JURNAL MULTIDISIPLIN MADANI (MUDIMA)
Homepage: https://journalmudima.my.id/index.php/mudima
ISSN: 2808-5639 (Online)
Research Article

Vol. 6, No. 4, April (2026)	DOI: https://doi.org/10.55927/mudima.v6i4.44	Page: 514-522

Decline in Critical Thinking Skills and Learning Independence of Junior High School Students in Indonesia

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ARTICLE INFO

Keywords: Critical Thinking, Learning Independence, Merdeka Curriculum, Innovative Learning

Received : 4 February
Revised : 22 March
Accepted : 25 April

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ABSTRACT

This article examines the decline in critical thinking skills and learning independence among junior high school students in Indonesia through a Narrative Review that analyzes literature from SINTA and Google Scholar over the 2014–2024 period. The findings indicate that students' critical thinking skills are relatively low due to the dominance of teacher-centered learning, the limited use of active learning models, and teachers' constraints in implementing higher-order thinking strategies. Meanwhile, students' learning independence has declined due to weak self-regulation, strong dependence on teacher instructions, and changes in learning patterns after the pandemic. The thematic analysis shows that innovative models such as Problem-Based Learning and Resource-Based Learning are effective, although their implementation remains uneven due to limitations in teacher readiness and school facilities. The study concludes that the decline in both competencies is a multidimensional issue that requires pedagogical interventions, improved teacher capacity, and support from the Merdeka Curriculum. Recommendations are provided for future research and improvements in school learning practices

INTRODUCTION

Critical thinking skills and learning independence are two essential 21st-century competencies that are crucial for students' success in facing various academic and social challenges (Sofie, Pambudi, Fatekurohman, Lestari, & Kurniati, 2023; Wulandari, Padlurrahman, & Haritani, 2025). Globally, several international education reports reveal that students' higher-order thinking skills remain at a low level (Ariadi, Suriansyah, & Purwanti, 2023; Izdihar, Supriyatno, & Masruri, 2023; Sofie et al., 2023). For example, results from the Programme for International Student Assessment in recent years show that Indonesian students lag behind in problem-solving, reasoning, and literacy, all of which are key indicators of critical thinking (Sofie et al., 2023; Wulandari et al., 2025). This reflects fundamental challenges in developing higher-order thinking skills at the junior high school level (Prihastuti, Widodo, Liliasari, & Riandi, 2021; Zulaikah, Herpratiwi, & Nurwahidin, 2023).

In Indonesia, the low level of critical thinking skills among junior high school students is increasingly evident from various national studies (Panjaitan, Dharmono, & Suyidno, 2022; Wulandari et al., 2025). Numerous studies indicate that learning is still dominated by conventional teacher-centered approaches, limiting students' opportunities to explore, analyze, and evaluate information independently (Lukman & Tantu, 2022). Furthermore, the transition to the Merdeka Curriculum, which emphasizes learning independence, has not been optimally implemented in schools (Nasution, Ningsih, Silva, Suharti, & Harahap, 2023). This condition results in students' limited ability to manage their own learning processes, make decisions, and take responsibility for their learning outcomes (Nuriah et al., 2023; Rizki & Putri, 2025).

The urgency of this issue has increased in the post-pandemic period, where distance learning has revealed students' difficulties in managing time, understanding materials independently, and maintaining learning motivation (Nasution et al., 2023; Zulaikah et al., 2023). This situation reinforces that critical thinking skills and learning independence among junior high school students are not only low but have also declined due to drastic changes in learning patterns (Kholifah, 2024; Maulina, Widyastuti, Maulina, & Mayasari, 2022). Therefore, in-depth research is needed to analyze patterns, causal factors, and strategies for developing these competencies in the context of Indonesian education.

In addition, rapid advancements in digital technology demand that students possess stronger critical thinking skills and learning independence (Sahnan & Wibowo, 2023; Syukur & Sutrisno, 2023). However, various studies reveal that junior high school students in Indonesia still face difficulties in utilizing technology as a tool for independent learning (Febrianasari, Suriansyah, & Rafianti, 2024; Nenotek, Haan, Nifu, & Lindimara, 2023). Instead of enhancing analytical abilities, technology is often used for passive activities such as watching entertainment videos or searching for instant answers without deep cognitive processing (Dewi, Nurdiani, & Cartono, 2023; Munarun et al., 2025). This phenomenon illustrates a gap between 21st century competency demands and students' actual abilities.

