

Analysis of Teacher Learning Strategies in Supporting Students' Higher-Order Thinking Processes

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Received: Jan 12, 2026 | Revised: Feb 20, 2026 | Accepted: March 20, 2026 | Published Online: March 30, 2026

Abstract

Higher-Order Thinking Skills (HOTS) are essential competencies in modern education because they enable students to analyze information, evaluate arguments, and generate innovative solutions to complex problems. However, the implementation of instructional strategies that effectively promote HOTS in classroom learning is still limited in many educational contexts. Therefore, this study aims to analyze teachers' instructional strategies in supporting students' higher-order thinking processes. The research employed a qualitative descriptive design involving classroom observations, semi-structured interviews with teachers and students, and document analysis of lesson plans and assessment instruments. The collected data were analyzed using thematic analysis to identify patterns of instructional practices related to the development of HOTS. The findings reveal that teachers employ various instructional strategies, including inquiry-based learning, problem-based learning, collaborative discussion, structured thinking approaches, and HOTS-oriented assessments. These strategies contribute to increased student engagement, improved analytical reasoning, and greater participation in problem-solving activities. However, the implementation of HOTS-oriented instruction remains constrained by several challenges, such as limited teacher understanding of HOTS concepts, time constraints within the curriculum, and differences in students' readiness levels. Overall, the study concludes that teachers' instructional strategies play a crucial role in fostering higher-order thinking when supported by effective instructional planning, appropriate learning resources, and continuous professional development.

Keywords:

Higher-Order Thinking Skills, Instructional Strategies, Teacher Pedagogy, Critical Thinking, Student Learning Engagement

How to Cite:

Misrahayu Y. (2026). Analysis of Teacher Learning Strategies in Supporting Students' Higher-Order Thinking Processes. *Journal of Learning Spectrum*, 1(3), 1-15.
<https://doi.org/10.63985/jols.v1i3.101>

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1. INTRODUCTION

The rapid transformation of the global economy and the emergence of complex societal challenges have significantly influenced the goals of modern education. In the twenty-first century, education systems are increasingly expected to prepare students not only to acquire knowledge but also to develop advanced cognitive skills that enable them to analyze information, solve complex problems, and generate innovative ideas. These competencies are commonly referred to as Higher-Order Thinking Skills (HOTS), which include the abilities to analyze, evaluate, and create as defined in the revised Bloom's taxonomy. In a world characterized by volatility, uncertainty, complexity, and ambiguity (VUCA), the capacity to think critically and creatively has become essential for individuals to navigate rapidly changing environments and participate effectively in knowledge-based societies (Lu et al., 2021).

Higher-Order Thinking Skills play a crucial role in enabling students to understand complex issues, evaluate diverse perspectives, and produce reasoned solutions to real-world problems. Unlike lower-level cognitive processes that emphasize memorization and recall, HOTS require learners to engage in deeper cognitive activities such as analysis, synthesis, and evaluation. These skills allow students to connect concepts, apply knowledge in unfamiliar contexts, and generate new ideas through reflective and creative thinking processes. Consequently, the development of HOTS has become a major focus of educational reforms aimed at improving the quality of learning and preparing students for the demands of the modern workforce (Rathore, 2025).

The importance of HOTS is also closely related to the concept of lifelong learning. In contemporary societies where information is constantly evolving, individuals must be able to learn independently, evaluate new knowledge critically, and adapt to emerging challenges. HOTS support the development of self-directed learning because students who possess strong analytical and reflective thinking abilities are better equipped to identify learning needs, evaluate information sources, and generate solutions to complex problems. Therefore, fostering higher-order thinking skills is not only essential for academic achievement but also for cultivating adaptive learners capable of continuous personal and professional development (Mao, 2023).

A growing body of research across various academic disciplines demonstrates the significant benefits of integrating HOTS-oriented learning strategies into classroom instruction. Studies in science education show that students who engage in higher-order thinking activities develop stronger conceptual understanding and improved scientific literacy. Similarly, research in mathematics education indicates that students' ability to solve complex mathematical problems increases when instructional practices emphasize reasoning and analytical thinking. These findings suggest that HOTS-oriented instruction can significantly enhance students' academic performance and cognitive development across different subject areas (Mat et al., 2025).

