



A Literature Analysis of Differentiated Instruction as a Learning Management Strategy in Physical Education

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Abstract

This study aims to analyze differentiated instruction as a learning management strategy in Physical Education, Sports, and Health (PESH) through a literature review approach. Education plays a crucial role in developing high-quality human resources; however, learning challenges such as declining educational quality, low student motivation, and diverse learner characteristics remain prevalent, particularly in PESH learning. Differentiated instruction is considered a relevant pedagogical approach to address these challenges by adjusting learning content, processes, and products according to students' readiness levels, interests, and learning profiles. This study employed a descriptive literature review method. Data were collected through a systematic search of scientific articles, reference books, and academic journals published within the last five to ten years using databases such as Google Scholar and PubMed. The selected literature was analyzed through categorization, comparison, and synthesis to identify patterns and key findings related to the implementation of differentiated instruction in PESH learning. The findings indicate that differentiated instruction has a positive impact on student motivation, engagement, and learning outcomes in PESH. The approach strengthens teachers' roles as facilitators and learning managers who are responsible for planning, organizing, implementing, and evaluating learning activities in a flexible yet structured manner. Furthermore, differentiated instruction aligns with the principles of the Merdeka Curriculum, which emphasizes student-centered and inclusive learning. In conclusion, differentiated instruction is an effective learning management strategy that supports inclusive, engaging, and sustainable PESH learning environments.

How to Cite

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INTRODUCTION

Education is one of the fundamental elements in national development, as it plays a strategic role in shaping high-quality human resources. Through education, individuals acquire knowledge, skills, and values necessary to face life's challenges and contribute positively to society.(Jaya & Wiguna, 2025) Law Number 20 of 2003 on the National Education System defines education as a conscious and well-planned effort to create a learning environment and learning process that enables learners to actively develop their potential, including spiritual strength, self-control, personality, intelligence, noble character, and skills needed for themselves, society, the nation, and the state(Blegur et al., 2024). Therefore, the ability of a nation to produce qualified human resources is closely related to the quality of its education system(Hanif, 2024).

In recent years, education in Indonesia has continuously undergone changes and innovations to respond to global challenges and societal needs. However, the results of the Programme for International Student Assessment (PISA) in 2018 indicated a decline in Indonesia's performance across several domains, reflecting gaps in learning quality. These challenges were further exacerbated by the COVID-19 pandemic, which significantly disrupted the learning process(Hidayat et al., 2025). In response, the Ministry of Education, Culture, Research, and Technology introduced the Merdeka Belajar (Independent Learning) policy through the implementation of the Merdeka Curriculum, aiming to promote more flexible, student-centered learning(Umam & Sulistiyo, 2024)

In the context of Physical Education, Sports, and Health (PESH), student learning motivation remains a prominent issue across various educational levels (M. Rinaldi et al., 2025) Motivation plays a crucial role not only as a driving force for learning activities but also in determining students' effort, consistency, and perseverance throughout the learning process(NWOKIKE et al., 2015). Low learning motivation may negatively affect the achievement of PESH learning objectives, making it essential to adopt appropriate pedagogical approaches to foster and sustain students' (Blegur & Hardiansyah, 2024)

One approach that is considered relevant to addressing these challenges is differentiated instruction. Differentiated instruction is a learning management strategy that adapts the learning process to students' diverse needs, characteristics,

readiness levels, interests, and learning profiles. In this approach, teachers act as facilitators who support students in achieving learning objectives while encouraging independence and active engagement in learning(Kurniawan, 2021).

Differentiated instruction consists of three main components: content differentiation, process differentiation, and product differentiation. (Bangun et al., 2025) Content differentiation refers to variations in learning materials provided to students; process differentiation involves differences in how students access and process information; and product differentiation relates to how students demonstrate their learning outcomes(Raihan & Hotimah, 2025). Numerous studies have shown that differentiated instruction can enhance student engagement and learning outcomes, as learning activities become more relevant to students' interests and abilities(Agus & Hita, 2023).

