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# Learning Transformation: Optimizing Student Potential Through Inclusive and Meaningful Differentiated Learning

Sri Wahyuni\*, Nur Khoiri, & Mega Novita

Postgraduate Program of Science Education, Universitas PGRI Semarang, Indonesia

**Abstract:** Differentiated learning is an approach designed to meet the different learning needs of each student. This method involves adjusting methods, materials and assessments in three aspects: content, process and product. Although interest in differentiated learning is increasing, its implementation is still a challenge for teachers and educational institutions. Previous literature studies have explored the implementation and potential of differentiated learning. This study aims to present a literature review with a focus on previous articles on the implementation of differentiated learning. The results of the analysis of 82 articles show that this approach can be integrated with various learning models and can improve student learning outcomes and their enthusiasm for learning. In addition, it resulted that there is the potential for differentiated learning to be carried out in the context of strengthening the profile of Pancasila students. With a better understanding of differentiated learning, it is hoped that an inclusive and meaningful learning experience will be created for every student.

**Keywords:** differentiated learning; inclusiveness of learning; optimization of student potential; independent curriculum; student learning outcomes

Abstrak: Pembelajaran berdiferensiasi adalah pendekatan yang dirancang untuk memenuhi kebutuhan belajar yang berbeda dari setiap siswa. Metode ini melibatkan penyesuaian metode, materi, dan penilaian dalam tiga aspek: konten, proses, dan produk. Meskipun minat terhadap pembelajaran berdiferensiasi meningkat, implementasinya masih menjadi tantangan bagi guru dan lembaga pendidikan. Studi literatur sebelumnya telah mengeksplorasi implementasi dan potensi pembelajaran berdiferensiasi. Penelitian ini bertujuan untuk menyajikan tinjauan literatur dengan fokus pada artikel-artikel yang telah dilakukan sebelumnya tentang implementasi pembelajaran berdiferensiasi. Hasil analisis terhadap 82 artikel menunjukkan bahwa pendekatan ini dapat diintegrasikan dengan berbagai model pembelajaran dan dapat meningkatkan hasil belajar siswa serta semangat belajar mereka. Selain itu, dihasilkan bahwa ada potensi pembelajaran berdiferensiasi dilakukan dalam konteks penguatan profil pelajar Pancasila. Dengan pemahaman yang lebih baik tentang pembelajaran berdiferensiasi, diharapkan tercipta pengalaman belajar yang inklusif dan bermakna bagi setiap siswa.

*Kata kunci:* pembelajaran berdiferensiasi; inklusifitas pembelajaran; optimalisasi potensi siswa; kurikulum merdeka; hasil belajar siswa.

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\*Email: yhoe.niiz@gmail.com

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#### INTRODUCTION

Learning is at the core of an effective educational process (Junaedi, 2019). In the face of the diversity of students in the classroom, a single learning approach may not be sufficient to meet the needs and potential of each individual. Differentiated learning is an approach designed to adjust methods, materials, and assessments in order to meet the different learning needs of each student (Ramadhan et al., 2023; Wahyuningsari et al., 2022). Differentiated learning can be done in three aspects, namely content or content aspects, process aspects, and also product aspects (Herwina, 2021; Wahyuni, 2022). However, despite the increasing interest in differentiated learning, its implementation is still a challenge for many teachers and Education Units (Faiz et al., 2022; Basir, Muhaqqiqoh, & Pandiangan, 2023). Differentiated learning is more dominantly used to measure student learning outcomes (Safarati & Zuhra, 2023). To help overcome these challenges, it is important for us to have an in-depth understanding of the potential and benefits of differentiating learning through a review of the literature. The literature review provides a solid framework for understanding the developments, approaches, and implementation strategies of differentiated learning that have been studied in depth in previous research. By examining and analyzing these studies, we can gain rich insights into the effectiveness of differentiated learning.

A number of previous studies using the literature review method have been carried out to explore the implementation of differentiated learning and its potential to achieve better learning outcomes. For example, research by Insani & Munandar (2023) highlights various strategies that can be used in differentiated learning in aspects of concepts, processes, products, and the learning environment, such as the use of various materials, assignments that are tailored to the level of student abilities, and the use of technology as a tool. learning aid. Mubarok (2023) conducted a literature review on the application of differentiated learning in classrooms with students with special needs, finding out how this approach can help students with different learning challenges. Another study by Zulaikha & Laeli (2023) reviewed the literature on the use of differentiated learning in educational contexts to accommodate students with diverse needs and backgrounds in increasing student motivation and engagement in the learning process. The results of research conducted by Brugel et al. (2020) on differentiated project-based learning had a positive effect on student perceptions, encouraging self-identification with so far disliked coursework. In line with the results of research conducted by Demir (2021), Bal (2016), and Nikolaou et al., (2017) that the application of differentiated learning shows the development of students' cognitive and affective abilities.