Social and cultural factors also shape the development of these two competencies. In many Indonesian educational contexts, learning culture emphasizes obedience, dependence on teachers, and a focus on exam scores (Hartono, Hartoyo, & Hairida, 2022; Lukman & Tantu, 2022). This culture results in students being less trained to take initiative, ask critical questions, or evaluate information independently. Consequently, critical thinking skills and learning independence do not develop optimally despite curriculum changes (Noorhapizah, Pratiwi, & Ramadhanty, 2022; Nuriah et al., 2023).

Furthermore, disparities in education quality across regions exacerbate the situation. Schools in urban areas generally have better access to learning resources, teacher training, and technological facilities, while schools in remote areas face significant limitations (Maharani, Putri, Kurniawati, Perkasa, & Rifa'i, 2025). This disparity leads to uneven development of critical thinking skills and learning independence, making the decline in these competencies potentially more severe in certain regions (Farliana, Setiaji, & Muktiningsih, 2021; Maharani et al., 2025). This condition highlights the urgency of comprehensive studies to understand the dynamics of competency decline across different educational contexts (Hidayati, Tamrin, & Cahyono, 2024).

Although a number of studies have examined students' critical thinking skills and learning independence, most research still emphasizes the effectiveness of specific learning models such as Problem-Based Learning, Inquiry Learning, or Project-Based Learning (Ariadi et al., 2023; Rahmawati & Airlanda, 2023). These studies generally evaluate improvements in student abilities after instructional interventions, but few comprehensively analyze the phenomenon of decline in both competencies, especially at the junior high school level (Hidayati et al., 2024; Nuriah et al., 2023).

Moreover, most studies tend to separate the variables of critical thinking and learning independence, even though these competencies are interrelated and influence each other (Sofie et al., 2023; Wulandari et al., 2025). Another research gap lies in the limited number of studies linking the implementation of the Merdeka Curriculum with the development of these competencies (Hidayati et al., 2024; Sukarni, Bahrani, Fatimah, & Kamaruddin, 2025). Some studies discuss challenges in curriculum implementation, but they do not specifically connect them to the decline in critical thinking and learning independence.

Contradictions are also evident in previous research findings. Some studies state that innovative learning models effectively improve students' critical thinking skills, while others indicate that such improvements are insignificant or not sustained (Faridli, Abidin, Sutama, Sutopo, & Murtiyasa, 2024; Fitria, Sukardi, & Handayani, 2023). This phenomenon underscores the need for more comprehensive and in-depth studies to reveal general patterns across existing research.

In addition, previous studies have methodological limitations. Most use short-term designs that only measure students' abilities after one or two learning interventions (Yanti & Wijaya, 2023). This approach fails to capture the long-term dynamics of critical thinking skills and learning independence, making it difficult to determine whether the decline is permanent or merely temporary variation (Zulaikah et al., 2023). This reinforces the urgency of more comprehensive literature reviews to uncover long-term patterns.

Another notable research gap is the limited number of studies considering contextual factors such as socio-economic background, learning culture, and technological readiness (Hidayati et al., 2024; Maulina et al., 2022). These factors significantly influence the development of critical thinking and learning independence. Without incorporating these contexts, research findings tend to be limited and fail to explain the decline comprehensively. A Narrative Review approach can address this limitation by integrating multiple perspectives and contexts from related studies (Aguboshim & Otuu, 2023; Hidayati et al., 2024).

Furthermore, there is still limited research analyzing the relationship between post-pandemic learning changes and the decline in students' critical thinking skills and learning independence (Lukman & Tantu, 2022; Sofie et al., 2023). In fact, the pandemic has radically changed how students learn and have had long-term impacts on their motivation, discipline, and self-regulation (Halimah, Usman, & Maryam, 2023). The lack of studies linking this phenomenon to competency decline indicates a wide research opportunity. Therefore, this Narrative Review is essential to identify these relationships and provide deeper insight into their implications for junior high school students.

This article aims to examine the evolution of research on critical thinking skills and learning independence among junior high school students in Indonesia through a Narrative Review approach. Specifically, this study aims to:

1. Identify factors causing the decline in critical thinking skills and learning independence among junior high school students.
2. Analyze patterns, trends, and key findings from previous studies.
3. Identify unresolved research gaps.
4. Provide theoretical and practical recommendations for developing more effective learning.

