



A Systematic Review of Teachers' Obstacles in Implementing Differentiated Learning in Junior High Schools

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ABSTRACT.

Education plays an important role in developing human potential to face future challenges. One of the newest concepts in education is differentiated learning, which aims to meet the individual needs of students with tailored teaching strategies. This study uses the Systematic Literature Review (SLR) method with the PRISMA approach to explore the obstacles faced by teachers in implementing differentiated learning in junior high schools. A literature search was conducted through Google Scholar with related keywords between 2020-2024, resulting in 19 articles that met the inclusion criteria. The results of the analysis show that the main obstacles include teacher readiness, technology limitations, and inadequate time allocation. The proposed solutions include increased teacher training, the provision of adequate technological resources, and better planning for time allocation. Support from schools and supportive policies is also crucial to support the effective implementation of differentiated learning in junior high schools.

INTRODUCTION

Education is a learning process and ability that is very important for humans. The main goal of education is to provide the knowledge, skills, and values needed to face difficulties and succeed in the future (Handayani & Mauludea, 2022), so it requires quality education. This is undoubtedly the primary concern of the government, which has resulted in various ideas about curriculum changes that are made to adjust to current conditions; one of these concepts is the new paradigm curriculum (Naibaho, 2023). According to this paradigm shift, teachers, as agents of change, must be able to guide and direct their students to achieve their potential in various aspects of life (Alifah, 2023). Considering the complexity of today's challenges, the rapid development of technology and information, and the diversity of student characteristics, it is essential to have professional teachers. Both include emotional stability, realistic attitudes, reflective skills, and a deep understanding of student's creativity (Handayani & Mauludea, 2022). To create meaningful, creative, and dynamic learning, it is necessary to have an optimal learning plan that pays attention to the diversity of students through differentiation. (Supono, 2023).

According to (Isrotun, 2022), Differential learning is a motor learning model that emphasizes the importance of movement variation and is based on the dynamic systems theory of human movement. It is part of an effort to adjust education to the individual needs of each student. Learning strategies must be tailored to each learner's interests and learning styles to ensure that all learners face challenges, succeed, and feel satisfied. Despite its potential benefits, many teachers need help in

implementing differentiated learning. Common challenges include a lack of knowledge about differentiation strategies, difficulties in identifying individual student needs, and limited time and resources (Ria & Kurniati, 2023). However, these challenges are shared. Some educators have reported positive experiences with differentiated learning, particularly when leveraging collaborative teaching strategies and peer support networks. Professional learning communities can play a crucial role in mitigating the challenges of differentiation. By sharing resources and insights, teachers can enhance their understanding of differentiation techniques (Kancheli & Tchokhanelidze, 2023).

Additionally, schools prioritizing ongoing training and mentorship for teachers are more likely to see successful implementation of differentiated instruction. Such initiatives can build teacher confidence and foster a culture of continuous learning. To address these systemic issues, educational institutions must create an environment where all teachers can effectively meet diverse student needs. A literature review can help identify critical barriers, such as lack of resources, insufficient training, and time constraints. This information can then guide future professional development initiatives that effectively support educators in implementing differentiated learning.

RESEARCH METHODS

The Systematic Literature Review (SLR) used in this study follows the previously developed PRISMA method (Ritterbusch & Teichmann, 2023) to answer several research questions to be formulated. After this stage, the database that will be used to search for articles according to the criteria set is then selected. The author's question is, what obstacles do teachers face in implementing differentiated learning in junior high schools? What solutions can be provided? Literature search uses Publish or Perish with Google Scholar and Scopus as the database. The keyword is "Implementation of differentiated learning in junior high schools" from 2020-2024.

In the process of filtering articles, authors set inclusion and exclusion criteria for related literature. Table 1 details the criteria that have been set.

Table 1. SLR Inclusion and Exclusion Criteria

Criterion	Inclusion	Exclusion
Type of article	Article published in the journal The article can be accessed	Articles published not in journals
Type of study	Keywords education, differentiation and junior high school	Articles outside the keyword
Study focus	Articles published in Indonesian and English	Articles published outside of Indonesian and English
Population and sample	Junior high school at all levels Teachers	Senior high school at all levels and university students

After establishing inclusion and exclusion criteria, articles that meet the inclusion criteria are then filtered based on quality that focuses on the topics of education, differentiation and junior high school. 200 articles were obtained from these keywords which were then eliminated as many as 181 and 19 articles remained. The researcher stratified it into a prism flow diagram as follows:

