



SYSTEMATIC LITERATURE REVIEW ON THE APPLICATION OF QUESTIONING STRATEGIES IN MATHEMATICS LEARNING TO IMPROVE STUDENT UNDERSTANDING

Putu Restu Hadinata¹, I Made Suarsana², I Nyoman Sukajaya³, Kadek Ayu Mutiara Pratiwi⁴

^{1,2,3,4}Program Studi Pendidikan Matematika, Fakultas Matematika dan Ilmu Pengetahuan Alam, Universitas Pendidikan Ganesha, Indonesia

*Correspondence: Email: restuhadinata@student.undiksha.ac.id

A B S T R A K	A R T I C L E I N F O
<p><i>Rendahnya pemahaman siswa dalam pembelajaran matematika masih menjadi permasalahan penting yang dipengaruhi oleh kurang optimalnya interaksi dan strategi pembelajaran yang digunakan guru, khususnya dalam penerapan strategi bertanya. Penelitian ini bertujuan untuk mengkaji secara sistematis penerapan strategi bertanya dalam pembelajaran matematika guna meningkatkan pemahaman siswa. Penelitian menggunakan metode Systematic Literature Review (SLR) dengan mengacu pada protokol Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA). Proses pencarian literatur dilakukan melalui database Google Scholar, ERIC, dan ScienceDirect pada rentang tahun 2016–2026. Berdasarkan tahapan identifikasi, penyaringan, kelayakan, dan inklusi, diperoleh delapan artikel yang relevan untuk dianalisis. Hasil kajian menunjukkan bahwa strategi bertanya memiliki peran penting dalam meningkatkan pemahaman siswa, kemampuan berpikir kritis, penalaran matematis, dan keterlibatan siswa dalam pembelajaran. Jenis pertanyaan yang efektif meliputi pertanyaan terbuka, pertanyaan tingkat tinggi (HOTS), serta pertanyaan konseptual dan reflektif. Selain itu, strategi bertanya yang sistematis seperti sequencing questions dan probing questions terbukti mampu memperdalam pemahaman konsep matematika siswa. Namun, implementasi strategi bertanya di kelas masih belum optimal karena guru cenderung menggunakan pertanyaan tertutup dan kurang memberikan umpan balik yang mendukung eksplorasi pemikiran siswa. Oleh karena itu, diperlukan pengembangan model strategi bertanya yang lebih sistematis serta pelatihan bagi guru untuk menciptakan pembelajaran matematika yang lebih interaktif, bermakna, dan berpusat pada siswa.</i></p>	<p>Article History: <i>Received: 2025-05-14</i> <i>Revision: 2025-05-19</i> <i>Accepted: 2026-05-31</i> <i>Published: 2026-05-31</i></p> <p>Kata Kunci: <i>strategi bertanya</i> <i>pembelajaran matematika</i> <i>pemahaman siswa</i> <i>HOTS</i> <i>tinjauan literatur sistematis</i></p>

ABSTRACT	
<p><i>Students' low understanding in mathematics learning remains a significant issue influenced by the limited effectiveness of classroom interaction and teaching strategies, particularly questioning strategies used by teachers. This study aims to systematically review the implementation of questioning strategies in mathematics learning to improve students' understanding. The research employed a Systematic Literature Review (SLR) method based on the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) protocol. Literature searches were conducted through Google Scholar, ERIC, and ScienceDirect databases covering publications from 2016 to 2026. Through the stages of identification, screening, eligibility, and inclusion, eight relevant articles were selected for further analysis. The findings indicate that questioning strategies play a significant role in improving students' understanding, critical thinking skills, mathematical reasoning, and classroom engagement. Effective questioning types include open-ended questions, Higher Order Thinking Skills (HOTS) questions, as well as conceptual and reflective questions. Furthermore, systematically designed questioning strategies, such as sequencing questions and probing questions, were found to deepen students' conceptual understanding in mathematics learning. However, the implementation of questioning strategies in classrooms is still not optimal because teachers tend to rely on closed-ended questions and provide limited feedback to support students' exploration of ideas. Therefore, it is necessary to develop more systematic questioning strategy models and provide teacher training to create interactive, meaningful, and student-centered mathematics learning.</i></p>	<p>Keywords: <i>Questioning Strategy mathematics learning students' understanding HOTS systematic literature review</i></p>