Evidence from language education also highlights the role of HOTS in improving students' communication and analytical abilities. When students are encouraged to engage in higher-level cognitive activities such as interpreting texts, evaluating arguments, and constructing original ideas, they develop deeper linguistic competence and critical thinking

skills. Such learning experiences enable students to move beyond surface-level comprehension toward more complex forms of reasoning and interpretation. Therefore, integrating HOTS into instructional practices is essential for developing students' intellectual capabilities in diverse academic contexts (Dorgham & Obiad, 2025).

In addition to academic achievement, the development of HOTS contributes significantly to students' ability to engage in reflective and innovative thinking. Through higher-order thinking processes, students learn to question assumptions, evaluate evidence, and develop reasoned arguments. These abilities are essential for solving complex problems that require creative and analytical approaches. Consequently, educational researchers emphasize that cultivating HOTS should be a central objective of instructional practices in contemporary classrooms (Villacruel, 2025).

Despite the recognized importance of HOTS, its development in classroom practice depends largely on the instructional strategies implemented by teachers. Teachers play a fundamental role in designing learning environments that stimulate critical and creative thinking among students. Effective instructional strategies can encourage students to explore ideas, question assumptions, and engage in collaborative problem-solving activities that promote higher-order cognitive processes. Without appropriate teaching strategies, however, the potential benefits of HOTS-oriented learning may not be fully realized (Rathore, 2025).

One of the most widely recommended approaches for promoting HOTS is inquiry-based learning. Inquiry-based instruction encourages students to investigate questions, analyze information, and construct knowledge through exploration and experimentation. This learning approach shifts the focus from teacher-centered instruction toward student-centered inquiry processes that emphasize reasoning and evidence-based thinking. Research indicates that inquiry-based learning significantly improves students' higher-order thinking skills because it requires learners to actively engage in problem identification, hypothesis formulation, and data analysis (Antonio & Prudente, 2023).

Problem-Based Learning (PBL) is another instructional strategy that has been widely recognized for its effectiveness in developing HOTS. In PBL environments, students are presented with complex, real-world problems that require them to apply knowledge, analyze information, and develop solutions collaboratively. Through this process, students practice critical thinking, reasoning, and decision-making skills. Empirical studies show that PBL has a strong positive effect on students' higher-order thinking abilities, particularly in mathematics and science education contexts (Badolo et al., 2025).

In addition to inquiry and problem-based approaches, classroom strategies such as contextual problem solving, collaborative discussion, and experimental activities also play an important role in fostering HOTS. These instructional methods encourage students to engage actively with learning materials and develop reasoning processes that support critical analysis and evaluation. By participating in collaborative discussions and practical investigations, students learn to examine evidence, formulate arguments, and reflect on their thinking processes. Such learning experiences contribute to the development of critical thinking dispositions and analytical reasoning skills (Arviani et al., 2023).

Teacher questioning strategies are also considered a crucial component in developing students' higher-order thinking skills. High-level questioning techniques encourage students

to analyze information, evaluate ideas, and generate creative responses rather than simply recalling factual knowledge. When teachers use open-ended questions that require explanation and reasoning, students are prompted to think more deeply about the subject matter. Studies in language education contexts indicate that higher-order questioning strategies significantly enhance students' analytical and creative thinking abilities (AlBadi et al., 2025).

Another important instructional approach for promoting HOTS is the integration of metacognitive learning strategies. Metacognition refers to students' ability to reflect on their own thinking processes, monitor their understanding, and regulate their learning strategies. When students are encouraged to engage in metacognitive reflection, they become more aware of how they approach problems and evaluate solutions. This awareness enables students to develop more sophisticated reasoning skills and improve their ability to solve complex problems independently (Mao, 2023).

Although various instructional strategies have been shown to support the development of HOTS, several studies indicate that students' higher-order thinking abilities remain at moderate levels in many educational contexts. Research conducted in different countries and subject areas reveals that students often struggle to analyze complex information, evaluate arguments, and generate creative solutions to problems. These findings suggest that despite the emphasis on HOTS in educational policies, the development of higher-order thinking skills in classroom practice is still limited (Liu et al., 2025).

