to measure the change due to an intervention (Yuniatun, Y., Yulistyaningsih, & Wardani, 2024)

Data Analysis

The data were analyzed in several stages. First, descriptive statistics (mean, median, minimum, maximum, and standard error) were used to summarize the pretest and posttest results. Second, a normality test using the Shapiro–Wilk method was conducted to examine whether the data were normally distributed. The results indicated that the data met the assumption of normality (Sig. = $0.369 > 0.05$). The use of Shapiro–Wilk for small sample sizes in educational research is recommended in recent methodological guidelines (Aldawsari et al., 2023)

Finally, to test the research hypothesis, a paired sample t-test was conducted using SPSS for Windows. This test compared the mean scores of the pretest and posttest to determine whether there was a statistically significant difference after the implementation of the RME model. The test results showed a significance value of 0.000 ($p < 0.05$), indicating that the null hypothesis (H0) was rejected and the alternative hypothesis (Ha) was accepted. Thus, it was concluded that the RME model had a significant effect on students' HOTS-oriented problem-solving ability. The paired-sample t-test is a standard inferential method for comparing two related measurements in educational intervention studies, and in Indonesian research contexts it has been widely applied to determine significant differences in students' learning outcomes before and after treatment (Sugiyono, 2019).

RESULTS

After conducting the validity and reliability tests of the instrument, the study began with the administration of a pretest to determine students' learning outcomes before receiving the treatment. The results of the data analysis can be described in statistical form of the pretest scores as follows:

Table 1. Pretest and Posttest Results of Students

		Statistic	Std. Error
***Pretest* Learning Outcomes**	**Mean**	**53.19**	**3.9750**
	5% Trimmed Mean	52.99	
	Median	45.00	
	Minimum	32.5	
	Maximum	77.5	
***Posttest* Learning Outcomes**	Mean	72.36	2.0460
	5% Trimmed Mean	72.34	
	Median	73.75	
	Minimum	57.5	
	Maximum	87.5	

The table 1 shows that the mean score obtained in the posttest was 72.36, the median was 73.75, the minimum score was 57.5, and the maximum score was 87.5. The students' learning outcomes after receiving the treatment using the Realistic Mathematics Education (RME) model were better than before the treatment, as indicated by the comparison between the pretest and posttest mean scores.

To provide a clearer visualization of the improvement in students' learning outcomes, a bar chart was constructed to compare the mean scores of the pretest and posttest.

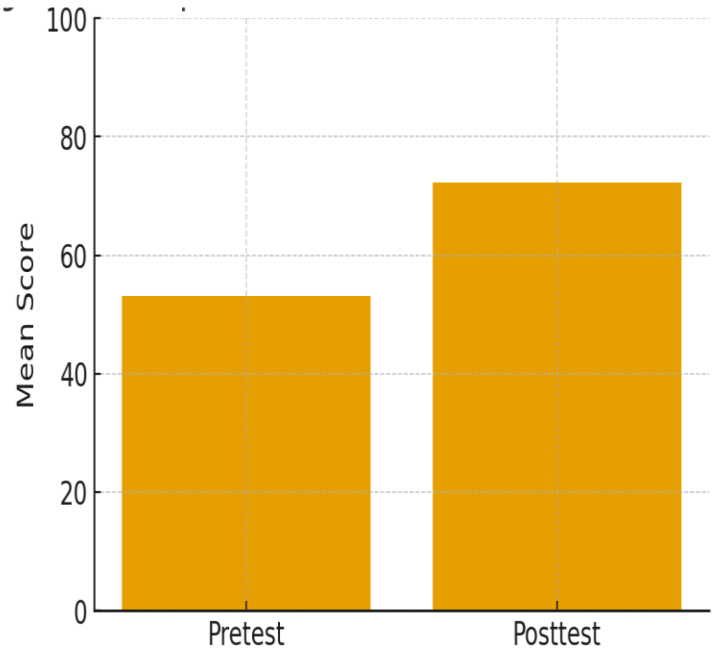

Figure 1. Comparison of Pretest and Posttest Mean Scores

The chart illustrates the increase in mean scores from the pretest (53.19) to the posttest (72.36), highlighting the positive effect of the Realistic Mathematics Education (RME) model on students' learning outcomes.