© 2025 UPI Journal and Publication Office

1. INTRODUCTION

Education has an important role in shaping the quality of human resources that are able to face the development of science and technology in the 21st century. One of the subjects that plays a big role in developing students' thinking skills is mathematics. Mathematics is not only related to the ability to calculate, but also to train logical, critical, systematic, creative, and problem-solving skills in daily life. Mahayani (2025) emphasizing that mathematics learning should be able to create an active, interactive, and meaningful learning atmosphere so that students can understand concepts in depth and be able to apply them in various situations.

However, the reality in the field shows that mathematics learning still faces various problems. The learning process in the classroom tends to still be teacher-centered (*teacher*

centered learning) so that students are less actively involved in learning activities. Mahayani (2025) shows that students receive more information than construct their own knowledge through the process of thinking and discussion. This condition causes a low ability to understand concepts and solve mathematical problems for students. This is strengthened by the results of the Programme for International Student Assessment (PISA) which shows that the mathematical ability of Indonesian students is still relatively low, especially in the aspects of reasoning, mathematical communication, and problem solving. In addition, students also still have difficulties in understanding problems, determining solution strategies, and connecting mathematical concepts with real life.

One of the causes of this low ability is the lack of student involvement in the learning process, especially in questioning activities. Many students still feel afraid, embarrassed, or lack the confidence to ask questions during learning. As a result, students only passively receive information without delving deeper into the material being studied. In fact, asking questions is a form of thinking activity that is very important in the learning process. Questioning strategies can help students develop curiosity, practice critical thinking skills, improve learning interactions, and help students understand mathematical concepts more deeply. In constructivism theory, it is explained that knowledge will be more meaningful if students actively build their own understanding through learning experiences and interactions during the learning process. Therefore, the strategy of asking questions is one of the important strategies to be applied in mathematics learning.

The importance of questioning strategies in learning is also supported by various previous studies. Rendrayana and Suarsana (2020) It shows that analogy learning strategies have a positive influence on students' ability to understand mathematical concepts compared to conventional learning. Antini et al (2019) shows that the concept map-assisted SQ4R learning strategy is able to significantly improve students' understanding of mathematical concepts because students are actively involved in understanding the learning material. Apriyanti and Sugiarta (2021) found that the *Everyone is a Teacher Here* Able to improve students' understanding of mathematical concepts through activities of asking questions, answering questions, and explaining material to their friends. Sunita and Suweken (2017) shows that students' active involvement in learning is able to improve students' mathematical problem-solving skills.

Susmawathi (2021) It shows that learning that emphasizes students' active thinking, discussion, and engagement activities is able to improve mathematical problem-solving skills. Mahayani (2025) It shows that learning that actively involves students in the process of thinking and discovering concepts is able to significantly improve students' mathematical problem-solving skills. In addition, the *Authentic Inquiry* It is also able to help students build knowledge through investigation, discussion, and exploration activities so that students are more active in the learning process. Irawan and Suharta (2018) It shows that student engagement, appreciation of mathematics, and logical thinking skills contribute to students' mathematical problem-solving abilities.

Although these studies have discussed active learning strategies and approaches, research that specifically examines questioning strategies in mathematics learning is still relatively limited. Most research focuses more on learning models, media, inquiry approaches, or problem-solving strategies, while research that addresses questioning strategies as a means to improve critical thinking skills, concept understanding, and student engagement in mathematics learning has not been done in depth. In addition, the strategy of asking questions in learning practice is often only used by teachers as an evaluation tool to find out students' answers, not as a means to build an active student thinking process. These conditions indicate a gap (*research gap*) that needs to be investigated further.