One explanation for this phenomenon is the discrepancy between teachers' theoretical understanding of HOTS and their actual instructional practices in the classroom. Many teachers acknowledge the importance of developing higher-order thinking skills but continue to rely on traditional teaching methods that emphasize memorization and factual recall. As a result, classroom activities often focus on lower-level cognitive processes rather than encouraging analytical and evaluative thinking. This gap between educational theory and classroom practice represents a significant challenge for the effective implementation of HOTS-oriented instruction (Adao & Morong, 2025).

Another factor contributing to the limited implementation of HOTS-oriented instruction is the dominance of assessment practices that emphasize lower-level cognitive skills. In many educational systems, examinations and assessments primarily focus on factual knowledge rather than evaluating students' reasoning and problem-solving abilities. Consequently, teachers may prioritize teaching strategies that prepare students for such assessments rather than fostering higher-order thinking skills. This situation further reinforces the persistence of traditional teaching approaches in many classrooms (Gradini et al., 2025).

In addition to these pedagogical challenges, teachers often face various practical constraints that hinder the implementation of HOTS-oriented instructional strategies. These constraints include limited professional training related to HOTS pedagogy, heavy teaching workloads, dense curriculum requirements, and insufficient access to instructional resources and technology. Such factors can reduce teachers' capacity to design and implement innovative learning strategies that promote higher-order thinking among students (Puspitasari, 2025).

Student readiness also represents an important challenge in implementing HOTS-oriented instruction. Some students may lack the prior knowledge or learning strategies necessary to engage effectively in higher-order thinking activities. Without adequate scaffolding and instructional support, students may find it difficult to participate in analytical discussions or complex problem-solving tasks. Therefore, teachers must carefully design learning environments that gradually develop students' cognitive abilities while providing appropriate guidance and support (Asmawi & Nasir, 2025).

Considering these challenges, there is a clear need for research that examines how teachers implement instructional strategies to support higher-order thinking processes in classroom practice. While many studies focus on measuring students' HOTS levels, fewer studies investigate the specific strategies used by teachers to foster higher-order thinking in real classroom contexts. Understanding these strategies is essential for identifying effective pedagogical practices that can enhance students' cognitive development (Liu et al., 2025).

This study therefore seeks to address this research gap by analyzing teachers' instructional strategies in supporting students' higher-order thinking skills. By examining how teachers design learning activities, facilitate discussions, and encourage analytical reasoning, the study aims to provide insights into effective pedagogical approaches that promote HOTS in classroom settings. Such insights are expected to contribute to improving teaching practices and supporting the development of higher-order thinking skills among students.

Accordingly, the objective of this study is to analyze teachers' instructional strategies in supporting students' higher-order thinking processes in classroom learning. Through this analysis, the study aims to identify how instructional practices can effectively stimulate students' analytical, evaluative, and creative thinking skills, thereby contributing to the development of more effective and student-centered learning environments.

2. METHOD

This study employed a qualitative descriptive research design to analyze teachers' instructional strategies in supporting students' higher-order thinking skills (HOTS) in classroom learning. The qualitative approach was chosen because the study aimed to explore in depth how teachers design and implement instructional strategies that stimulate students' analytical, evaluative, and creative thinking processes. The research was conducted in selected secondary or elementary classrooms where learning activities explicitly aimed to develop higher-order thinking skills. Participants consisted of teachers and students involved in the learning process. Teachers were selected using purposive sampling to ensure that participants had experience in applying instructional strategies intended to promote higher-order thinking. Data collection was carried out through several techniques, including classroom observations, semi-structured interviews, and documentation analysis. Classroom observations were conducted to examine instructional practices, teacher questioning strategies, learning activities, and student interactions during lessons. Semi-structured interviews were conducted with teachers to explore their understanding of HOTS-oriented instruction and the strategies they used to support students' higher-order thinking. Interviews with students were also conducted to understand their experiences and perceptions of the learning process. In addition, relevant documents such as lesson plans, learning materials,

and assessment instruments were analyzed to identify how HOTS principles were integrated into instructional planning.