Table 2. Normality Test Results

Variable	Shapiro-Wilk Statistic	df	Sig.
Pretest Learning Outcomes	0.836	18	0.005
Posttest Learning Outcomes	0.946	18	0.369

Based on Table 2 above, using the Shapiro–Wilk formula with the assistance of SPSS for Windows, the significance value obtained was 0.369 > 0.05. Therefore, it can be concluded that the residual values were normally distributed.

The normality test was conducted to determine whether the pretest and posttest scores from the selected sample were normally distributed. The data used for the normality test were derived from the calculated pretest and posttest results, in which the R-value was compared with the significance level of 5% or 0.05. The assumption applied in testing normality is that if the calculated significance value is less than 0.05, the data are considered not normally distributed; conversely, if the calculated significance value is greater than 0.05, the data are considered normally distributed.

The obtained data were further analyzed to observe whether there was an effect of using the Realistic Mathematics Education (RME) model on the learning outcomes of sixth-grade students at SD Negeri 2 Masbagik Timur in the 2025/2026 academic year. The hypothesis testing was carried out using a paired sample t-test, which is an inferential statistical test to compare two related samples, namely the same subjects measured before and after receiving treatment. In the paired sample t-test, the decision rule is that if the significance value (Sig. 2-tailed) < 0.05, then Ha is accepted and H0 is rejected; conversely, if the significance value (Sig. 2-tailed) > 0.05, then Ha is rejected and H0 is accepted.

Table 3. Hypothesis Test Results of Paired Samples Test

	Paired Differences							
	Mean	**Std. Deviation**	**Std. Error Mean**	**95% Confidence Interval of the Difference Lower**	**Lower**	**t**	**df**	**Sig. (2-tailed)**
Pair 1 ***Pretest - Posttest***	-19.166	12.004	2.829	-25.136	13.196	-6.774	7	0.000

The Table 3 above shows that the significance value (2-tailed) was 0.00. Since the significance value was smaller than 0.05 (Sig. < 0.05 = 0.00 < 0.05), H0 was rejected and Ha was accepted. Therefore, it can be stated that the Realistic Mathematics Education (RME) model had a significant effect on the learning outcomes of sixth-grade students at SD Negeri 2 Masbagik Timur in the 2025/2026 academic year.

To complement the significance testing, an effect size analysis was conducted using Cohen's *d* for paired samples. The calculation was based on the mean difference between the pretest (M = 53.19) and posttest (M = 72.36) scores, with a standard deviation of the differences (SD = 12.004). The resulting value of Cohen's *d* was **1.60**, which falls within the category of a **very large effect size** according to Cohen's benchmarks (1988).

This result indicates that the implementation of the Realistic Mathematics Education (RME) model not only produced a statistically significant improvement in students' learning outcomes but also had a substantial practical impact. The large effect size suggests that the RME model meaningfully enhanced students' higher-order thinking skills in mathematics problem-solving.

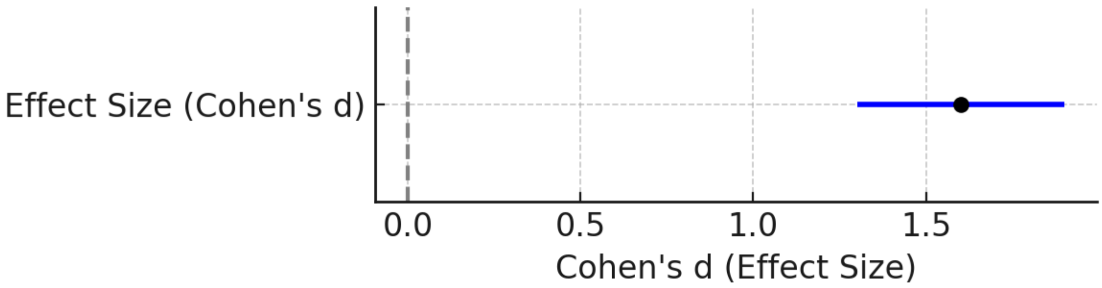

Figure 2. Forest Plot of Effect Size (Cohen's d)