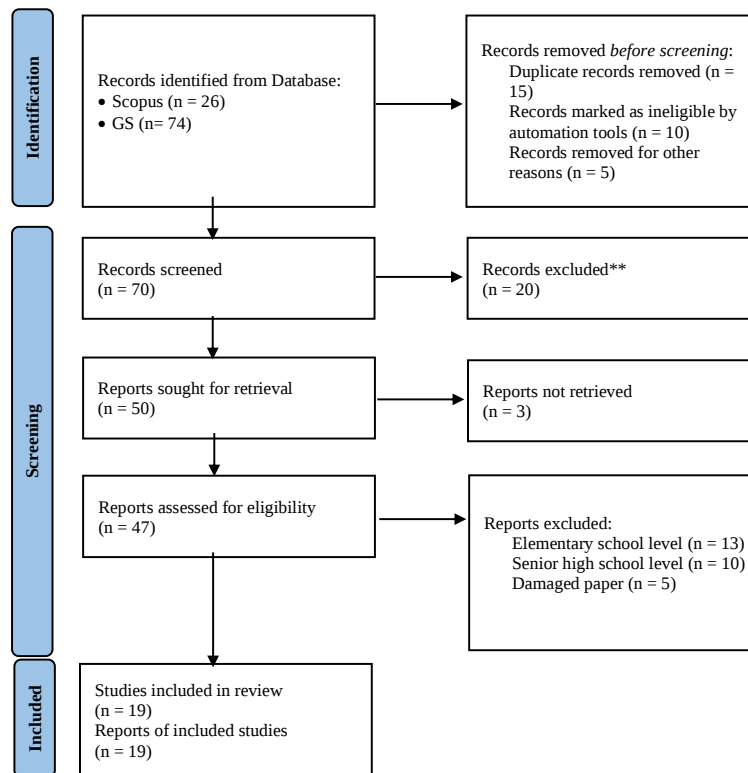


Figure 1. Differentiated Learning Prisma Flow Diagram

RESULTS AND DISCUSSION

The published study centered on instructors' challenges in implementing differentiated learning. In the last five years, there has been an increase in the quantity of research on the application of differentiated learning, with ten articles published in 2023, five in 2024, two in 2022, and one in 2021 and 2021. The number of publications reached its high in 2023, with ten papers released. This trend may continue to expand because, at the time of the literature search, 19 articles had already been published in 2020-2024. Table 2 shows the results of filtering the prisma flow diagram.

Table 2. Results of Literature Review Analysis

Author	Subject	Result
(Sriyanti et al., 2024)	All Subject	Teachers have difficulty adapting teaching methods to suit the dynamic nature of students' learning styles and abilities.
(Sujadi et al., 2024)	Mathematics	Teachers face barriers in design, limited learning time, classroom management, and gaps in knowledge regarding certain aspects of different learning.
(Napitupulu et al., 2023)	Sains	Science teachers in junior high schools face barriers to implementing different learning, including time constraints (80%), content adaptation (50%), lack of appropriate teaching resources (20%), student resistance (30%), and inadequate professional development (20%).
(Suryati et al., 2023)	English	Teachers face challenges in implementing Differentiated Instruction, including the time and effort required to prepare and design the learning process and the lack of support from other teachers.
(Kholid et al., 2024)	English	Teachers face obstacles such as time constraints, large class

		sizes, limited resources, varied student abilities, and resistance to change. These challenges can hinder the use of effective diagnostic assessments to tailor education to individual student needs
(Marantika et al., 2023)	All subjects	lack of understanding of concepts and how to design and implement them effectively. The heterogeneous nature of classrooms, the varied characteristics of students, and the need to meet individual learning needs further complicate the process. In addition, the absence of a flexible curriculum tailored to the needs of students and the challenge of managing diverse student profiles in a single class contribute to the difficulties teachers face in implementing different learning strategies.
(Gibbs, 2022)	All Subjects	limited school resources, student behavior issues, and inadequate time for planning and implementation. These barriers hinder the effective implementation of Differentiated Instruction, impacting the ability to meet the diverse needs of students in the middle school environment. The study emphasizes the need for further research to address these barriers and ensure that teachers have the necessary support and resources to successfully implement Differentiated Instruction and provide maximum learning opportunities for all students.
(Kyeremeh et al., 2021)	Mathamatics	There is still a lack of teachers' understanding of differentiated learning, and a lack of supporting facilities
(Kelvin, 2023)	All Subjects	Lack of adequate teacher training, time constraints, lack of power symer, and ability to manage the classroom
(Benjamin & Panesar-Aguilar, 2020)	All Subjects	Limited resources, time constraints in designing effective differentiated learning according to student needs
(Mirawati et al., 2022)	All Subjects	Time constraints in designing differentiated learning strategies and preparing the right materials and assessments according to the needs of students, and the ability to manage the classroom
(Syarqia et al., 2024)	Sains	Teachers face obstacles such as a lack of training, resources, and effective time in implementing differentiated learning
(Saraswati & Sulistyani, 2023)	Mathematics	Barriers to managing the right time and technology resources.
(Kalangi et al., 2023)	Sains	Difficulties in designing effective learning
(Rosmiati et al., 2023)	Mathematics	Obstacles in curriculum planning, implementation, and assessment are detailed. Differential teaching strategies need to be improved.
(Melani & Gani, 2023)	Sains	Difficulties in designing differential learning and preparing teaching materials
(Sasmita et al., 2024)	Mathematics	Difficulties in managing classes and designing diverse content according to students' learning styles
(Sinaga et al., 2023)	All Subjects	Classroom management and appropriate use of resources according to students' material needs and learning styles
(Pratiwi & Maftujianah, 2023)	Sains	Difficulties in time management and the use of technology in learning