The collected data were analyzed using qualitative thematic analysis. First, all data from observations, interviews, and documentation were transcribed and organized systematically. Second, the data were coded to identify key themes related to teachers' instructional strategies in promoting higher-order thinking skills, such as the use of inquiry-based activities, problem-based learning tasks, higher-level questioning, collaborative discussion, and metacognitive reflection. Third, the coded data were grouped into broader categories to identify patterns of instructional practices and their influence on students' cognitive engagement. To enhance the credibility and validity of the findings, data triangulation was applied by comparing information obtained from different sources, including observation results, interview responses, and documentary evidence. The interpretation process focused on identifying relationships between instructional strategies and students' higher-order thinking processes during classroom learning. Through this analytical procedure, the study aimed to provide a comprehensive understanding of how teachers' instructional strategies contribute to the development of higher-order thinking skills among students.

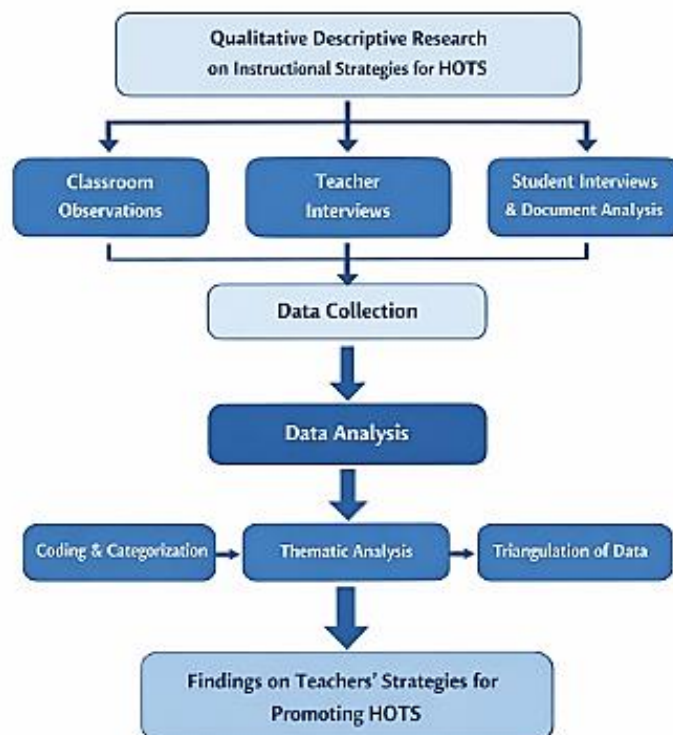


Figure 1. Journal of Learning Spectrum

3. RESULTS AND DISCUSSION

3.1. Results

To analyze teachers' instructional strategies in supporting students' Higher-Order Thinking Skills (HOTS), data obtained from classroom observations, teacher interviews,

student interviews, and document analysis were organized into several thematic categories. The analysis focused on identifying the types of instructional strategies implemented by teachers, the learning activities designed to stimulate higher-order thinking processes, students' cognitive engagement during learning, and challenges encountered in implementing HOTS-oriented instruction. The findings indicate that teachers employed several strategies such as inquiry-based activities, problem-based learning tasks, higher-level questioning, collaborative discussions, and metacognitive reflection to encourage analytical and critical thinking among students. A summary of the findings is presented in Table 1.

Table 1. Teachers' Instructional Strategies in Supporting Students' Higher-Order Thinking Skills

Instructional Strategy	Implementation in Classroom	Impact on Students' HOTS	Educational Implications
Inquiry-Based Learning	Students investigate questions, conduct observations, and analyze information during lessons	Students demonstrate improved analytical thinking and reasoning abilities	Encourages active learning and deeper conceptual understanding
Problem-Based Learning	Teachers present contextual problems requiring collaborative problem-solving	Students develop problem-solving skills and critical thinking abilities	Supports application of knowledge in real-world situations
Higher-Order Questioning	Teachers use open-ended and analytical questions during discussions	Students engage in evaluation, reasoning, and idea generation	Promotes reflective and analytical thinking processes
Collaborative Discussion	Students work in groups to analyze problems and exchange ideas	Students develop argumentation skills and collaborative reasoning	Enhances communication and social interaction
Metacognitive Reflection	Teachers encourage students to reflect on their thinking and learning strategies	Students improve self-monitoring and independent learning abilities	Strengthens metacognitive awareness and lifelong learning skills
Implementation Challenges	Limited teacher training, time constraints, and varying student readiness	Some students struggle with complex analytical tasks	Requires professional development and instructional support

