

Differentiated Learning Strategies to Enhance Student Interest in Elementary Schools: A Literature Review

Alizatulo Waruwu/Universitas Quality Medan

Corresponding Author: Email. alizatulowaruwu@gmail.com

Abstract

Differentiated learning is an instructional approach that adapts the content, process, product, and learning environment to match each student's readiness, interests, and learning profile. Low student interest in learning at the elementary school level remains a persistent challenge in Indonesian education, particularly in the context of implementing the Merdeka Curriculum. This study aims to examine differentiated learning strategies that can enhance student interest in elementary schools through a literature review method. Data were sourced from national and international journals published between 2018 and 2024 and obtained through Google Scholar, ERIC, and Semantic Scholar databases. The results of the review show that three main differentiated learning strategies—content differentiation, process differentiation, and product differentiation—have been consistently shown to increase student interest in learning. Content differentiation allows students to access learning materials according to their level of readiness; process differentiation gives students flexibility in understanding concepts; and product differentiation provides varied means of demonstrating understanding. Supporting factors such as the use of digital teaching materials, technology-based learning media, and the Understanding by Design (UbD) framework strengthen the effectiveness of these strategies. The study concludes that differentiated learning, when planned systematically and supported by appropriate technology, can significantly improve student learning interest in elementary schools and is aligned with the inclusive and student-centered principles of the Merdeka Curriculum.

Keywords: differentiated learning; student interest; elementary school; Merdeka Curriculum; learning strategies

INTRODUCTION

Education at the elementary school level plays a fundamental role in shaping the cognitive, affective, and psychomotor foundations of students. However, one of the main challenges faced by educators today is the diversity of students within a single classroom, which includes differences in readiness levels, learning styles, interests, and background knowledge. This diversity demands a more responsive and adaptive instructional approach, as a uniform teaching method is unlikely to meet the varied needs of all learners (Tomlinson, 2001).

Student interest in learning is one of the key determinants of learning outcomes. According to Slameto (2010), learning interest refers to a stable tendency to pay attention to and engage in certain activities without coercion. Students who have high interest in learning tend to be more actively involved, more focused, and more motivated throughout the learning process. Conversely, low learning interest often leads to passivity, inattentiveness, and poor

achievement. Several studies have documented that conventional teaching approaches that ignore individual student differences contribute to declining student interest, particularly at the elementary level (Naldi et al., 2023).

Differentiated instruction has been widely recognized as an effective strategy for addressing learner diversity while simultaneously fostering engagement and interest. Tomlinson (2001, 2017) conceptualized differentiated instruction as a proactive, qualitative, and multifaceted approach in which teachers modify the content, process, product, and learning environment based on student readiness, interest, and learning profile. This approach moves away from the one-size-fits-all model and instead creates multiple pathways for students to engage with the curriculum meaningfully.

In the Indonesian educational context, the implementation of the Merdeka Curriculum (Kurikulum Merdeka) since 2022 has explicitly emphasized student-centered and differentiated learning as core pedagogical principles. This policy change has prompted a growing body of research exploring the practical implementation of differentiated learning in Indonesian classrooms, particularly at the elementary level (Wahyuningsari et al., 2022; Sumilat et al., 2024). However, a comprehensive synthesis of strategies and their specific effects on student learning interest in elementary schools remains limited.

This study therefore aims to synthesize existing literature on differentiated learning strategies and their relationship to student learning interest at the elementary school level. Through a systematic literature review, this study seeks to provide educators and educational policy makers with a clearer and evidence-based understanding of which differentiated strategies are most effective in enhancing student interest, as well as the conditions that support their successful implementation.

MATERIALS AND METHODS

This study employs a literature review method, specifically a systematic narrative review, to synthesize findings from relevant studies on differentiated learning strategies and student learning interest in elementary schools. The literature review approach was selected because it allows for a comprehensive and critical analysis of existing knowledge, identifies patterns across multiple studies, and generates conceptual insights that go beyond what any single study can provide (Snyder, 2019).

The literature search was conducted through several academic databases, including Google Scholar, ERIC (Education Resources Information Center), Semantic Scholar, and Sinta (Science and Technology Index). Keywords used in the search included combinations of: "pembelajaran berdiferensiasi," "minat belajar," "sekolah dasar," "differentiated instruction," "student interest," "elementary school," and "learning strategies." The search was limited to publications between 2018 and 2024, with the exception of foundational theoretical works such as Tomlinson (2001) and Slameto (2010), which remain highly relevant as seminal references in the field.