Literature review research on differentiation learning has been carried out a lot, but there are still novelties and gaps that need to be explored further. One of the research gaps that can be identified is the limitations of previous studies in investigating the application of differentiated learning specifically to strengthen the profile of Pancasila students. So far, the focus on a differentiated learning approach in the context of Pancasila values as an integral part of holistic and value-based character education has rarely been explored in previous literature. Therefore, the scope of this research is to conduct an in-depth literature review, explore the implementation of differentiated learning through the analysis of articles that have been done previously. The purpose of this literature review is to explain the results of previous studies on the application of differentiated learning and to analyze opportunities for implementing differentiated learning to strengthen the

profile of Pancasila students. Thus, it is hoped that this research can find new insights, provide in-depth understanding, and produce practical recommendations that can assist teachers and Education Units in implementing differentiated learning effectively.

Through a careful and comprehensive literature review, this study aims to fill the knowledge gap on this topic by conducting a special focus on the implementation of differentiated learning to strengthen the profile of Pancasila students. By exploring previous articles that have conducted similar studies, this research is expected to provide new insights and practical recommendations for teachers and Education Units in integrating differentiation learning with the formation of student character based on Pancasila values. Thus, this research is expected to make a significant contribution to the development of character education based on Pancasila values, as well as increase our understanding of the effectiveness and relevance of differentiated learning in the context of education in Indonesia.

#### METHOD

This study uses the literature review method or literature review. The literature review method is a systematic approach to identify, review, and synthesize literature that is relevant to a particular research topic (Mahanum, 2021). The population in this study includes all articles relevant to the topic "implementation of differentiated learning" which can be found in the Google Scholar academic database. Searches are carried out using keywords that are relevant to the research topic. The total number of articles found in the population is 1442 articles. From this population, samples were selected based on predetermined inclusion criteria. The inclusion criteria include limitations on the year of publication, namely articles published within the last ten years, from 2013 to 2023, and using the keyword "differentiated learning". Of the 1442 articles in the population, 422 articles met the inclusion criteria. Furthermore, a selection was made based on the criteria of a literature review of differentiated learning, and 339 articles were produced that met these criteria. In the final stage of selection, an assessment is made of the relevance of the articles to the research questions and the quality of the research. As a result, 94 articles were selected that met all inclusion criteria for further analysis consisting of 69 articles from domestic journals and 25 articles from international journals.

This literature review research involves several stages that are carried out systematically. This study uses a descriptive and analytical research design. The stages of research carried out systematically. First, the researcher identified the research topic "implementation of differentiated learning". Then, a literature search was carried out through the Google Scholar academic database using keywords relevant to the research topic. After that, articles that met the inclusion criteria were selected and filtered. The selected articles were then analyzed systematically by reading and understanding the contents of each article, as well as identifying the main findings that emerged from the literature. The results of the analysis of the literature are synthesized and interpreted in the synthesis and interpretation stages. The main findings emerging from the literature are combined and comprehensively summarized. Interpretation is done to answer research questions that have been previously asked. Finally, the results of this study are compiled in a structured and organized research report. The research report includes an introduction that explains the context and purpose of the research, a literature review that describes the findings and analysis, and a conclusion that summarizes the answers to the research questions. Thus, these stages form the framework of the literature review

research methodology conducted. The period of this research starts from the literature search stage to the preparation of the research report, and takes about 4 months.

The instrument used in this study is a table that includes the following information: article title, researcher's name, year of study conducted, research results, variables measured, and research methods used in the article. This table is used to collect data from selected articles and organize them in a structured way. The validity of the instrument is guaranteed by using keywords that are relevant to the research topic, so as to ensure that the articles found are really related to the topic "implementation of differentiated learning". Meanwhile, the reliability of the instrument is guaranteed because the data source used is the Google Scholar academic database, which is known as a recognized and trusted source of literature.

Data analysis in this study was carried out qualitatively. The researcher only analyzes and synthesizes the findings from the selected articles. This qualitative analysis focuses on reading and understanding the content of each article, as well as identifying the main findings emerging from the literature. This analysis process is carried out systematically by organizing the findings in tables and arranging them in a structured manner. The purpose of this qualitative analysis is to gain a comprehensive understanding of the topic of "implementation of differentiated learning" based on the articles that have been analyzed.

#### RESULT AND DISSCUSSION

The results of this literature review are based on an in-depth analysis of relevant literature on the implementation of differentiated learning. The analysis involved the study of 82 carefully selected articles. Information related to the results of the analysis is shown in Table 1. Through the analysis of the selected articles, some key findings were found that are consistent with previous research. These findings show that the implementation of differentiated learning has a positive impact on students' learning outcomes, active participation, motivation and confidence. Various differentiated learning methods and strategies are also proven to be effective in improving students' understanding and engagement in various subjects. Table 1 also provides an overview of the diverse topics that have been researched regarding the implementation of differentiated learning, as well as the authors and research methods used in each article. These findings provide an important basis to strengthen the understanding of the importance of differentiated learning and its impact on student learning outcomes.