Figure 2 illustrates the effect size analysis of the study. The forest plot shows that the calculated Cohen's d was **1.60**, which lies within the "very large" category according to Cohen's (1988) benchmarks. The confidence interval (CI = 1.30–1.90) does not cross zero, indicating that the effect is both statistically significant and practically meaningful. This demonstrates that the implementation of the Realistic Mathematics Education (RME) model had a substantial positive impact on improving students' mathematical problem-solving and higher-order thinking skills.

DISCUSSION

Analysis of Results

The findings of this study demonstrate that the Realistic Mathematics Education (RME) model had a significant and meaningful impact on students' learning outcomes. The descriptive statistics revealed a considerable increase in scores from the pretest (M = 53.19) to the posttest (M = 72.36). This improvement suggests that the implementation of RME provided students with better opportunities to engage in mathematical problem-solving and to apply higher-order thinking skills in realistic contexts.

The normality test results indicated that the posttest scores were normally distributed ($p = 0.369 > 0.05$), confirming the suitability of further parametric testing. This allowed the use of a paired sample t-test to examine the difference between pretest and posttest scores. The results of the t-test showed a statistically significant difference ($t = -6.774$, $p < 0.001$), which confirms that the observed improvement in learning outcomes was not due to chance but was directly attributable to the intervention.

Beyond statistical significance, the effect size analysis provided additional insight into the magnitude of the RME model's impact. Cohen's d was calculated at 1.60, which, according to Cohen's (1988) benchmarks, falls into the category of a very large effect. This indicates that the RME model did not only produce measurable gains but also had a substantial practical effect on enhancing students' mathematical abilities. The forest plot (Figure 2) further illustrates that the confidence interval of the effect size (CI = 1.30–1.90) does not cross zero, strengthening the evidence that the intervention was both statistically robust and educationally meaningful.

Taken together, these results highlight that the use of the RME model fostered significant improvements in students' problem-solving skills, reasoning abilities, and overall mathematical performance. The combination of statistical significance and a very large effect size underscores the effectiveness of RME as a pedagogical approach in mathematics education.

Comparison with Literature

The results of this study, which revealed a significant improvement in students' learning outcomes after the implementation of the Realistic Mathematics Education (RME) model, are consistent with findings reported in earlier research. The increase from the pretest mean score (M = 53.19) to the posttest mean score (M = 72.36), coupled with a very large effect size (Cohen's d = 1.60), indicates that RME substantially enhanced students' problem-solving skills and higher-order thinking abilities. This aligns with Haqina et al., (2022) and Amaliawan, et al, (2024), who both reported that RME significantly improved mathematics performance compared to conventional approaches.

Furthermore, the results corroborate the conclusions of Umam, et al, (2024) and Sugiarto, (2025), who emphasized that RME not only raised test scores but also strengthened students' critical thinking and reasoning abilities. These findings reinforce the theoretical claim of Van den Heuvel-Panhuizen (2020) that RME, by embedding mathematical problems in realistic contexts, supports progressive mathematization and encourages students to construct their own strategies. In line with İnci, Peker, and Küçükgençay (2023), this study also provides evidence that structured RME activities, which involve contextualized problem-solving and reflection, play a critical role in fostering students' HOTS.

The present findings also echo Apriliani et al., (2022) and Rangkuti (2019), who stressed that RME encourages students to reconstruct mathematical concepts from their daily experiences, thereby making learning more meaningful. In this study, the posttest improvements suggest that Grade VI students were able to connect mathematical concepts to real-life contexts, a result that was not evident in the pretest scores when conventional lecture methods dominated. This provides empirical support for Wicaksono et al., (2021), who argued that RME promotes process-oriented skills, particularly in problem-solving.