Inclusion criteria for literature selection were: (1) the article discusses differentiated learning in the context of elementary education; (2) the article explicitly addresses student learning interest or engagement as an outcome variable; (3) the study is published in a peer-reviewed journal or reputable academic source; and (4) the article is written in Indonesian or English. Articles that focused solely on secondary or higher education levels without reference to elementary education, or that lacked empirical or conceptual grounding related to differentiated learning, were excluded.

A total of 20 sources were identified as relevant after screening. The selected sources were analyzed thematically, with themes emerging around: (1) the conceptual framework of

differentiated learning; (2) specific differentiated strategies and their effects on learning interest; (3) supporting factors and challenges in implementation; and (4) contextual factors in the Indonesian educational setting. Findings from individual studies were synthesized and interpreted to draw overarching conclusions about the effectiveness of differentiated learning strategies in enhancing student interest at the elementary school level.

RESULTS AND DISCUSSION

Conceptual Framework of Differentiated Learning

Differentiated instruction, as conceptualized by Tomlinson (2001), is grounded in the recognition that students in any given classroom differ significantly in their readiness, interests, and learning profiles. Rather than treating these differences as obstacles to instruction, differentiated learning views them as the starting point for instructional planning. Tomlinson (2017) further elaborated that differentiation must be proactive—planned in advance based on assessed student differences—qualitative, requiring a genuine transformation of learning tasks, and multiple in terms of the dimensions it addresses: content, process, product, and learning environment.

In the Indonesian context, Marlina (2020) defined differentiated learning as a method designed to accommodate the diverse learning needs, abilities, and interests of students within the same classroom. This definition aligns with the framework outlined in the Merdeka Curriculum, which emphasizes that every student has the right to a learning experience suited to their individual characteristics and potential. Sumilat et al. (2024) further noted that in differentiated learning, the teacher acts as a facilitator who adapts every component of instruction—content, process, product, and learning environment—based on student motivation, interest, and learning profile.

The concept of learning interest itself, as defined by Slameto (2010), refers to a stable tendency to pay attention to and be engaged with certain activities without external compulsion. The key indicators of learning interest include feelings of pleasure, attention, attraction, and voluntary participation. Within the differentiated learning framework, student interest serves a dual role: it is both a basis for differentiating instruction (teachers differentiate based on student interests) and an outcome that differentiated learning aims to improve.

Differentiated Learning Strategies and Their Effects on Student Interest

1. Content Differentiation

Content differentiation refers to adapting what students learn or how they access learning material based on their readiness level, interests, and learning profile (Tomlinson, 2001). At the elementary school level, content differentiation may take the form of providing varied reading materials at different complexity levels, using varied visual or audio resources, or presenting topics through students' identified interest areas. The Jurnal Review Pendidikan Dasar (2023) noted that content differentiation can be implemented by providing materials and tools aligned with the distinct learning needs of each student, and that content can be differentiated in response to readiness, interest, or learning profile, or any combination thereof.

Research by Achmad et al. (2024), as cited in a systematic review published in the International Journal of Evaluation and Research in Education (IJERE, 2024), demonstrated that content differentiation helps students with low learning readiness remain engaged in the learning process. When students receive materials that are appropriately challenging—neither too easy nor too difficult—they are more likely to sustain their attention and develop positive feelings toward learning. This finding is consistent with Tomlinson's (2001) theoretical claim that matching content to student readiness is essential for maintaining student engagement and interest.

2. Process Differentiation

Process differentiation involves varying the methods and activities through which students make sense of and internalize content. According to the Jurnal Review Pendidikan Dasar (2023), process differentiation can be implemented through tiered activities, guiding questions at interest corners, individualized task agendas, varied task durations, and flexible grouping strategies. These variations allow students to engage with learning through paths that feel more accessible and relevant to them individually, thereby supporting interest development.

Naldi et al. (2023) conducted a classroom action research study at SDN 037 Sabang involving 30 Grade III students and found that the application of differentiated learning based on the Understanding by Design (UbD) framework significantly increased student learning interest across two cycles. The percentage of student learning interest rose from 49.91% in the pre-cycle to 81.40% in Cycle I, and further to 96.79% in Cycle II. The UbD-based differentiated approach systematically incorporated process differentiation by designing learning activities backward from desired outcomes, ensuring that all activities were purposeful and aligned with students' learning characteristics. This result strongly supports the effectiveness of process differentiation in improving elementary school students' learning interest.

The study by Saputra et al. (2023) on the application of differentiated learning with a Problem-Based Learning (PBL) model in elementary schools further confirmed that differentiated processes can increase student learning interest by situating problems in authentic and personally relevant contexts. When students engage with real-world problems adjusted to their individual readiness and interests, they display greater curiosity, effort, and positive emotional engagement toward learning activities.