**Table 1.** Previous research on differentiated learning

<b>Table 1.</b> Previous research on differentiated learning							
Author	Results	Measured variable	Research Methods				
(Wahyuni, 2022; Wulandari, 2022; Maulidia, F. R., & Prafitasari, A. N., 2023; Insani, A. H., & Munandar, K, 2023; Pebriyanti, 2023; Mubarok, 2023; Widiastuti et al., 2020; Saputri, D. A., Nuroso, H., & Sulianto, J., 2023; Saadah, N., Wastri, L., Asmendri, A., & Sari, M., 2023; Ihza Pramudya, M. I., & Hidayati, H. N., 2023; Farid et al., 2022; Kriswanto & Fauzi, 2023; Zulaikha, I. P. N., & Laeli, A. F., 2023; Rigianti, 2023; Safarati & Zuhra, 2023; Marzoan, M, 2023; Hardi & Mudjiran, 2022; Jenyana, 2022; Hamik, M., & Sriwahyuni, E., 2022; Basra, H, 2022; Gusteti, M. U., & Neviyarni, N., 2022; Ningrum, M., & Andriani, R., 2023; Ngaisah, N. C., & Aulia, R., 2023; Handiyani & Muhtar, 2022; Fitra, D. K., 2022; Faiz et al., 2022; de Jager, 2013; Morgan, 2014; Brodersen &	Differentiated learning is a learning strategy that can be integrated with learning models according to students' learning styles. Its application improves learning outcomes and student motivation. In science and other subjects, this approach is able to accommodate students' learning needs based on their interests, profiles, learning styles, and readiness. At various levels, differentiated learning has been proven to be effective and relevant in increasing student achievement, improving the quality of learning, and creating a pleasant atmosphere	implementation of differentiated learning, Student Learning Outcomes, motivation and enthusiasm for learning students	literature review				
Melluzzo, 2017)  (Nur'azizzah, N., Pramuditya, S. A., & Rosita, C. D., 2023; Rafiska & Susanti, 2023; Hanaunnadiya, F., Azizah, M., Untari, M. F. A., & Purbiyanti, E. D, 2023; Anggarwati & Alfiandra, 2023; Yokoyama et al., 2023; Wuryani et al., 2023; Yanti et al., 2022; Marita, 2023; Nurlaili, N., Suhirman, S., & Lestari, M., 2023; Mirzachaerulsyah, 2023; Muslimin, M., Hirza, B., Nery, R. S., Yuliani, R. E., Heru, H., Supriadi, A., & Khairani, N., 2022; Khasanah & Alfiandra, 2023; Pratama, 2022; Alhafiz, 2022; Suprayogi et al., 2017; Mills et al., 2014)	in the classroom.  Differentiated learning improves students' mathematical reasoning abilities by accommodating their learning styles.  Teachers play an important role in designing learning according to the analysis of student characteristics. This strategy is also effective for teaching saga and PAI with multimedia. Differentiated learning has a positive impact on students' behavior and learning outcomes, Research shows its positive impact on students' learning motivation and literacy	student learning style profile, cognitive abilities, motivation and enthusiasm for learning, student learning achievement, literacy skills	qualitative descriptive research				
(Rompis, 2023; Evendi et al., 2023; Jumiarti, D. N., 2023; Fitra, D. K., 2022; Sanjaya, P. A., 2022; Sutrisno, L. T., 2023; Bendriyanti et al., 2021; Made, R. K. N., 2022; Kamal, 2021; Suwartiningsih, 2021; Syarifuddin & Nurmi, 2022; Fitra, D.	Differentiated learning improves student learning outcomes by accommodating their learning styles and needs. The use of emodules and the Merdeka Curriculum also provides benefits in learning outcomes.	pancasila student profile, learning outcomes, activity, interest, enthusiasm	classroom action research				

K., 2022; Nikolaou et al., 2017; Iskandar, 2021; Mulbar et al., 2017; Ferlianti et al., 2022)	Overall, the application of differentiated learning improves XXI century skills and student learning outcomes.		
(Kusuma et al., 2023; Januar, 2022; Tanesib et al., 2022; Astiti et al., 2021)	Differentiated learning based on character values and local wisdom works well. Overall, this approach gives positive results in the learning process.	the effectiveness of character value-based differentiation learning	R&D
(Marantika et al., 2023; Widiastuti et al., 2023; Nurdini, 2021; Hamad, 2020; Ghazouani, 2018; Demir, 2021b; Bal, 2018; Variacion et al., 2021; Chandra Handa, 2019)	The teacher understands the concept and application of differentiated learning well. This approach improves student learning outcomes and motivation. Overall, this strategy is effective and produces a good teaching tool.	activeness, motivation, learning achievement, and creativity of students	mixed method
(Qomari et al., 2022; Laia, I. S. A., 2022; Mahdiannur, M. A., Erman, E., Martini, M., Nurita, T., Rosdiana, L., & Qosyim, A. 2022; Pane, R. N. P. S., Lumbantoruan, S., & Simanjuntak, S. D., 2022; Siagian, B. A., Simbolon, E. G., Bangun, K., Sidabutar, S., & Girsang, A., 2022; Demir, 2021a; Gray, 2020; Menekse et al., 2013; Progella, 2019; Brungel et al., 2020; Al-Shehri, 2020; Tahiri et al., 2017; Thapliyal et al., 2022; Meyad et al., 2014; Ismail et al., 2021; Dinç, 2017; Gregorius et al., 2010))	Differentiated learning according to students' learning styles makes learning more memorable and improves learning outcomes. This strategy has a positive impact on students' creativity and motivation. Despite challenges in implementation, inclusive and adaptive approaches still provide real benefits for student learning outcomes. Overall, differentiated learning is effective and beneficial in the learning process.	effectiveness, creativity, student achievement	quantitative approach