Nevertheless, the results contrast with the traditional classroom observations at SD Negeri 2 Masbagik Timur, where students initially struggled with HOTS-based problem-solving tasks. These difficulties—such as misunderstanding problems, committing careless errors, and rarely reviewing solutions—highlighted the limitations of teacher-centered approaches. The improvement observed after applying RME confirms the necessity of shifting from conventional teaching toward student-centered learning, as emphasized by Rahmi et al., (2024) and Syukra et al., (2025) in the broader context of 21st-century skills development.

Taken together, the consistency of this study's findings with existing literature strengthens the conclusion that RME is an effective model for enhancing mathematical problem-solving and higher-order thinking skills. At the same time, the local evidence from SD Negeri 2 Masbagik Timur contributes to the growing body of research demonstrating that contextualized, student-centered approaches are essential for meaningful mathematics learning at the primary school level.

Implications

The findings of this study provide important implications for mathematics education, particularly in the context of adopting innovative teaching models. The significant improvement in students' learning outcomes after the implementation of the Realistic Mathematics Education (RME) model suggests that this approach can serve as an effective alternative to conventional teaching methods. Teachers may consider integrating RME strategies to promote student engagement, problem-solving ability, and higher-order thinking skills. Furthermore, curriculum developers and policymakers could use these results as a basis for designing mathematics programs that are more contextual, interactive, and student-centered. In practice, the success of RME also highlights the importance of linking mathematical concepts to real-life situations, thereby making learning more meaningful and sustainable for students.

Limitations

Despite its promising results, this study has several limitations that should be acknowledged. First, the relatively small sample size ($n = 18$) restricts the generalizability of the findings to a broader student population. Future research with larger and more diverse samples is necessary to validate and extend these results. Second, the study was limited to a single intervention period, which may not fully capture the long-term impact of the RME model on students' learning outcomes. Longitudinal studies are recommended to evaluate the sustainability of the observed effects. Third, external factors such as students' prior knowledge, motivation, and classroom environment were not controlled, which could have influenced the outcomes. Addressing these limitations in future research will provide a more comprehensive understanding of the effectiveness of RME in improving mathematics learning.

CONCLUSION

This study confirmed that the application of the Realistic Mathematics Education (RME) model had a significant effect on the learning outcomes of sixth grade students at SD Negeri 2 Masbagik Timur. The findings showed a substantial increase from the pretest mean score ($M = 53.19$) to the posttest mean score ($M = 72.36$), with the paired sample t-test indicating a statistically significant difference ($t = -6.774$, $p < 0.001$). The effect size analysis further demonstrated a very large impact (Cohen's $d = 1.60$), supporting the initial hypothesis that RME improves students' mathematical performance. Another key finding was that students taught with RME exhibited stronger higher-order thinking skills, including problem understanding, solution design, and critical evaluation, which is consistent with the constructivist approach to mathematics learning. These results validate that integrating contextual and realistic problems in classroom practice meaningfully enhances students' problem-solving capacity.

This research provides three key contributions: (1) It extends the theoretical foundation of RME by confirming its effectiveness in enhancing HOTS-based problem-solving in the Indonesian elementary school context, an area that has been relatively underexplored; (2) It offers empirical validation of the importance of contextual and student-centered learning environments in mathematics education, reinforcing the theoretical perspectives of Piaget and Vygotsky regarding active knowledge construction;

and (3) It highlights a practical pedagogical model that shifts classroom practices from teacher-centered to student-centered approaches, thus enriching the discourse on 21st-century mathematics education in developing countries. Several directions for further research are recommended: (1) Conduct longitudinal studies to examine the long-term sustainability of RME's influence on students' HOTS problem-solving abilities; (2) Expand the sample to include schools from different regions and educational levels to strengthen the generalizability of findings; and (3) Explore variations of RME by integrating digital or gamified tools to further enhance engagement and problem-solving in mathematics learning.