InPhysical Education learning, the implementation of differentiated instruction is particularly important due to variations in students' physical abilities, fitness levels, interests, and individual characteristics(Blegur & Hardiansyah, 2024). However, in practice, many teachers still rely on monotonous teaching models with limited variation, which can lead to student boredom and reduced motivation(Qorib, 2024). Therefore, differentiated instruction can serve as an effective learning management strategy to create an inclusive, engaging, and supportive learning environment that facilitates the achievement of Physical Education learning(Rahman et al., 2023) . The purpose of this study is to analyze differentiated learning as a learning management strategy in Physical Education, Sports, and Health (PJO) through a literature review approach.

Based on these considerations, a literature analysis of differentiated instruction as a learning management strategy in Physical Education, Sports, and Health (PESH) is essential. This study aims to provide conceptual and empirical insights into how differentiated instruction can be systematically managed to improve the quality, inclusiveness, and effectiveness of PESH learning within the framework of the Merdeka Curriculum(Gunawan et al., 2025). This study therefore offers a novel perspective by positioning differentiated instruction as a learning management strategy in Physical Education, Sports, and Health (PESH), rather than merely as a pedagogical approach. While previous studies have mainly focused on the effects of differentiated instruction on students' motivation, motor

skills, and learning outcomes, this study extends the discussion by integrating differentiated instruction into the core managerial functions of teachers, including planning, organizing, implementing, and evaluating learning in heterogeneous PESH classrooms. Furthermore, by aligning differentiated instruction with the principles of the Merdeka Curriculum, this study demonstrates how content, process, and product differentiation serve as practical and operational mechanisms for realizing student-centered, flexible, and inclusive learning. Through this management-oriented synthesis of the literature, this study proposes a new conceptual framework for improving the quality, inclusiveness, and sustainability of PESH learning.

METHOD

This study uses the literature review method. This method involves collecting, reading, and analyzing various relevant sources, including national and international journal articles, books, and policy documents related to physical literacy, Physical Education (PE), and lifelong active lifestyles. The literature review procedure employed in this study follows the approach described (Afifah et al., 2025), which emphasizes systematic identification, selection, and synthesis of previous research to build a strong theoretical foundation.

The literature collection process was carried out through searches in electronic databases such as Scopus, ScienceDirect, Taylor & Francis Online, Google Scholar, and national SINTA-accredited journal platforms. The keywords used included "physical literacy," "physical education," "movement competence," "lifelong active lifestyle," "school-based physical activity," and "PE pedagogy." The search strategy applied Boolean combinations to refine the results and ensure that only studies directly related to the research theme were selected.

RESULTS AND DISCUSSION

On This discussion elaborates on the findings of the literature synthesis regarding the implementation of differentiated instruction as a learning management strategy in Physical Education, Sports, and Health (PESH). Based on the reviewed literature, differentiated instruction is considered a relevant pedagogical approach for addressing major challenges in PESH learning, particularly low student motivation, diverse learner characteristics, and the demands of implementing the Merdeka Curriculum.

Differentiated Instruction and Student Learning Motivation The literature synthesis indicates that differentiated instruction contributes positively to improving student motivation in PESH learning. Adjusting learning content, processes, and products based on students' interests, readiness levels, and learning profiles makes learning activities more meaningful and relevant. Students with higher learning motivation tend to demonstrate greater activeness, enthusiasm, and perseverance during PESH lessons. These findings are consistent with previous studies by (Masrun et al., 2022) and (Salim et al., 2022), which emphasize that instruction tailored to individual needs significantly enhances student engagement.

The Role of Teachers as Learning Managers in PESH The reviewed literature highlights that in differentiated instruction, teachers function not only as content deliverers but also as facilitators and learning managers. Teachers are required to effectively plan, organize, implement, and evaluate learning activities in a flexible and adaptive manner. According to (Marlina, 2020), the success of differentiated instruction largely depends on teachers' ability to manage classrooms, learning resources, and instructional strategies that align with students' needs. Therefore, teachers' managerial competence plays a crucial role in the successful implementation of differentiated instruction in PESH.