Based on these gaps, this study offers a novelty (*novelty*) in the form of the application of questioning strategies in mathematics learning which is focused on developing students' thinking activities through directed and meaningful questions. The questioning strategy in this study is not only used to test students' understanding, but also to encourage students to actively think, discuss, express opinions, and find mathematical concepts independently through the question and answer process. Thus, the questioning strategy is expected to be able to create more active, interactive, communicative, and meaningful mathematics learning. The purpose of this research is to describe the application of the questioning strategy in mathematics learning and to find out its influence on learning activities, concept understanding, and students' critical thinking skills. In addition, this study aims to find out how questioning strategies can help students improve their mathematical problem-solving skills. Theoretically, this research is expected to enrich the study of mathematics learning strategies, especially the questioning strategy. Practically, the results of this research are expected to be a reference for teachers in implementing more innovative learning strategies so as to improve the quality of mathematics learning and create a more active and meaningful learning atmosphere for students.

2. METHOD

This study uses the *Systematic Literature Review* (SLR) approach which aims to systematically review various studies related to the application of questioning strategies in mathematics learning to improve student understanding. The SLR method was chosen because it is able to provide a comprehensive, transparent, and structured synthesis of previous research findings. The implementation of SLR in this study refers to the *Preferred Reporting Items for Systematic Reviews and Meta-Analyses* (PRISMA) protocol which includes four main stages, namely: *identification*, *screening*, *eligibility*, and *inclusion*.

Identification Stage

At this stage, the researcher searches the literature through several scientific databases, including Google Scholar, ERIC, and ScienceDirect. The search process was carried out using the following keywords: "*questioning strategy*", "*questioning strategies*", "*mathematics learning*", "*student understanding*", and "*Higher Order Thinking Skills (HOTS)*". Literature searches are limited to articles published in the 2016–2026 range to ensure the relevance and novelty of the research. From the initial search results, around 327 articles were obtained that were potentially relevant to the research topic.

Screening Stage

At this stage, an initial selection is carried out based on the title and abstract to identify the suitability of the article with the focus of the research. Irrelevant articles, duplications, as well as articles that do not discuss questioning strategies in math learning are eliminated.

The results of this stage left 18 articles that were deemed relevant for further analysis.

Eligibility

Articles that pass the screening stage are then analyzed in more depth through full-text reading.

Criteria	Description
Inclusions	<ol style="list-style-type: none"> 1. Articles that discuss questioning strategies in math learning 2. Empirical research articles (qualitative, quantitative, or mixed methods) 3. Articles published in scientific journals or proceedings

	4. Articles that discuss improving students' understanding or related aspects (HOTS, reasoning, critical thinking)
Exclusion	1. Articles that are not available in full-text form 2. Articles that are not relevant to the context of mathematics education 3. Opinion, editorial, or non-research articles
Eligible articles	Based on the selection process and full-text analysis, 18 articles were obtained that met the eligibility criteria for further analysis.

Tabel 1. (Eligibility)

Levels of Inclusion

In the final stage, the final selection of the most relevant articles is carried out and in accordance with the research objectives. Based on this process, 8 articles were obtained that were used as the main source in this study. The articles are then analyzed and synthesized to identify patterns, types of questioning strategies, and their impact on students' understanding.

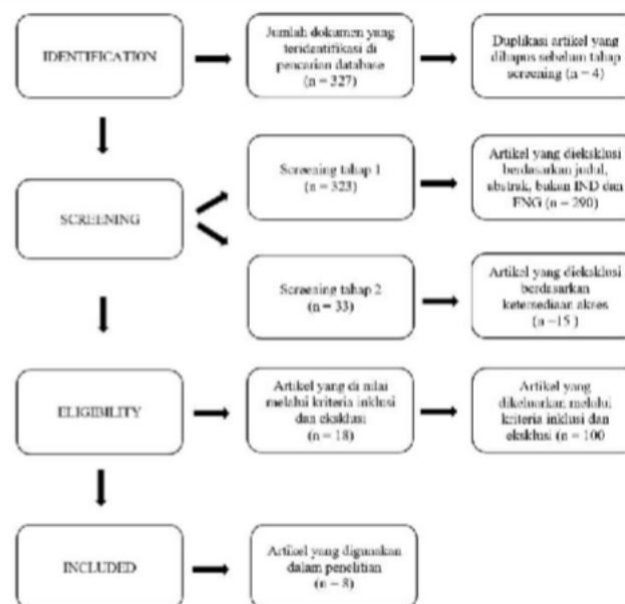


Figure 1. PRISMA flowchart

3. RESULT AND DISCUSSION

Based on the results of the search and selection of literature using the Systematic Literature Review (SLR) method with reference to the protocol *Preferred Reporting Items for Systematic Reviews and Meta-Analyses* (PRISMA), obtained a number of articles that meet the inclusion criteria and are relevant to the research topic.