The results presented in Table 1 indicate that teachers' instructional strategies play a crucial role in supporting the development of students' Higher-Order Thinking Skills in classroom learning. Strategies such as inquiry-based learning, problem-based learning, and higher-order questioning encourage students to engage actively in analytical and evaluative thinking processes. Through collaborative discussions and problem-solving activities, students are able to explore different perspectives, analyze information critically, and construct reasoned arguments. In addition, metacognitive reflection activities help students develop awareness of their own thinking processes, enabling them to regulate their learning more effectively. However, the findings also reveal several challenges in implementing HOTS-oriented instruction, including limited teacher preparation, time constraints in classroom activities, and differences in students' cognitive readiness. These results suggest that while innovative instructional strategies can effectively promote higher-order thinking skills, successful implementation requires adequate teacher training, supportive learning environments, and instructional scaffolding that gradually develops students' analytical abilities.

3.2. Discussion

This study aimed to analyze teachers' instructional strategies in supporting students' Higher-Order Thinking Skills (HOTS) in classroom learning. The findings derived from classroom observations, interviews, and document analysis demonstrate that teachers employ various instructional strategies intended to stimulate analytical, evaluative, and creative thinking processes among students. These strategies include structured thinking approaches, problem-based learning, inquiry-oriented activities, collaborative discussions, and HOTS-based assessments. The results indicate that although teachers have begun integrating strategies that promote higher-order thinking, the implementation of these strategies remains inconsistent and faces several pedagogical challenges. The discussion of these findings highlights how teachers' instructional strategies influence students' cognitive engagement and how certain barriers limit the effectiveness of HOTS-oriented learning.

One of the important findings of this study concerns the use of structured thinking strategies that explicitly guide students through higher-order thinking processes. Teachers in several classrooms implemented instructional frameworks that emphasize sequential thinking stages such as analyzing problems, interpreting information, constructing arguments, and communicating conclusions. This approach is consistent with structured thinking models such as ASICC (Adapting–Searching–Interpreting–Creating–Communicating), which has been shown to significantly improve students' critical thinking scores and learning engagement. Empirical evidence indicates that the application of ASICC strategies can increase students' critical thinking performance, reflected in improvements in normalized gain scores and increased student participation in analytical discussions (Andrianto, 2025). When students are guided through structured stages of reasoning, they become more capable of organizing ideas, evaluating information sources, and constructing logical arguments.

Another example of structured thinking approaches that support higher-order thinking is the Mathematical Habits of Mind strategy. This instructional strategy emphasizes the development of intellectual habits such as analyzing problem structures, verifying

solutions, and reflecting on reasoning processes. The integration of digital tools such as Wolfram Alpha in mathematical problem solving further enhances students' analytical reasoning by providing opportunities to test hypotheses and evaluate computational results. Research shows that such strategies encourage students to adopt reflective thinking habits that are essential for solving complex mathematical problems and developing higher-level reasoning skills (Diva & Purwaningrum, 2023). These findings support the idea that explicit cognitive scaffolding can significantly enhance students' higher-order thinking processes.

In addition to structured thinking strategies, the findings of this study highlight the important role of problem-based learning and inquiry-oriented instructional approaches in promoting HOTS. Teachers frequently used contextual problem scenarios, case studies, and project-based assignments to encourage students to analyze issues and generate solutions. These instructional practices align with research findings indicating that Problem-Based Learning (PBL) can effectively stimulate students' analytical reasoning and evaluative thinking processes. Studies conducted in various educational contexts show that PBL enables students to develop critical arguments and analytical perspectives, although students' critical thinking levels often remain within the moderate category (Rosfiyani et al., 2025).