Content Differentiation as a Strategy for Managing PESH Learning Materials Content differentiation is identified as a key component of learning management in PESH. The literature suggests that adapting learning materials according to students' physical fitness levels, motor skills, and interests enhances understanding and active participation. In PESH contexts, differences in physical ability among students are inevitable. Consequently, teachers need to manage a variety of learning activities and materials to ensure that all students can achieve learning objectives optimally without experiencing pressure or exclusion.

Process Differentiation and Flexible Classroom Management The literature also indicates that process differentiation allows students to acquire and process information in ways that match their learning styles and profiles. (Thi et al., 2022) assert that varied learning processes increase learning effectiveness and reduce student boredom. In practice, teachers must apply flexible yet structured classroom management strategies so that, despite students engaging in different activities, the learning process remains effective, orderly, and conducive.

Table 1. Literature Review

Authors and Journals	Title	Conclusion
Jaya & Wiguna, 2025 PENJAGA: Pendidikan Jasmani dan Olahraga	Differentiated Learning Strategies in Physical Education: A Literature Review on Implementation in Volleyball Games	The conclusion of this study emphasizes that differentiated instruction is an effective, inclusive, and responsive approach to addressing the diversity of students' characteristics in volleyball learning. This strategy not only improves students' psychomotor skills (basic techniques) but also enhances their cognitive and affective aspects in a comprehensive manner. As a recommendation, further development of more practical implementation models is needed, along with continuous professional development support for teachers, so that this strategy can be applied widely and consistently in schools.
(Blegur et al., 2024) Jurnal Abdimas Prakasa Dakara	Training on Differentiated Instruction Using Project-Based Learning in Physical Education	In conclusion, the training on PjBL-based differentiated instruction improved elementary PJOK teachers' competence in addressing diverse student learning needs in the Merdeka Belajar era. Although teachers showed better understanding and skills, challenges remain in fully integrating differentiated instruction into the PjBL framework. Therefore, continuous training and follow-up evaluations are recommended to ensure effective and sustainable implementation in schools.
(Agus & Hita, 2023) Jurnal Integrasi Manajemen Pendidikan	Talents in learning educational private vocational school of al azhar mandiri palu	Based on the sources provided, the study concludes that the differentiated learning approach has a significant positive impact on the development of elementary school students' motor skills, particularly in basketball games.
(Agus & Hita, 2023) Indonesian Journal of Physical Activity	the effectiveness of differentiated learning models to increase student motivation in physical fitness courses	Based on the results of the effectiveness test, the maximum score was 89.29, the minimum score was 52.63, and the average score was 75.6. Based on this average value, it can be concluded that the implementation of the differentiated learning model is quite effective in increasing students' learning motivation in physical fitness courses.
(Hanif, 2024) Didaktik : Jurnal Ilmiah PGSD FKIP Universitas Mandiri	Analysis of Teachers' Implementation of Differentiated Instruction on the Achievement of Physical Education Learning Outcomes in Class 12.5 at SMA N 8 Semarang	Based on the results presented in this study, students responded very positively to the differentiated learning approach, as it helps develop their interests and talents. The findings indicate that the implementation of differentiated instruction in physical education lessons greatly supports the achievement of physical education learning objectives at the senior high school level. This approach encourages students to be more active, creative, and innovative, enabling them to learn independently and foster positive character development.
(Hidayat et al., 2025) Pendas : Jurnal Ilmiah Pendidikan Dasar	Transformation of Physical Education Learning: Enhancing Students' Learning Motivation through a Differentiated Approach	The research results indicate a significant difference between the pre-test and post-test scores, with the average score increasing from 18.80 to 23.20. The significance value of the t-test was 0.000 (< 0.05), indicating that the differentiated learning strategy significantly improved students' learning motivation. The conclusion of this study is that the differentiated learning approach is effective in increasing students' learning motivation in Physical Education (PJOK), particularly in the topic of underhand volleyball passing skills.
(M. Rinaldi et al., 2025) JURNAL SPORT SCIENCE INDONESIA	Implementation of the Process Differentiation Learning Strategy for Grade X Students at SMA Cendana Pekanbaru	Differentiation was applied to the aspects of content, process, product, and learning environment based on the results of diagnostic assessments. Data collection instruments included observations, interviews, documentation, and analysis of assessment results before and after the intervention. The findings showed an increase in students' average scores from 72.3 to 83.4, along with improved engagement and learning motivation. This strategy also promoted the development of 21st-century skills such as collaboration, independence, and critical thinking. The reflective implementation of differentiated instruction was proven to create an inclusive, adaptive, and personally as well as socially meaningful learning environment.
(Saputra et al., 2024) EDUCAZIONE: Jurnal Multidisiplin	Innovation in Physical Education Learning in Elementary Schools: A Review of the Literature	The use of digital technologies, such as artificial intelligence and virtual reality, can enhance students' engagement and learning motivation. Beyond technical aspects, this text emphasizes the importance of collaborative learning strategies and curriculum integration in developing children's motor and social skills. Its primary focus is on creating a physical education system that is more inclusive and adaptive to the challenges of the modern era. Overall, this research provides a theoretical framework for teachers to promote healthy lifestyles through creative and data-driven teaching methods.