Author (Year)	Research Methods	Results Research	Results Review
---------------	------------------	------------------	----------------

(Septiani and Rosyidah, 2026)	Quantitative correlation with Pearson Product Moment test	<p>The results showed a significant relationship between teachers' questioning skills and students' learning motivation ($r = 0.705 > r_{table} 0.374$). This means that the better the quality of the questions the teacher asks, the higher the students' motivation to learn in mathematics learning. Questioning skills also play a role in increasing student engagement during the learning process. Question type : Basic and advanced questions</p> <p>Subject Level : Junior High School (MTs grade VII)</p> <p>Student Comprehension Indicators: Learning motivation, activeness, students' responses to questions</p>	The strategy of asking questions has an indirect impact on students' understanding through increased motivation and active participation in learning.
(Livy et al., 2025)	Qualitative study (single-case study) through classroom observation and learning discussion analysis	<p>The results showed that the teacher's planned and sequential questioning strategy was able to improve students' mathematical reasoning. The use of <i>student work samples</i> and follow-up questions helps students explain, justify, and expand their thinking.</p> <p>Question type: Open-ended questions, probing questions, guiding questions, closed-ended questions (as a basis)</p> <p>Subject Level : Primary School (Early Grade / Year 1)</p> <p>Indicators of Student Comprehension: Mathematical reasoning skills, the ability to explain and justify, the ability to evaluate ideas, the ability to think critically</p>	Questioning strategies are effective when designed systematically, including the use of follow-up questions that adjust student responses. This approach has been proven to support student-centered learning and improve the quality of mathematical discussions.
(Zhang dkk., 2025)	Educational experiment based on a qualitative	The teacher's questioning strategy in the context of play (Conceptual PlayWorld) has been proven to be able to	The strategy of asking questions is not only effective in formal learning, but

	<p>approach in the context of play-based learning</p>	<p>improve understanding of mathematical concepts and children's spatial reasoning skills. Responsive and contextual questions encourage exploration, collaboration, and active student engagement in learning.</p> <p>Question type: Open-ended questions, probing questions, factual questions, guiding questions</p> <p>Subject Level : Early Childhood Education (Kindergarten)</p> <p>Indicators of Student Understanding:</p> <p>Understanding of basic mathematical concepts, spatial reasoning skills, concept exploration skills, collaboration and communication skills</p>	<p>also in the context of play. The use of questions that are adaptive to students' responses is essential for building deep conceptual understanding from an early age.</p>
<p>(Bohara, 2024)</p>	<p>Mixed methods (quantitative and qualitative) through questionnaires, interviews, and observations</p>	<p>Research has found that the use of questioning strategies such as APPLE, DEAL, CLAPS, and 5W effectively improves student learning outcomes. In contrast, the use of monotonous and less varied questions leads to low student engagement and achievement. A good questioning strategy is able to encourage students to think critically and be active in learning mathematics.</p> <p>Question type : Open-ended, probing, higher-order questions</p> <p>Subject Level : Secondary School</p> <p>Student Comprehension Indicators: Critical thinking, problem solving, concept comprehension</p>	<p>The quality and variety of questions greatly determine the effectiveness of learning, especially in developing students' critical thinking and problem-solving skills.</p>