METHODS

This study obtained literature sources through a systematic search in SINTA, a national indexing portal that provides access to various Indonesian education journals. To broaden the scope and ensure that relevant articles were not overlooked, additional searches were conducted via Google Scholar. The search process utilized keywords such as "berpikir kritis siswa SMP", "kemandirian belajar siswa SMP", "critical thinking junior high school Indonesia", and "self-regulated learning SMP". The

selected publication range was 2017–2026, as this period reflects the evolution of research over the past decade, including changes due to the pandemic and the implementation of the Merdeka Curriculum. The reviewed articles included publications in the Indonesian language to ensure diversity of perspectives and completeness of data.

The literature selection was based on inclusion and exclusion criteria designed to ensure the relevance and quality of the analyzed articles. Included articles were peer-reviewed journal publications focusing on junior high school students and discussing critical thinking skills, learning independence, or both in an integrated manner. Empirical studies employing quantitative, qualitative, or mixed-method approaches were also included if they were relevant to the Indonesian educational context. On the other hand, conference papers, articles without full-text availability, and those not directly related to Indonesia were excluded from the review. Articles focusing solely on elementary or senior high school students were also excluded unless they had strong conceptual relevance to junior high school student development.

The literature screening process was carried out in three main stages: title screening, abstract screening, and full-text review. In the first stage, all articles obtained from keyword searches were examined based on their titles to evaluate their relevance to the research focus, and irrelevant articles were immediately excluded. The second stage involved reading abstracts to verify that the articles truly addressed critical thinking skills, learning independence, or supporting factors of these competencies among junior high school students. Articles that met the abstract criteria were then subjected to full-text review to assess methodological quality, contextual relevance, and their contribution to thematic analysis. Although the Narrative Review approach does not require a PRISMA diagram, the selection process remained systematic and transparent to maintain the credibility of the study.

In this study, data analysis was conducted using a thematic narrative synthesis approach, which involves organizing and interpreting research findings based on key themes emerging from the literature. Each article was examined to extract crucial information such as main variables, methodology, findings, and study context. The data were then grouped into thematic categories representing general research patterns, such as factors causing the decline in critical thinking skills, impacts on learning independence, effectiveness of learning models, and challenges in curriculum implementation. These themes were analyzed in depth to identify patterns, gaps, contradictions, and interconnections among findings. The results of the analysis were then constructed into a coherent narrative to strengthen the discussion and conclusions of the article.

RESULTS AND DISCUSSION

A. Results

The analysis of the reviewed literature reveals four main themes that illustrate the condition of critical thinking skills and learning independence among junior high school students in Indonesia. These themes consistently emerge from various studies that emphasize learning challenges, curriculum changes, and student characteristics at the junior high school level.

The first identified theme is the low level of students' critical thinking skills, which is driven by teacher-centered learning patterns. Various studies indicate that students are given minimal opportunities to develop analytical skills, evaluate information, and solve problems independently (Sofie et al., 2023). Repetitive and memorization-based approaches result in students being less trained in higher-order thinking. In addition, several studies highlight teachers' inability to implement learning strategies that promote critical thinking, such as Problem-Based Learning or Inquiry Learning, leading to suboptimal outcomes.

The second theme highlights the low level of students' learning independence. The literature indicates that junior high school students tend to rely heavily on teacher guidance and show minimal initiative in managing their own learning processes. This low level of independence is reflected in students' difficulties in time management, selecting learning strategies, and maintaining motivation. This situation worsened during the era of distance learning, where students were required to learn autonomously but lacked sufficient self-regulation skills.

The third theme indicates that several learning models have proven effective in improving students' critical thinking skills and learning independence,

although their implementation remains uneven. Models such as Problem-Based Learning, Resource-Based Learning, and Project-Based Learning have successfully enhanced students' analytical abilities and independence. However, research emphasizes that the success of these models largely depends on teacher readiness, availability of learning resources, and support from the school environment.

The fourth theme discusses challenges in implementing the Merdeka Curriculum. Although this curriculum is designed to promote learning independence and higher-order thinking skills, many schools face difficulties in its implementation. Teachers require more in-depth training, while learning facilities in some schools are still inadequate to support project-based learning or independent exploration. Therefore, the curriculum's goal of strengthening critical thinking and learning independence competencies has not yet been optimally achieved.