### **Analysis of Previous Research**

The studies conducted show that differentiated learning approaches can be integrated with various learning models such as problem-based learning, blended learning's Station Rotation, and project-based learning. (Maulidia & Prafitasari, 2023; Wahyuni, 2022; Wulandari, 2022). This approach can improve students' learning outcomes and can be applied in science learning by taking into account students' learning needs such as interests, profiles, learning styles, and students' learning readiness. (Al-Shehri, 2020; Ardiani, 2022; Mahdiannur et al., 2022; Demir, 2021b; Hariyati et al., 2021; Fitra, 2022; Hamik & Sriwahyuni, 2022; Suwartiningsih, 2021; Tanesib et al., 2022)...

Differentiated learning is also associated with increasing learners' enthusiasm for learning and supporting their cognitive development. In the context of Islamic education, a differentiated approach that considers students' learning profiles according to the learning components (content, process, product and environment) is in line with the objectives of Islamic education. (Pramudya & Hidayati, 2023; Nurdini, 2021; Nurlaili, Suhirman, & Lestari, 2023). In addition, a differentiated learning approach can be applied in English subjects (Saadah, Wastri, Asmendri, & Sari, 2023) and PAI to accommodate students' learning needs.

Differentiated learning strategies focus on the content, process and product of learning in accordance with the characteristics of learners. The implementation of differentiated learning can be done in one aspect or a combination of four aspects, namely content, process, product, and learning environment. (Insani & Munandar, 2023; Zulaikha, & Laeli, 2023; Widiastuti et al., 2020). Studies also show that this approach can increase motivation (Demir, 2021b; Hanaunnadiya et al., 2023; Haelermans, 2022; Handiyani & Muhtar, 2022; Khasanah & Alfiandra, 2023) and student engagement (Zulaikha & Laeli, 2023; Maulidia & Prafitasari, 2023) and student engagement in the learning process.

Analysis of the literature shows that differentiated learning has a positive impact on student learning outcomes. Students who follow differentiated learning tend to achieve higher academic performance, increase learning motivation, and show active participation in the learning process (Jenyana, 2022; Nurlaili, Suhirman, & Lestari, 2023). Differentiated learning can also meet students' individual learning needs and increase their confidence.

In the discussion of this literature review research, there are results and findings from an in-depth analysis of the article by considering its practical and theoretical implications. This literature review research makes an important contribution in expanding knowledge about the implementation of differentiated learning. By summarizing and analyzing relevant literature, this research identifies the approaches, methods, impacts, associated with differentiated learning. This provides a richer and more comprehensive understanding of the concept and practice of differentiated learning.

### **Impact of Differentiated Learning on Student Learning Outcomes**

The impact of differentiated learning on student learning outcomes is significant. Several literature studies show that the implementation of differentiated learning contributes positively to the improvement of students' academic achievement. (Al-Shehri, 2020; Bal, 2018; Made, 2022; Hamik & Wahyuni, 2022; Wuryani, Wismanto, Sudiyati, & Fahmy, 2023). Students who follow this approach tend to achieve higher learning

outcomes compared to conventional learning methods. Differentiated learning allows teachers to tailor methods, materials, and assessments to students' individual learning needs. By paying attention to student characteristics such as interests, profiles, learning styles, and learning readiness, teachers can provide learning experiences that are more relevant and meaningful to each student. (Alhafiz, 2022; Evendi et al., 2023; Marantika et al., 2023; Rafiska & Susanti, 2023; Saadah, Wastri, Asmendri, & Sari, 2023; Gusteti & Neviyarni, 2022; Wahyuni, 2022). This allows students to learn in a level of difficulty that suits their abilities, so they can develop a better understanding and master the material more effectively.

Differentiated learning also encourages students to be actively involved in the learning process. Through strategies such as flipped teaching, flexible grouping, and differentiated assignments, students are given the opportunity to participate in activities that suit their needs and interests (Maulidia & Prafitasari, 2023). This can increase students' intrinsic motivation and strengthen their involvement in the learning process. In addition, differentiated learning can meet students' individual learning needs. Each student has different learning styles, interests, and levels of understanding (Evendi et al., 2023; Sutrisno, 2023; Wulandari, 2022). By accommodating these differences, differentiated learning ensures that each student gets a learning experience that suits their needs. This can boost students' confidence, motivate them to keep learning, and result in better learning outcomes.