REFERENCES

Adibta, W., Nisa, D., Ermawati, D., & Riswari, L. A. (2024). Analisis Kemampuan Pemecahan Masalah Matematis Siswa Kelas VI SD Melalui Soal HOTS. *BSIS: Jurnal Pendidikan Matematika Dan Matematika*, *6*(2), 963–975. https://doi.org/10.30606/absis.v6i2.2396

Ahmad Nizar Rangkuti. 2019. *Pendidikan Matematika Realistik Pendekatan Alternatif dalam Pembelajaran Matematika*. Citapustaka Media

Aldawsari, H. K., Shahat, H. A., Gaber, S. A., Al-Ruwaili, H. A., Aldughaysh, A. M., & Mohmed, T. A. (2023). Developing Productive Thinking Skills in the field of Artistic Works using the SCAMPER Strategy for Twice Exceptional Students. *International Journal of Learning, Teaching and Educational Research*, *22*(12), 1–20. https://doi.org/10.26803/ijlter.22.12.1

Amaliawan S, Kartono, and G. D. (2024). Pengaruh Pendekatan Realistic Mathematics Education Terhadap Hasil Belajar Siswa Kelas IV SDN 11 Pontianak Kota,. *PONDATIA: Jurnal Pendidikan Dasar*, *8*(2), 420–432. https://doi.org/10.36088/fondatia.v8i2.4797

Apriliani, S., Dewi Riang Tati, A., & Sayidiman. (2022). Penerapan Model Realistic Mathematic Education (RME) Untuk Meningkatkan Hasil Belajar Matematika Siswa Kelas V SDN No. 48 Inpres Galung Utara Kecamatan Banggae Kabupaten Majene. *Pinisi Journal of Education*, *Vol. 2 No*(1), 1–13. https://eprints.unm.ac.id/33820/1/Sul Apriliani_1847442024_Artikel.pdf

Haqina, F., Turmuzi, M., & Saputra, H. H. (2022). Pengaruh Model P embelajaran Realistic Mathematics Education (RME) terhadap Hasil Belajar Matematika Siswa Kelas V SDN 6 Cakranegara Tahun 2020/2021. *Jurnal Ilmiah Profesi Pendidikan*, *7*(1), 95–101. https://doi.org/10.29303/jipp.v7i1.453

Hardani, Helmina Andriani, Jumari Ustiawaty, Evi Fatmi Utami, Ria Rahmatul Istiqomah, Roushandy Asri Fardani, Dhika Juliana Sukmana, N. H. A. (2020). Buku Metode Penelitian Kualitatif. In *Revista Brasileira de Linguística Aplicada* (Vol. 5, Issue 1).

Hidayati, A. N., & Mashuri, W. B. (2024). Systematic Literature Review: Kemampuan Representasi Matematis pada Pembelajaran Matematika dengan Pendekatan

Realistic Mathematics Education. *PRISMA, Prosiding Seminar Nasional Matematika*, *7*, 801–807. https://proceeding.unnes.ac.id/prisma/article/view/3032

İnci, A. M., Peker, B., & Küçükgençay, N. (2023). *Realistic Mathematics Education.* ISRES Publishing.

I Wayan Gunartha. (2024). Pengembangan Penilaian Berorientasi Hots: Upaya Peningkatan Kemampuan Berpikir Kritis Siswa Di Era Global Abad Ke-21. *Widyadari*, *25*(1), 133–147. https://doi.org/10.59672/widyadari.v25i1.3660

Mawardi, A. F., -, P.-, & Ngimadudin, N. (2022). Cognitive And Affective Factor In Learning Proses (Faktor Kognitif dan Afektif dalam Proses Pembelajaran). *Ej*, *4*(2), 349–371. https://doi.org/10.37092/ej.v4i2.362

Mutik, R. I., & Kharisudin, I. (2024). Numeracy Literacy Skills in the ELPSA Learning Model with the Realistic Mathematics Education Approach Viewed from Students ' Mathematics Anxiety. *Indonesian Journal of Mathematics Education*, *7*(2), 71–81. https://doi.org/10.31002/ijome.v7i2.2272

Nasriwandi, Aprinawati, I., & Astuti. (2021). Kajian Literatur Kemampuan Pemecahan Masalah Matematika dengan Menggunakan Model Pembelajaran Realistic Mathematics Educations di Sekolah Dasar. *Journal on Teacher Education*, *2*, 42–48. https://doi.org/10.3100/jote.v2i2.1403

Rahmi, U. J., Meiliasari, & Aziz, T. A. (2024). Literatur Review : Problem Solving Process on HOTS Tes Mathematics. *Jurnal Pendidikan Tambusai*, *8*(3), 41283–41288. https://doi.org/10.25157/j-kip.v4i3.11178

Schunk, D. H. (2020). *Learning Theories: An Educational Perspective (8th ed.).* Pearson.