Similarly, inquiry-based learning approaches have been identified as effective strategies for developing higher-order thinking skills. Inquiry learning requires students to formulate questions, develop hypotheses, collect data, and analyze evidence in order to construct conclusions. Through this process, students engage in systematic reasoning that strengthens their analytical and problem-solving abilities. Research indicates that inquiry-based instruction significantly improves students' critical thinking skills and learning motivation because it encourages active exploration and reflective reasoning (Rianto et al., 2025). The findings of this study confirm that inquiry-oriented strategies can create learning environments where students actively engage in knowledge construction rather than simply receiving information from teachers.

Another instructional strategy identified in this study is the use of collaborative learning approaches such as discussion-based learning and group investigations. Collaborative learning environments encourage students to exchange ideas, challenge assumptions, and develop arguments through social interaction. These interactions enable students to examine multiple perspectives and refine their reasoning through dialogue and debate. Previous research demonstrates that collaborative strategies such as group investigation and project-based discussions can significantly improve students' analytical thinking and problem-solving abilities (Rahmawati & Suriansyah, 2024). The implementation of hybrid learning models such as BALOGO, which integrates elements of Problem-Based Learning, Group Investigation, and interactive review activities, has also been shown to increase student engagement and critical thinking performance.

The effectiveness of collaborative strategies in promoting HOTS can be explained through social constructivist perspectives of learning. According to this perspective, knowledge is constructed through social interaction and shared inquiry processes. When students participate in collaborative discussions and group problem-solving activities, they are exposed to diverse viewpoints and reasoning strategies that stimulate deeper cognitive

engagement. Such interactions enable students to develop argumentation skills, evaluate evidence, and refine their thinking processes. As a result, collaborative learning environments provide valuable opportunities for developing higher-order thinking skills.

In addition to instructional models and collaborative learning strategies, assessment practices also play an important role in supporting the development of HOTS. The findings of this study reveal that teachers who design assessments aligned with higher-order cognitive levels tend to create more intellectually challenging learning environments. For example, teachers who integrate indicators corresponding to cognitive levels C4 (analyze), C5 (evaluate), and C6 (create) into lesson plans and assessments encourage students to engage in deeper reasoning processes. Research indicates that the use of contextual problems, open-ended questions, and performance-based assessments can significantly improve students' critical thinking abilities and conceptual understanding (Sufa et al., 2025).

HOTS-oriented assessments also provide opportunities for students to demonstrate their analytical reasoning and creative problem-solving abilities. Instead of focusing solely on factual recall, these assessments require students to interpret information, construct arguments, and propose solutions to complex problems. Studies examining teachers' ability to design HOTS-based questions show that many teachers are capable of developing assessment items aligned with higher-order thinking levels, particularly when supported by appropriate guidelines and professional development opportunities (Mahmudah et al., 2023). These findings highlight the importance of aligning instructional practices and assessment strategies in order to effectively promote higher-order thinking.

Another important aspect of HOTS-oriented instruction is the integration of authentic learning contexts and multimedia resources. Teachers in this study often used digital media, contextual case studies, and interactive learning materials to stimulate students' cognitive engagement. Authentic learning environments enable students to connect theoretical knowledge with real-world situations, which encourages them to analyze problems from multiple perspectives. Research in language and social studies education indicates that contextual learning activities supported by multimedia resources can significantly enhance students' critical and creative thinking abilities (Ashfia et al., 2024). Such learning environments encourage students to actively explore ideas and develop innovative solutions to complex problems.

Despite the positive impact of these instructional strategies, the findings of this study also reveal several challenges that hinder the effective implementation of HOTS-oriented instruction. One major challenge relates to teachers' limited conceptual understanding of higher-order thinking and its pedagogical implications. Some teachers recognize the importance of HOTS but experience difficulties in selecting appropriate instructional strategies and designing learning activities that effectively stimulate analytical thinking. Research shows that insufficient pedagogical knowledge and limited professional training often prevent teachers from implementing HOTS-oriented teaching practices consistently (Mahariyanti & Irwansah, 2021).

Another significant challenge concerns time constraints and curriculum demands. Teachers often face pressure to complete extensive curriculum content within limited instructional time, which may reduce opportunities for implementing inquiry-based or

problem-based learning activities. HOTS-oriented learning requires extended periods for discussion, reflection, and investigation, which may not always align with traditional classroom schedules. As a result, teachers may revert to conventional teaching methods that prioritize content coverage over cognitive development (Widiastuti & Surachman, 2025).