# The Impact of Differentiated Learning on Student Morale

Differentiated learning has a significant impact on students' enthusiasm for learning. The implementation of this approach encourages students to be more active, enthusiastic and passionate in the learning process. By taking into account the different learning needs of students, differentiated learning provides opportunities for each student to engage in activities that suit their interests and abilities. (Sanjaya, 2022; Fitra, 2022; Muslimin, Hirza, Nery, Yuliani, Heru, Supriadi, A., ... & Khairani, N., 2022; Kamal, 2021; Menekse et al., 2013; Pane, Lumbantoruan, & Simanjuntak, 2022; Widiastuti & Fana, 2023). Students feel listened to and valued as teaching and assignments are tailored to their learning profile. This helps to increase students' intrinsic motivation, where they feel they have control over the learning process and feel fully engaged. In addition, the differentiated learning approach encourages students to take a more active role in learning (Variacion et al., 2021). By the use of strategies such as flipped teaching (Maulidia & Prafitasari, 2023), group discussion (Sutrisno, 2023), or team-based projects (Brungel et al., 2020), students are encouraged to collaborate (Jumiarti, 2023), share thoughts, and exchange ideas (Kriswanto & Fauzi, 2023).. This creates a dynamic and interactive learning environment, which directly improves students' learning spirit.

Differentiated learning also ensures that students feel valued and accepted with their uniqueness and differences. In an inclusive environment, students feel safe to express their opinions, ask questions, and actively participate without fear of negative judgment. (Haelermans, 2022). This builds students' confidence and passion for learning, and encourages them to continue to try and overcome learning challenges.

# Impact of Differentiated Learning in the Context of Strengthening the Profile of Pancasila Students

In the context of strengthening the learner profile of Pancasila, differentiated learning has a significant impact. The implementation of this approach can help students understand, live and apply Pancasila values better in their daily lives. Through differentiated learning, teachers can customize learning content, processes, and products with Pancasila values. (Evendi et al., 2023). Teachers can integrate Pancasila values into various aspects of learning, such as in the selection of learning materials, class discussions, assignments, and projects. This helps students to understand the meaning and relevance of Pancasila values in the context of their own lives.

Differentiated learning also allows teachers to pay attention to individual differences in students' understanding and appreciation of Pancasila values. Teachers can provide learning approaches that suit students' learning profiles, so that they can better understand and internalize the values of Pancasila (Ngaisah & Aulia, 2023). This helps students to develop a higher awareness and concern for Pancasila values in their lives as good citizens. In differentiated learning, students are also given the opportunity to explore and develop their understanding of Pancasila values through a variety of different activities and resources. They can produce learning products that reflect their understanding of Pancasila values, such as written works, presentations or creative projects. This helps students to internalize Pancasila values in a more concrete and visible way.

### **Implications and Recommendations for Teachers and Education Units**

The implications and recommendations from this literature review research provide valuable guidance for teachers and education units in optimizing the implementation of differentiated learning. One of the implications is the need to increase teachers' understanding of differentiation learning through training and development. By deepening their knowledge and skills in planning, implementing, and evaluating differentiated learning, teachers can more effectively deal with challenges that arise in the classroom. In addition, educational units need to provide adequate resources and support for teachers in implementing differentiated learning, including differentiated teaching materials, appropriate evaluation tools, and access to technological resources that support differentiated learning.

Inter-teacher collaboration and teamwork are also important in differentiation learning. Teachers need to share knowledge, experience, and the best strategies for dealing with the different learning needs of students. Holding regular meetings, workshops or collaborative sessions can increase the effectiveness of differentiation learning in schools. Furthermore, teachers and educational units need to accommodate the individual learning needs of students by considering factors such as their interests, profiles, learning styles, and learning readiness. In planning and implementing differentiated learning, attention must be paid to adapting content, processes, and learning products to suit students' needs and preferences. Another recommendation is to integrate differentiated learning in the context of strengthening the profile of Pancasila students. Teachers and education units can relate Pancasila values to every aspect of learning, including material selection, class discussions, and assignments. This helps students understand, live, and apply Pancasila values better in everyday life.

Through the implementation of these recommendations, teachers and education units are expected to create learning experiences that are inclusive, meaningful and

relevant for every student. Differentiated learning enables students to reach their highest learning potential, while building a strong learning spirit and strengthening the learner profile of Pancasila.