(Li dan Jiang, 2024)	Video-based qualitative and quantitative analysis (discourse analysis)	<p>The results of the study show that questions with a high cognitive level are able to stimulate students' mathematical thinking skills, especially in reasoning and problem solving. Question-based interaction between teachers and students is a major factor in developing mathematical thinking skills.</p> <p>Question type : High cognitive questions</p> <p>Subject Level : Elementary School</p> <p>Indicators of Student Comprehension: Mathematical reasoning, explainable ability, in-depth understanding</p>	The questioning strategy is a core component in learning that encourages the development of students' mathematical thinking optimally.
(Sa'aidin and Mahmud, 2023)	Systematic Literature Review (SLR) with the PRISMA approach to 21 articles (dominant qualitative)	<p>Research shows that oral questioning strategies in mathematics learning have not been optimally applied. Teachers tend to use closed-ended questions and make less use of exploratory questions. In addition, it was found that the absence of specific strategies that teachers consistently use, as well as the lack of <i>feedback</i> on students' answers are the main inhibiting factors in improving student understanding.</p> <p>Question type: Closed-ended questions, open-ended questions, exploratory questions</p> <p>Subject Level : Primary and secondary schools</p> <p>Indicators of Student Understanding:</p> <p>Ability to connect concepts, ability to explain answers, ability to solve non-routine problems, ability to think at a</p>	The questioning strategy has an important role in improving students' understanding of concepts and thinking skills, but its implementation is still weak. It is necessary to develop a systematic questioning strategy model or guide for teachers.

		high level	
(Mohd Tajudin et al., 2018)	Quantitative (survey) with factor analysis	<p>The results of the study show that the strategy of asking questions is one of the six main principles in developing HOTS in mathematics learning. Teachers who are able to design HOTS-based questions can improve students' ability to analyze, evaluate, and solve problems.</p> <p>Question type: HOTS questions (analysis, evaluation, creation)</p> <p>Subject Level : Secondary School</p> <p>Student Comprehension Indicators: Analysis, evaluation, high-level thinking</p>	The questioning strategy serves as the main means of stimulating students' high-level thinking skills in mathematics learning.
(Maoto et al., 2016)	Qualitative (observation and interview)	<p>Research shows that teachers' questioning strategies play an important role in helping students understand the big picture. Questions that lead to concept connections are able to increase student understanding in a more in-depth way than learning that focuses only on procedures.</p> <p>Question type : Conceptual and reflective questions</p> <p>Subject Level : High School & College</p> <p>Student Comprehension Indicators: Connection of concepts, representations, comprehensive understanding</p>	Conceptual and reflective questions are very effective in building an integrated and meaningful understanding of mathematics.

Table 2. (8 Research Topic Articles)

Based on the table that has been analyzed, it can be concluded that the questioning strategy is an important component in mathematics learning that contributes to improving student understanding, both from cognitive and affective aspects. These findings show that the quality of the questions asked by teachers not only serves as an evaluation tool, but also as a means to build meaningful learning interactions.

Research conducted by showed that teachers' questioning skills have a significant relationship with students' learning motivation. This confirms that good questions are able to increase student engagement in learning. High motivation is one of the important factors in supporting student understanding, because motivated students tend to be more active in responding to questions and engaging in the thought process. Thus, the strategy of asking questions not only has an impact on learning outcomes directly, but also through the improvement of the affective aspect of students. Septiani and Rosyidah (2026)

Livy et al. (2025) indicates that the questioning strategy is designed systematically and sequentially (*sequencing questions*) is able to encourage the development of students' mathematical reasoning. This can be seen from the students' ability to explain, justify, and evaluate mathematical ideas through discussions facilitated by teacher questions. Usage *student work samples* It is also one of the effective approaches in triggering follow-up questions (*follow-up questions*) that are relevant to the student's response. Thus, a structured questioning strategy not only increases student engagement, but also deepens the process of critical and reflective thinking.

Broaden understanding that questioning strategies are not only effective in formal learning in the classroom, but also in the context of play-based learning (*play-based learning*). In the approach *Conceptual PlayWorld*, open-ended, probing, and contextual questions are able to encourage the exploration of mathematical concepts and improve early childhood spatial reasoning skills. These findings suggest that questioning strategies that are adaptive to learning situations and student characteristics can create a more interactive and meaningful learning environment. In addition, active student involvement through collaboration and communication is also an important indicator in the development of concept understanding from an early age (Zhang dkk., 2025).

shows that the use of various questioning strategies such as Bohara (2024) *open-ended questions, probing questions, and higher-order questions* able to significantly improve student learning outcomes. The variety of questions provides students with the opportunity to think more broadly, deeply, and critically. Conversely, the use of monotonous and closed-ended questions tends to hinder student participation. These findings reinforce that a diversity of question types is critical in creating interactive and effective learning.