Student-related factors also contribute to the complexity of implementing HOTS-oriented instruction. Students possess diverse cognitive abilities, learning styles, and prior knowledge levels, which may influence their readiness to engage in higher-order thinking activities. Some students may struggle to articulate their reasoning processes or participate in analytical discussions, particularly when they lack prior experience with inquiry-based learning environments. Teachers therefore need to provide appropriate scaffolding and support to help students gradually develop the skills required for higher-order thinking (Rosfiyani et al., 2025).

In addition, classroom heterogeneity presents challenges for teachers in facilitating balanced participation during discussions and collaborative activities. Some students may dominate group discussions, while others remain passive participants. Managing such diversity requires teachers to employ differentiated instructional strategies and create inclusive learning environments that encourage equal participation. Without careful facilitation, collaborative learning activities may fail to fully achieve their intended cognitive benefits (Mahariyanti & Irwansah, 2021).

The findings of this study suggest that effective implementation of HOTS-oriented instruction requires a comprehensive approach that integrates planning, instructional processes, and assessment practices. At the planning stage, teachers must design lesson plans that incorporate higher-order cognitive objectives and select instructional strategies aligned with these objectives. This includes identifying appropriate learning models such as inquiry-based learning, problem-based learning, and collaborative discussion strategies (Andrianto, 2025).

During the instructional process, teachers should adopt facilitative roles that encourage students to actively participate in inquiry and discussion activities. Techniques such as higher-order questioning, scaffolding, reflective dialogue, and collaborative problem-solving can significantly enhance students' cognitive engagement. These instructional practices enable students to analyze information, evaluate arguments, and construct meaningful interpretations of complex issues (Rahmawati & Suriansyah, 2024).

Finally, the evaluation of learning outcomes should focus not only on students' academic performance but also on the development of higher-order thinking abilities. Indicators such as critical thinking scores, quality of arguments, participation in discussions, and independent learning behaviors can provide valuable insights into the effectiveness of HOTS-oriented instruction. Studies indicate that improvements in these indicators often reflect meaningful cognitive development among students (Juraidah & Hartoyo, 2022).

Overall, the findings of this study demonstrate that teachers' instructional strategies play a crucial role in supporting the development of higher-order thinking skills among students. Although various effective strategies have been identified, their implementation remains inconsistent due to pedagogical, institutional, and contextual challenges. Addressing these challenges requires comprehensive professional development programs that enhance

teachers' pedagogical competencies and support the integration of HOTS-oriented strategies into everyday classroom practice. By strengthening teachers' capacity to design and implement effective instructional strategies, educational institutions can create learning environments that foster critical, analytical, and creative thinking among students.

4. CONCLUSION

This study aimed to analyze teachers' instructional strategies in supporting students' Higher-Order Thinking Skills (HOTS) in classroom learning. The findings indicate that teachers employ various instructional strategies such as structured thinking approaches, inquiry-based learning, problem-based learning, collaborative discussions, and HOTS-oriented assessments to stimulate students' analytical, evaluative, and creative thinking processes. These strategies contribute to increased student engagement, improved reasoning abilities, and more active participation in learning activities. However, the implementation of HOTS-oriented instruction is not yet fully optimal due to several challenges, including limited teacher understanding of HOTS concepts, time constraints within the curriculum, diverse student readiness levels, and limited instructional resources. Despite these challenges, the study demonstrates that well-designed instructional strategies can significantly support the development of higher-order thinking skills when teachers function as facilitators who guide inquiry, encourage reflective discussion, and design authentic learning tasks. Therefore, strengthening teachers' pedagogical competencies and providing adequate institutional support are essential for enhancing the effectiveness of HOTS-oriented learning in classroom practice.

Acknowledgments

The authors would like to express their sincere appreciation to all individuals and institutions that contributed to the completion of this research. Special gratitude is extended to the teachers and students who participated in this study and provided valuable insights during the data collection process. The authors also acknowledge the support and encouragement from colleagues, academic mentors, and the educational institution that facilitated this research. Their constructive feedback, cooperation, and academic guidance were essential in improving the quality of this study and ensuring the successful completion of the research.

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