Product Differentiation and Authentic Assessment Systems Product differentiation relates to the variation in learning outcomes and assessment forms provided to students. The literature shows that offering multiple options for learning products enables students to demonstrate their competencies more optimally based on their individual strengths. This approach requires teachers to manage assessment systems that are fair, authentic, and oriented toward both learning processes and outcomes. In PESH learning, assessment should encompass cognitive, affective, and psychomotor domains in a holistic manner.

Differentiated Instruction within the Merdeka Curriculum Framework The literature review reveals that differentiated instruction aligns with the principles of the Merdeka Curriculum, which emphasizes student-centered learning. This approach allows teachers to manage learning activities contextually and responsively according to students' needs. Thus, differentiated instruction can serve as an effective learning management strategy to support the implementation of the Merdeka Curriculum, particularly in PESH subjects.

Implications of Differentiated Instruction for the Quality of PESH Learning Overall, the literature synthesis demonstrates that differentiated instruction enhances the quality of PESH learning in terms of student motivation, engagement, and learning outcomes. Conversely, monotonous and less varied instructional approaches tend to reduce student motivation and hinder the achievement of learning objectives (Utamayasa, 2021). Therefore, differentiated instruction should be regarded as an integral component of PESH learning management strategies aimed at creating inclusive, effective, and sustainable learning environments.

CONCLUSION

The Based on the results of the literature analysis, it can be concluded that differentiated instruction is an effective learning management strategy for improving the quality of Physical Education, Sports, and Health (PESH) learning. Differentiated instruction enables teachers to respond to students' diverse learning needs by adjusting learning content, processes, and products according to students' readiness levels, interests, and learning profiles.

The literature consistently indicates that the implementation of differentiated instruction has a positive impact on student learning motivation, engagement, and participation in PESH

learning activities. By providing learning experiences that are relevant and meaningful, differentiated instruction encourages students to actively participate, persevere in learning tasks, and develop positive attitudes toward physical activity.

Furthermore, differentiated instruction strengthens the role of teachers as facilitators and learning managers. Teachers are required to possess managerial competencies in planning, organizing, implementing, and evaluating learning activities in a flexible yet structured manner. This managerial approach supports the creation of inclusive learning environments that accommodate individual differences without compromising learning objectives.

The findings also demonstrate that differentiated instruction aligns with the principles of the Merdeka Curriculum, which emphasizes student-centered learning and flexibility in instructional design. Therefore, differentiated instruction can be effectively integrated as a core strategy in PESH learning management to support curriculum implementation.

In conclusion, differentiated instruction contributes significantly to enhancing learning effectiveness, fostering student motivation, and achieving holistic learning outcomes in PESH. Consequently, it is recommended that teachers adopt differentiated instruction as an integral part of learning management strategies to create inclusive, engaging, and sustainable Physical Education learning environments.

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