In terms of the development of mathematical thinking skills, research confirms that questions with high cognitive levels (Li dan Jiang (2024) *high cognitive questions*) is able to stimulate students' reasoning and problem-solving. This shows that questions not only serve to test knowledge, but also as a tool to develop students' mathematical thinking skills. Question-based interaction between teachers and students is key to building deeper understanding.

revealed that the implementation of the questioning strategy in mathematics learning is still not optimal. Teachers tend to use closed-ended questions that focus on short answers, making them less able to develop students' high-level thinking skills. Lack of variety of question types and lack of giving Sa'aidin and Mahmud (2023) *feedback* Students' answers are the main factors that hinder the improvement of concept understanding. In addition, the absence of a specific strategy or model used consistently shows that the practice of asking questions is still spontaneous and undirected.

In line with this, it is stated that the strategy of asking questions is one of the main principles in development Mohd Tajudin et al (2018) *Higher Order Thinking Skills (HOTS)*. Questions designed at the level of analysis, evaluation, and creation have been proven to improve students' high-level thinking skills. This shows that the quality of the questions greatly determines the depth of students' understanding of mathematics material.

Meanwhile, the research emphasizes the importance of conceptual and reflective questions in helping students understand mathematical concepts thoroughly (Maoto dkk (2016)*big picture*). Questions that lead students to connect different mathematical concepts have proven to be more effective compared to learning that focuses solely on procedures. Thus, the strategy of asking questions not only partially improves comprehension, but also helps students build an integrated knowledge structure.

When viewed as a whole, there is a tendency that the most effective types of questions in improving student understanding are open-ended questions, high-level questions (HOTS), as well as questions that are conceptual and reflective. These types of questions are able to encourage students to reason, relate concepts, and develop critical thinking skills. In addition, differences in education levels also affect the focus of the use of questioning strategies, where at the basic level there is more emphasis on initial reasoning, while at the secondary to tertiary level it focuses more on the development of high-level thinking and deep conceptual understanding.

However, based on the results of this study, there are still several gaps. Most studies show that the practice of asking questions in the classroom is still dominated by low-level questions that are procedural in nature. In addition, existing research tends to examine the strategy of asking questions partially, both in terms of motivation, learning outcomes, and thinking ability, without a comprehensive synthesis. Therefore, this research through the *Systematic Literature Review* It is important to provide a more comprehensive picture of the effectiveness of the questioning strategy in mathematics learning.

Thus, appropriately designed and varied questioning strategies have great potential in improving student understanding. Teachers need to develop questioning skills that not only focus on the low cognitive aspect, but are also able to encourage students to think critically, reflectively, and understand concepts in depth. In this case, the strategy of asking questions can be seen as a key element in effective math learning. However, there is still a gap between theory and practice in the field, especially in the aspects of planning, variety, and quality of questions asked by teachers. Therefore, it is necessary to develop a systematic questioning strategy model or guide as well as training for teachers to be able to design and implement questions optimally to improve student understanding.

4. CONCLUSION

Based on results *Systematic Literature Review* Regarding the eight articles, it can be concluded that the questioning strategy has an important role in improving students' understanding of mathematics learning. Open-ended questions, HOTS questions, and conceptual and reflective questions have been proven to improve students' critical thinking, reasoning, problem-solving, and involvement in the learning process. In addition, the use of *sequencing questions* and *probing questions* It also helps deepen students' understanding of mathematical concepts.

However, the implementation of the strategy of asking questions in the field is still not optimal. Teachers still tend to use closed-ended questions and give less *feedback* that support the student's thinking process. This study also has limitations because it only uses eight articles with various levels of education and different research methods, so the results of the study do not fully describe the condition as a whole.

Therefore, teachers are advised to develop questioning skills in a more planned, varied, and HOTS-oriented manner so that learning becomes more interactive and

meaningful. Schools also need to provide training related to effective questioning strategies. For future researchers, it is recommended to use more literature sources as well as develop and test models of questioning strategies in mathematics learning at various levels of education.