Soesana, A., Subakti, H., Salamun, S., Tasrim, I. W., Karwanto, K., Falani, I., Bukidz, D. P., & Pasaribu, A. N. (2023). *Metodologi Penelitian Kualitatif.* Yayasan Kita Menulis.

Sugiarto. (2025). Pengaruh Realistic Matematics Education (RME) Terhadap Kemampuan Pemecahan Masalah Matematika Kelas V SDN 39 Mataram. *GeoScienceEd*, *4*(1), 1–23. https://doi.org/10.29303/goescienceed.v6i3.1304

Sugiyono. (2019). *Metode Penelitian Kuantitatif, Kualitatif, dan R&D.* Alfabeta.

Sutisna, E., & Pujiastuti, H. (2023). Systematic Literature Review: Adversity Quotient pada Kemampuan Pemecahan Masalah Matematis Siswa Berdasarkan Tahapan Polya. *JNPM (Jurnal Nasional Pendidikan Matematika)*, *7*(1), 192. https://doi.org/10.33603/jnpm.v7i1.8052

Syukra, S. K., Adrias, A., & Syam, S. S. (2025). Systematic Literature Review : Kesulitan Siswa dalam Memahami Materi Pecahan pada Pembelajaran Matematika di Sekolah Dasar. *Bilangan : Jurnal Ilmiah Matematika, Kebumian Dan Angkasa*, *3*(2), 1–11. https://doi.org/10.62383/bilangan.v3i2.449

Van den Heuvel-Panhuizen, M. (Ed.). (2020). *National Reflections on the Netherlands Didactics of Mathematics: Teaching And Learning in the Context of Realistic Mathematics Education.* Springer.

Wicaksono, W. A., Supandi, S., & Kusumaningsih, W. (2021). Kemampuan Berpikir Kreatif Matematis dengan Model Cycle Learning dan Reciprocal Learning Berbasis Realistic Mathematics Education (RME). *Imajiner: Jurnal Matematika Dan Pendidikan Matematika*, *3*(4), 353–357. https://doi.org/10.26877/imajiner.v3i4.7720

Winarti, & Istiyono, E. (2020). *Taksonomi Hingher Order Thinking Skill Untuk Penilaian Pembelajaran Fisika.* Widya Sari Press

Wulan Sutriyani and Aan Widiyono. 2021. *Konsep Dasar Matematika.* Unisnu Press.

Wulandari, H., & Nurhaliza, I. (2023). Mengembangkan Potensi Guru Yang Profesional Dalam Proses Belajar Mengajar. *Didaktik : Jurnal Ilmiah PGSD STKIP Subang*, *9*(2), 2487–2509. https://doi.org/10.36989/didaktik.v9i2.990

Yuniatun, Y., Yulistyaningsih, & Wardani, Y. (2024). *The Use of Digital Media in Increasing Student Learning Motivation in the Subject of Creed and Ethics at Al Khoiriyah Patihan Elementary School, 1(3) ETNOPEDAGOGI: Jurnal Pendidikan dan Kebudayaan* (pp. 160–169). https://doi.org/10.62945/etnopedagogi.v1i3.537

Zamrul Umam, Masrul, and R. W. (2024). Pengaruh Model Pembelajaran Realistic Mathenatics Education Terhadap Kemampuan Berpikir Kritis Dan Penalaran Siswa Sekolah Dasar. *MULIPLE: Journal of Global and Multidiciplinary*, *2*(10), 1378–1389. https://journal.institercom-edu.org/index.php/multiple/article/view/600/435