3. Product Differentiation

Product differentiation allows students to demonstrate their understanding in varied ways, rather than through a single standardized format. According to Tomlinson (2001), product differentiation enables students to show what they know through modalities aligned with their learning profiles, such as through visual presentations, written projects, oral demonstrations, or creative outputs. When students have agency in how they demonstrate their learning, they tend to feel more ownership over the learning process, which strengthens their intrinsic motivation and interest.

In the Indonesian elementary school setting, Ernawati et al. (2024) documented that the use of differentiated learning with digital teaching materials—including e-modules and video-based content—significantly increased student interest in the IPAS (Science and Social Studies) subject. The study found that the learning interest percentage rose from below 50% to 89.9% following the implementation of diverse digital product formats. This finding is aligned with an earlier study by Kurnia Khikmawati et al. (2021), which demonstrated that the use of e-books at the elementary level in Kudus increased student enthusiasm for independent learning. These studies underscore that differentiated product formats, particularly those incorporating digital media, are highly effective in capturing and sustaining student interest.

Supporting Factors and Challenges in Implementation

Several factors have been identified in the literature as supporting the effective implementation of differentiated learning strategies in elementary schools. First, the availability of educational technology and digital teaching materials significantly enhances teachers' capacity to differentiate instruction (Ernawati et al., 2024). Digital platforms allow teachers to deliver differentiated content efficiently and to monitor individual student

progress more effectively. Second, teachers' professional competence in assessing student readiness, interests, and learning profiles is critical; without accurate pre-assessment data, differentiation may be superficial or misdirected (Kenney et al., 2024).

Third, the policy environment matters considerably. The implementation of the Merdeka Curriculum in Indonesia has created an enabling policy framework for differentiated learning by mandating student-centered approaches and recognizing diversity as a pedagogical asset (Wahyuningsari et al., 2022; Rahayu et al., 2022). This has led to a notable increase in teacher awareness of and willingness to experiment with differentiation strategies at the elementary level.

On the other hand, several challenges persist. A systematic review by Kenney et al. (2024) identified insufficient professional development and limited resources as the primary barriers to effective differentiated learning implementation. Many teachers report difficulty in managing differentiated activities for large, heterogeneous classes, particularly when the curriculum is tightly regulated by pacing guides or standardized assessments. In the Indonesian context, Hapsary et al. (2025) similarly noted that while teachers understand the concept of differentiated learning under the Merdeka Curriculum, translating this understanding into consistent classroom practice remains challenging, especially for those with limited training or experience in student needs assessment.

Differentiated Learning in the Context of Indonesian Elementary Education

The Indonesian educational context presents a unique set of conditions for the implementation of differentiated learning. Elementary school students in Indonesia are characterized by concrete, integrative, and hierarchical learning patterns; they learn most effectively through direct interaction with their environment and through tasks that connect to real-world experiences (Jurnal Basicedu, 2024). These characteristics are well-aligned with differentiated learning principles, particularly with regard to process and product differentiation that emphasizes hands-on, contextually relevant activities.

Furthermore, the introduction of the Merdeka Curriculum has placed the concept of differentiated learning at the center of Indonesian educational reform. Ainia (2020) noted that the principle of Merdeka Belajar (Freedom to Learn), rooted in Ki Hadjar Dewantara's educational philosophy, emphasizes respecting each student's individual talents and character—a principle that mirrors Tomlinson's differentiated instruction framework. The curriculum's emphasis on *Projek Penguatan Profil Pelajar Pancasila* (P5) further creates structured opportunities for product differentiation, as students are encouraged to express their learning through creative and diverse projects.

Studies conducted specifically in Indonesian elementary school settings confirm the positive impact of differentiated learning on student learning interest. Wahyuningsari et al. (2022) demonstrated that differentiated learning in the context of Merdeka Belajar effectively combines components of content, process, product, and learning environment differentiation and that this integration positively influences student motivation and interest. Meanwhile, research by Sumilat et al. (2024) affirmed that teachers who adopt a facilitator role and consistently adapt instruction to individual student characteristics generate more positive and sustained learning interest among elementary students.

CONCLUSION

This literature review demonstrates that differentiated learning strategies—comprising content differentiation, process differentiation, and product differentiation—are effective in enhancing student learning interest at the elementary school level. Content differentiation sustains engagement by matching materials to students' readiness; process differentiation

supports interest by providing flexible and relevant learning activities; and product differentiation strengthens student agency by allowing varied means of expressing understanding. The integration of these strategies, supported by digital teaching materials, technology-based media, and structured frameworks such as Understanding by Design (UbD), further amplifies their effectiveness.