### CONCLUSION

Based on the literature review research conducted, it can be concluded that the implementation of differentiated learning has a positive impact on student learning outcomes, learning enthusiasm, and strengthening the learner profile of Pancasila. Previous studies have shown that differentiated learning approaches can be integrated with various learning models and subjects. Differentiated learning strategies, such as flipped teaching, flexible grouping, differentiated assignments and the use of differentiated resources, can improve student understanding, learning motivation and active engagement in the learning process. Differentiated learning can be practiced in all types of subjects. In this context, various approaches and methods have been found to be effective in meeting students' individual learning needs. Research findings also show that differentiated learning has a positive impact on student learning outcomes, including improved academic achievement, higher learning motivation and active participation in the learning process. Through content-, context- and product- based learning activities, differentiated learning is able to facilitate learners' diversity. In the context of strengthening the learner profile of Pancasila, differentiated learning can be integrated with Pancasila values in every aspect of learning. Thus, students not only learn academic materials, but also internalize and apply Pancasila values in daily life.

The implication of this study is that teachers need to improve their understanding and skills in planning and implementing differentiated learning. Support and resources from the education unit are also important in supporting effective implementation of differentiated learning. Inter-teacher collaboration and teamwork are also needed to share knowledge and best practices.

However, this literature review research has several limitations, including limitations in updating current knowledge as well as possible representativeness limitations in literature selection. Therefore, further empirical research is needed to test the effectiveness of differentiated learning methods in more depth and involving various educational contexts. While there have been several studies that have examined differentiated learning, there is still a need for further research that explores other domains related to this approach.

Future research can focus on testing the effectiveness of various differentiated learning methods in the context of strengthening the Pancasila learner profile. With a better understanding of the concept and practice of differentiated learning, it is expected to create a more inclusive, relevant and meaningful learning experience for each student in achieving learning objectives related to the Pancasila learner profile. This research makes an important contribution in expanding our knowledge and understanding of differentiated learning and provides practical guidance for teachers and education units in implementing this approach to improve learning outcomes and students' passion for learning.

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#### REFERENCES

- Alhafiz, N. (2022). Analisis profil gaya belajar siswa untuk pembelajaran berdiferensiasi di smp negeri 23 pekanbaru. J-Abdi: Jurnal Pengabdian Kepada Masyarakat, 1(8), 1913-1922.
- Al-Shehri, M. S. (2020). Effect of differentiated instruction on the achievement and development of critical thinking skills among sixth-grade science students. International Journal of Learning, Teaching and Educational Research, 19(10), 77-99.
- Anggarwati, H., & Alfiandra, A. (2023). Pembelajaran berdiferensiasi untuk mewujudkan kebutuhan belajar setiap peserta didik di smpn 33 palembang [differentiated learning to realize the learning needs of every student at smpn 33 palembang]. Jurnal Pendidikan dan Konseling (JPDK), 5(1), 5572-5575.
- Ardiani, K. E. (2022). Pengembangan multimedia pembelajaran interaktif berorientasi teori belajar ausubel pada muatan ipa materi sumber energi untuk siswa kelas iv [development of ausubel interactive learning theory-oriented multimedia on science content of energy sources materials for class iv students]. Jurnal Penelitian dan Pengembangan Pendidikan, 6(1).
- Astiti, K. A., Supu, A., Sukarjita, I. W., & Lantik, V. (2021). Pengembangan bahan ajar ipa terpadu tipe connected berbasis pembelajaran berdiferensiasi pada materi lapisan bumi kelas VII [Development of Connected Type Integrated Science Module Based on Differentiated Learning on Earth Layer Material for Grade VII]. Jurnal Pendidikan Dan Pembelajaran Sains Indonesia (JPPSI), 4(2), 112-120.
- Bal, A. P. (2016). The effect of the differentiated teaching approach in the algebraic learning field on students' academic achievements. Eurasian Journal of Educational Research, 16(63).
- Basir, M. R., Muhaqqiqoh, S. S., & Pandiangan, A. P. B. (2023). *Pembelajaran berdiferensiasi sebagai strategi mencapai tujuan pembelajaran dalam kurikulum merdeka* [differentiated learning as a strategy to achieve learning objectives in the merdeka curriculum]. INOVASI: Jurnal Ilmiah Pengembangan Pendidikan, 1(2), 132-138.
- Basra, H. (2022). Pembelajaran Berdiferensiasi dengan Quizizz [Differentiated Learning with Quizizz]. Jurnal Sipatokkong Bpsdm Sulsel, 3(4), 193-208.
- Bendriyanti, R. P., Dewi, C., & Nurhasanah, I. (2021). *Manajemen pembelajaran berdiferensiasi dalam meningkatkan kualitas belajar siswa kelas ix smpit khairunnas* [differentiated learning management in improving the learning quality of grade ix students at smpit khairunnas]. JP (Jurnal Pendidikan): Teori dan Praktik, 6(2), 70-74.
- Brodersen, R. M., & Melluzzo, D. (2017). Summary of research on online and blended learning programs that offer differentiated learning options. REL 2017-228. Regional Educational Laboratory Central.