5. REFERENCES

- Antini, N. K. J., Ardana, I. M., & Hartawan, I. G. N. Y. (2019). THE EFFECT OF THE SQ4R LEARNING STRATEGY (SURVEY, QUESTION, READ, REFLECT, RECITE, AND REVIEW) ASSISTED BY CONCEPT MAPS ON THE UNDERSTANDING OF MATHEMATICS CONCEPTS OF GRADE X STUDENTS OF SMA N 2 SINGARAJA. *Indonesian Journal of Mathematics Education and Learning*, 8(1), 29–39.
- Apriyanti, Sugiarta, S. (2021). Understanding students' mathematical concepts with the strategy everyone is a teacher here. *Journal of Analysis*, 7(1), 13–22.
- Bohara, C. L. (2024). An Analysis of Questioning Strategies in Secondary Mathematics Classroom. *Journal of Musikot Campus*, 2(1), 1–22.
- Irawan, Suharta, S. (2018). Contribution of Prior Knowledge , Appreciation of Mathematics and Logical-Mathematical Intelligence to the Ability of Solving Mathematical Problems. *International Journal of Physics & Mathematics*, 1, 21–28.
- Jenny, Umami, I. (2026). The Relationship between Teacher Questioning Skills and Learning Motivation. *Journal of Mathematics Education*, 5(1), 385–390.
- Li, R., & Jiang, Y. (2024). Research on Primary School Mathematics Classroom Questioning Based on Mathematical Thinking Cultivation - Taking One Teacher One Excellent Lesson. *ACM International Conference Proceeding Series*, (April), 109–118.
- Livy, S., Bobis, J., Downton, A., Russo, J., & Sullivan, P. (2025). Supporting mathematical reasoning: exploring questioning moves in a Year 1 classroom using student work samples. *Mathematics Education Research Journal*, 38(1), 241–269.
- Mahayani, Sudiarta, S. (2025). Development of Authentic Inquiry Approach Module : A Solution to Improve Senior High School Students ' Problem Solving Skills. *Jurnal Pedagogi Dan Pembelajaran*, 8(1), 43–53.
- Maoto, S., Masha, K., & Maphutha, K. (2016). Where is the bigger picture in the teaching and learning of mathematics? *Pythagoras*, 37(1), 1–8.
- Patni, L. D. P., Parwati, N. N., & Suharta, I. G. P. (2018). THROUGH THE APPLICATION OF THE WATER LEARNING MODEL ACCOMPANIED BY PORTFOLIO ASSESSMENT. *Indonesian Journal of Mathematics Education and Learning*, 7(1), 22–32.
- Rendrayana, Suarsana, P. (2020). Analogy Learning Strategies and Mathematical Concept Comprehension Ability. *RAFFA Journal of Mathematics Education*, 15–27.
- Sa'aidin, M. F., & Mahmud, M. S. (2023). Oral Questioning Strategies of Mathematics Teachers in Teaching and Learning Mathematics: A Systematic Literature Review. *International Journal of Academic Research in Progressive Education and Development*, 12(1).
- Sunita, Suweken, S. (2017). Wahana Mathematics and Science: Journal of Mathematics, Science, and Learning, Vol. 11 No. 2, October 2017 140. *Journal of Mathematics, Science, and Learning*, 11(2), 140–153.
- Susmawathi, R., & Suparta, I. N. (2021). STUDENTS THROUGH THE APPLICATION OF THE TREFFINGER LEARNING MODEL ASSISTED BY STRUCTURED LKS. *Indonesian Journal of Mathematics Education and Learning*, 10(2), 52–60.
- Tajudin, N. M., Puteh, M., & Adnan, M. (2018). Guiding Principles to Foster Higher Order thinking skills in teaching and learning of mathematics. *International Journal of Engineering and Technology(UAE)*, 7(4), 195–199.
- Zhang, W., Li, L., & Disney, L. (2025). “Asking questions is the key”: Chinese kindergarten teachers support children’s mathematics concept learning and spatial reasoning through a Conceptual PlayWorld approach. *Mathematics Education Research Journal*, (0123456789).