B. Discussion

The findings of this study indicate that the decline in critical thinking skills and learning independence among junior high school students in Indonesia is not a single phenomenon, but rather the result of the interaction of various structural, pedagogical, and psychological factors. Based on constructivist theory, critical thinking skills develop when students are actively engaged in learning, construct knowledge through experience, and interact with a challenging learning environment. However, many studies show that learning at the junior high school level is still dominated by traditional approaches that do not provide space for students to construct knowledge independently, causing students' critical thinking skills to stagnate or decline.

From the perspective of learning independence, self-regulated learning theory emphasizes the importance of students' ability to plan, monitor, and evaluate their own learning processes. However, the literature indicates that most junior high school students still lack sufficient self-regulation skills. Dependence on teachers and limited experience in independent learning make it difficult for students to develop initiative and take responsibility for their learning processes. This phenomenon became even more pronounced during the period of distance learning, when students were required to learn without direct supervision from teachers.

Research findings on the effectiveness of innovative learning models indicate strong potential for improving students' critical thinking skills and learning independence. Nevertheless, the success of these models largely depends on teacher readiness and the school environment. Curriculum implementation theory emphasizes that curriculum changes will not be effective without adequate teacher capacity, sufficient resources, and a school culture that supports active learning. These findings are consistent with the condition of the Merdeka Curriculum, which has not yet fully succeeded in improving these competencies due to implementation challenges in the field.

This study also identifies inconsistencies in previous research findings. Some studies report significant improvements in critical thinking skills after implementing certain learning models, while others show inconsistent results. These discrepancies can be explained by variations in school contexts, the quality of instructional implementation, and student characteristics. Therefore, this Narrative Review provides a more comprehensive perspective by integrating various findings to understand the emerging general patterns.

Overall, the results of this study confirm that the decline in critical thinking skills and learning independence among junior high school students is a complex issue that requires a comprehensive approach. Enhancing teacher competence, providing adequate learning resources, and implementing student-centered learning strategies are key factors in improving these competencies. In addition, further research is needed to more deeply investigate the relationship between the implementation of the Merdeka Curriculum and the development of critical thinking skills and learning independence.

CONCLUSION

This study concludes that the decline in critical thinking skills and learning independence among junior high school students in Indonesia is a complex phenomenon influenced by various pedagogical, psychological, and structural factors. The synthesis of the literature shows that students' critical thinking skills remain relatively low because learning is still dominated by conventional teacher-centered approaches, limiting students' opportunities to develop analytical, evaluative, and reflective abilities. In addition, students' learning

independence has also shown a declining trend, particularly due to a lack of self-regulation skills, strong dependence on teacher instructions, and limited learning experiences that emphasize initiative and personal responsibility.

The findings of this study indicate that although various innovative learning models such as Problem-Based Learning, Resource-Based Learning, and Project-Based Learning have proven effective in improving students' critical thinking skills and learning independence, their implementation remains uneven and often suboptimal. Barriers in the implementation of the Merdeka Curriculum are also a major factor affecting the development of these competencies. This curriculum, which is designed to promote independent learning and higher-order thinking skills, has not yet been fully realized due to limitations in teacher competence, school facilities, and the readiness of the learning environment.

These conclusions address the research problem by stating that the decline in students' critical thinking skills and learning independence is not only driven by internal student factors but also by the conditions of the learning process and an education system that has not yet optimally developed these competencies. This study emphasizes the urgency of adopting more student-centered learning approaches, strengthening teacher capacity in implementing active learning strategies, and providing learning environments that facilitate students in practicing critical thinking and independent learning.

Based on these findings, several recommendations can be proposed. First, teachers should receive intensive training in instructional strategies that promote higher-order thinking and self-regulation, including the use of formative assessment to support students in reflecting on their learning processes. Second, schools should foster a learning culture that facilitates exploration, discussion, and problem-solving so that students are better prepared to face intellectual challenges. Third, the government and policymakers must ensure that the implementation of the Merdeka Curriculum is supported by adequate facilities, teaching materials, and guidance.

Further research is recommended to conduct more in-depth empirical studies on the relationship between the implementation of the Merdeka Curriculum and students' critical thinking skills and learning independence. Longitudinal studies are also crucial to monitor the evolution of these competencies over time. In addition, comparative studies across regions or schools can provide deeper insights into contextual factors influencing the effectiveness of developing critical thinking skills and learning independence.

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