In the Indonesian context, the alignment between differentiated learning principles and the Merdeka Curriculum provides a strong policy foundation for wider implementation in elementary schools. However, realizing this potential requires sustained investment in teacher professional development, adequate resource provision, and school-level support systems that enable teachers to conduct ongoing assessment and adapt instruction accordingly. Future research is recommended to examine the long-term effects of specific differentiated strategies on student learning interest across different subjects and regional contexts in Indonesia.

REFERENCES

- Ainia, D. K. (2020). Merdeka Belajar dalam Pandangan Ki Hadjar Dewantara dan Relevansinya bagi Pengembangan Pendidikan Karakter. *Jurnal Filsafat Indonesia*, 3(3), 95–101.
- Ernawati, E., Raharjo, M., & Rudiansyah, R. (2024). Meningkatkan Minat Peserta Didik dalam Mata Pelajaran IPAS melalui Pembelajaran Diferensiasi Menggunakan Bahan Ajar Digital. *Jurnal Basicedu*, 8(5).
- Hapsary, A., Anjani, E., & Maryati, V. (2025). Analisis Pembelajaran Berdiferensiasi dalam Kurikulum Merdeka di Sekolah Dasar. *Jurnal Pendidikan Dasar dan Keguruan*.
- Jurnal Basicedu. (2024). Karakteristik Peserta Didik Tingkat Sekolah Dasar. *Jurnal Basicedu*, 8(5).
- Jurnal Review Pendidikan Dasar. (2023). Model Pembelajaran Berdiferensiasi. *Jurnal Review Pendidikan Dasar*, 9(2).
- Kenney, A. W., Langley, S. D., Hemmler, V., Callahan, C. M., Gubbins, E. J., & Siegle, D. (2024). Different or Differentiated? Recoupling Policy and Practice in an Era of Accountability. *Gifted Child Quarterly*, 68(1).
- Kurnia Khikmawati, K., et al. (2021). Pemanfaatan E-Book untuk Meningkatkan Minat Belajar Siswa Sekolah Dasar di Kudus. *Jurnal Pendidikan Dasar*.
- Marlina. (2020). Strategi Pembelajaran Berdiferensiasi di Sekolah Inklusif. Afifa Utama.
- Naldi, W., Suryadi, S., R, G. A., Herman, T., & Dwiana, R. (2023). Pembelajaran Berdiferensiasi Berbasis Rancangan Understanding by Design (UbD) terhadap Minat Belajar Siswa Sekolah Dasar. *JiIP - Jurnal Ilmiah Ilmu Pendidikan*, 6(7), 5224–5231. <https://doi.org/10.54371/jiip.v6i7.2374>
- Rahayu, R., Rosita, R., Rahayuningsih, Y. S., Hernawan, A. H., & Prihantini, P. (2022). Implementasi Kurikulum Merdeka Belajar di Sekolah Penggerak. *Jurnal Basicedu*, 6(4), 6313–6319.
- Saputra, D. A., Andri, A., & Sulianto, J. (2023). Analisis Penerapan Pembelajaran Diferensiasi dengan Model Problem Based Learning terhadap Minat Belajar Peserta Didik di SD. *Jurnal Pendidikan*.
- Slameto. (2010). Belajar dan Faktor-Faktor yang Mempengaruhinya. PT Rineka Cipta.
- Snyder, H. (2019). Literature Review as a Research Methodology: An Overview and Guidelines. *Journal of Business Research*, 104, 333–339.

- Sumilat, J. M., & Koni, S. M. (2024). Pembelajaran Berdiferensiasi untuk Mengakomodasi Keberagaman Siswa di Sekolah Dasar. *Journal on Education*, 7(1), 8362–8369.
- Tomlinson, C. A. (2001). *How to Differentiate Instruction in Mixed-Ability Classrooms* (2nd ed.). ASCD.
- Tomlinson, C. A. (2017). *How to Differentiate Instruction in Academically Diverse Classrooms* (3rd ed.). ASCD.
- Wahyuningsari, D., Mujiwati, Y., Hilmiyah, L., Kusumawardani, F., & Sari, I. P. (2022). Pembelajaran Berdiferensiasi dalam Rangka Mewujudkan Merdeka Belajar. *Jurnal Jendela Pendidikan*, 2(4), 529–535. <https://doi.org/10.57008/jjp.v2i04.301>