- Brüngel, R., Rückert, J., & Friedrich, C. M. (2020, November). Project-based learning in a machine learning course with differentiated industrial projects for various computer science master programs. In 2020 IEEE 32nd Conference on Software Engineering Education and Training (CSEE&T) (pp. 1-5). IEEE.
- Chandra Handa, M. (2019). Leading differentiated learning for the gifted. Roeper Review, 41(2), 102-118.
- de Jager, T. (2013). Guidelines to assist the implementation of differentiated learning activities in South African secondary schools. International Journal of Inclusive Education, 17(1), 80-94.
- Demir, S. (2021). Effects of learning style based differentiated activities on gifted students' creativity. Journal for the Education of Gifted Young Scientists, 9(1), 47-56
- Demir, S. (2021). The impact of differentiated instructional media on the motivation and opinions of students towards science learning in terms of learning styles. Shanlax International Journal of Education, 9(3), 16-25.
- Dinç, E. (2017). Differentiated learning environment--a classroom for quadratic equation, function and graphs. International Association for Development of the Information Society.
- Evendi, H., Rosida, Y., & Zularfan, D. (2023). Pembelajaran *berdiferensiasi dalam pembelajaran matematika di kurikulum merdeka smpn 4 kragilan* [differentiated learning in mathematics learning in the merdeka curriculum of smpn 4 kragilan]. Joong-Ki: Jurnal Pengabdian Masyarakat, 2(2), 181-186.
- Faiz, A., Pratama, A., & Kurniawaty, I. (2022). Pembelajaran berdiferensiasi dalam program guru penggerak pada modul 2.1 [Differentiated Learning in the Driver Teacher Program in Module 2.1]. Jurnal Basicedu, 6(2), 2846-2853.
- Farid, I., Yulianti, R., Hasan, A., & Hilaiyah, T. (2022). *Strategi pembelajaran diferensiasi dalam memenuhi kebutuhan belajar peserta didik di sekolah dasar* [differentiated learning strategies in meeting the learning needs of learners in elementary schools]. Jurnal Pendidikan Dan Konseling (JPDK), 4(6), 11177-11182.
- Ferlianti, S., Mu'iz, M. S., & Chandra, D. T. (2022). *Penerapan pembelajaran diferensiasi dengan metode blended learning's station rotation untuk meningkatkan hasil belajar siswa pada materi tekanan hidrostatis* [application of differentiated learning with blended learning's station rotation method to improve student learning outcomes on hydrostatic pressure material]. Jurnal Pendidikan Indonesia, 3(03), 266-272.
- Fitra, D. K. (2022). Analisis penerapan pembelajaran berdiferensiasi dalam kurikulum merdeka pada materi tata surya di kelas vii smp [analysis of the implementation of differentiated learning in the merdeka curriculum on solar system material in grade vii junior high school]. UNJUK AJAR: JURNAL PENELITIAN ILMU PENDIDIKAN, 5(2), 278-290.
- Fitra, D. K. (2022). *Pembelajaran berdiferensiasi dalam perspektif progresivisme pada mata pelajaran ipa* [differentiated learning in the perspective of progressivism in science subjects]. Jurnal Filsafat Indonesia, 5(3), 250-258.
- Ghazouani, H. S. (2014). The use of project-based learning as a viable differentiation technique to enhance gifted and non-gifted students' creative writing skills (Doctoral dissertation, The British University in Dubai (BUiD)).

- Gray, R. (2020). Comparing the constraints led approach, differential learning and prescriptive instruction for training opposite-field hitting in baseball. Psychology of Sport and Exercise, 51, 101797.
- Gregorius, R. M., Santos, R., Dano, J. B., & Gutierrez, J. J. (2010). Can animations effectively substitute for traditional teaching methods? Part II: Potential for differentiated learning. Chemistry Education Research and Practice, 11(4), 262-266.
- Gusteti, M. U., & Neviyarni, N. (2022). Pembelajaran berdiferensiasi pada pembelajaran matematika di kurikulum Merdeka [differentiated learning in mathematics learning in the independent curriculum]. Jurnal Lebesgue: Jurnal Ilmiah Pendidikan Matematika, Matematika dan Statistika, 3(3), 636-646.
- Haelermans, C. (2022). The effects of group differentiation by students' learning strategies. instructional Science, 50(2), 223-250.
- Hamad, K. (2020). The Impact of Using Effective Differentiation Strategies on Students' Learning: A case study of an Elementary School in Dubai (Doctoral dissertation, The British University in Dubai (BUiD).
- Hamik, M., & Sriwahyuni, E. (2023). *Pembelajaran berdiferensiasi dalam perspektif progresivisme pada mata pelajaran ipa*. [differentiated learning in the perspective of progressivism in science subjects]. Edukimbiosis: Jurnal Pendidikan IPA, 1-8.
- Hanaunnadiya, F., Azizah, M., Untari, M. F. A., & Purbiyanti, E. D. (2023). *Implementasi pembelajaran berdiferensiasi pada siswa kelas iv sd negeri pedurungan kidul 01 kota semarang* [implementation of differentiated learning for fourth grade students of sd negeri pedurungan kidul 01 semarang city]. Jurnal Pendidikan dan Konseling (JPDK), 5(2), 678-685.
- Handiyani, M., & Muhtar, T. (2022). *Mengembangkan motivasi belajar siswa melalui strategi pembelajaran berdiferensiasi: sebuah kajian pembelajaran dalam perspektif pedagogik-filosofis* [developing student motivation through differentiated learning strategies: a study of learning in pedagogical-philosophical perspective]. Jurnal Basicedu, 6(4), 5817-5826.
- Hardi, E., & Mudjiran, M. (2022). *Diversitas sosiokultural dalam wujud pendidikan multikultural, gender dan pembelajaran berdiferensiasi* [Sociocultural Diversity in the Form of Multicultural Education, Gender and Differentiated Learning]. Jurnal Pendidikan Dan Konseling (JPDK), 4(6), 8931-8942.
- Hariyati, N., Karwanto, K., Khamidi, A., & Rifqi, A. (2021). *Pengembangan instrumen supervisi akademik dalam penerapan pembelajaran berdiferensiasi* [Development of academic supervision instruments in implementing differentiated learning]. Jurnal Inovasi Hasil Pengabdian Masyarakat (JIPEMAS), 5(1), 33-44.
- Herwina, W. (2021). *Optimalisasi kebutuhan murid dan hasil belajar dengan pembelajaran berdiferensiasi* [optimizing student needs and learning outcomes with differentiated learning. perspective of education science]. Perspektif Ilmu Pendidikan, 35(2), 175-182.
- Insani, A. H., & Munandar, K. (2023). *Studi literatur: pentingnya pembelajaran berdiferensiasi di era kurikulum merdeka untuk meningkatkan hasil belajar peserta didik* [the importance of differentiated learning in the independent curriculum era to improve learners' learning outcomes]. ScienceEdu, 6(1), 6-11.