Junior high school teachers face several common obstacles when implementing different learning strategies. One significant challenge is time constraints, as many teachers find it difficult to allocate enough time to plan and execute different lessons effectively (Napitupulu et al., 2023). Additionally, adapting content to meet the diverse needs of students is another hurdle, with teachers struggling to modify existing materials to meet different levels and learning styles (Napitupulu et al., 2023). The lack of proper teaching resources further complicates this task, as teachers often do not have access to the necessary materials to support different instruction (Napitupulu et al., 2023).

Resistance from students, who may be unfamiliar or uncomfortable with different approaches, also poses challenges (Napitupulu et al., 2023). In addition, inadequate professional development and support hinder teachers' ability to implement these strategies effectively, highlighting the need for ongoing training and administrative support (Napitupulu et al., 2023). Organizational culture and academic supervision play a crucial role in the effectiveness of different learning, with a supportive environment and appropriate supervision increasing teachers' motivation and ability to discern instruction (Sasmita et al., 2024). Teachers also need to understand and apply special methods, such as dismantling modules and backward planning, to ensure quality and fair learning opportunities for all students (Grecu, 2022). Here are some of the main obstacles faced by junior high school teachers in implementing different learning, from various studies.

a. Conceptual and Technical Understanding

Many teachers struggle to understand the technical execution of differentiated learning clearly. This lack of clarity can lead to difficulties in effectively applying the methodology in classrooms, as seen in Indonesian subjects at the junior high school level (Sriyanti et al., 2024). Although some teachers have a good theoretical understanding of differentiated learning, they often lack the practical knowledge to design and implement it effectively, particularly in mathematics (Sujadi et al., 2024).

b. Time and Resource Constraints

Time limitations are a significant barrier, with teachers often finding it challenging to allocate sufficient time for planning and executing differentiated learning strategies. This issue is prevalent across various subjects, including science and English (Napitupulu et al., 2023; Rosali et al., 2024). Limited resources and teaching materials further complicate the implementation process. Teachers frequently encounter difficulties adapting content and providing various learning materials to meet diverse student needs.

c. Classroom Management and Student Engagement

Managing a classroom with diverse learning needs can be daunting. Teachers often face challenges in maintaining an organized and conducive learning environment while implementing differentiated strategies (Nurfianto et al., 2024). Student resistance to differentiated learning approaches can also hinder effective implementation. This resistance may stem from students' unfamiliarity with the approach or a preference for traditional teaching methods.

d. Professional Development and Support

Inadequate professional development opportunities leave teachers ill-prepared to tackle the complexities of differentiated learning. There is a need for ongoing training and support to help teachers refine their skills and strategies. The lack of support from colleagues and school administration can further exacerbate these challenges, making it difficult for teachers to sustain differentiated learning practices (Suryati et al., 2023).

While differentiated learning offers promising benefits, its successful implementation requires addressing these multifaceted challenges. Teachers need comprehensive support, including professional development, adequate resources, and a supportive school culture, to overcome these obstacles and enhance the learning experience for all students (Whitley et al., 2021). Additionally, collaboration among educators can foster innovative strategies and share best practices, ultimately leading to a more inclusive and effective learning environment.

Table 3. Obstacles faced by junior high school teachers

Obstacles	Number of Articles
Teacher Readiness	9
Technology	5
Time allocation	3
Proper Teaching and Strategy Modules	9

Based on Table 3, the obstacle teachers often face is their readiness, which impacts the teaching modules and learning strategies designed. Research (Rosmiati et al., 2023) states that curriculum planning, implementation, and assessment must be further detailed. Differentiated teaching strategies require improvement by relying on teacher commitment and understanding to achieve successful implementation. Furthermore, ongoing professional development is essential to equip educators with the necessary skills and knowledge to adapt their approaches effectively. This includes workshops, peer collaboration, and access to resources that foster innovative teaching practices.

CONCLUSION

The main challenges teachers face in implementing differentiated learning in junior high schools are teachers' readiness, which impacts teaching modules and learning strategies, technological limitations, and inadequate time allocation. Solutions that can be provided include increased training and professional support for teachers to understand and implement differentiation strategies, provision of adequate technology resources, and better planning for time allocation so that teachers can design and implement effective learning. Support from schools and flexible policies are also needed to facilitate this differentiated learning process. Future studies can contribute to a more nuanced and comprehensive understanding of the factors influencing teachers' implementation of differentiated learning in junior high schools. This knowledge can inform the development of effective strategies to support teachers in teaching.

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