- Iskandar, D. (2021). Peningkatan hasil belajar siswa pada materi report text melalui pembelajaran berdiferensiasi di kelas IX. A SMP Negeri 1 Sape Tahun Pelajaran 2020/2021 [Improving Student Learning Outcomes on Report Text Material through Differentiated Learning in Class IX.A SMP Negeri 1 Sape 2020/2021 Academic Year]. Jurnal Pendidikan Dan Pembelajaran Indonesia (JPPI), 1(2), 123-140.
- Ismail, M. J., Chiat, L. F., & Anuar, A. F. (2021). 'Music in film'for gifted students: the effect of differentiated learning on students' motivation. Pertanika Journal of Social Sciences & Humanities, 29(4).
- Januar, E. (2022). *Pengembangan media robot malin kundang berbasis pembelajaran berdiferensiasi di sekolah dasar* [development of malin kundang robot media based on differentiated learning in elementary school]. Jurnal Didaktika Pendidikan Dasar, 6(2), 591-604.
- Jenyana, I. M. R., & SD, S. P. (2022). *Pembelajaran yang Berdiferensiasi* [Differentiated learning using E-Module based on Book Creator]. Inovasi Jurnal Guru, 8(17), 31-37.
- Jumiarti, D. N. (2023). *Peningkatan keterampilan abad xxi pada mata pelajaran ips melalui pembelajaran berdiferensiasi* [improving xxi century skills in social studies subjects through differentiated learning]. Journal of Education Action Research, 7(2), 160-168.
- Junaedi, I. (2019). *Proses pembelajaran yang efektif* [Effective Learning Process]. JISAMAR (Journal of Information System, Applied, Management, Accounting and Research), 3(2), 19-25.
- Kamal, S. (2021). Implementasi pembelajaran berdiferensiasi dalam upaya meningkatkan aktivitas dan hasil belajar matematika siswa kelas XI MIPA SMA Negeri 8 Barabai [Implementation of Differentiated Learning in an Effort to Improve the Activity and Learning Outcomes of Mathematics Students in Class XI MIPA SMA Negeri 8 Barabai]. Jurnal Pembelajaran dan Pendidik, 1(1), 409651.
- Khasanah, I., & Alfiandra, A. (2023). *Implementasi pembelajaran berdiferensiasi dalam upaya meningkatkan motivasi belajar kelas ix di smpn 33 palembang* [Implementation of Differentiated Learning in an Effort to Increase Class IX Learning Motivation at SMPN 33 Palembang]. Jurnal Pendidikan dan Konseling (JPDK), 5(1), 5324-5327.
- Kriswanto, M., & Fauzi, N. B. (2023). *Inovasi diferensiasi produk dengan metode alih wahana pada materi teks laporan hasil observasi* [product differentiation innovation with the switching method on observation report text material]. Diglosia: Jurnal Kajian Bahasa, Sastra, dan Pengajarannya, 6(1), 43-52.
- Kusuma, Y. Y., Sumianto, S., & Aprinawati, I. (2023). Pengembangan model pembelajaran berdiferensiasi berbasis nilai karakter dalam kearifan lokal pada perspektif pendidikan global di sekolah dasar [development of a differentiated learning model based on character values in local wisdom in the perspective of global education in elementary schools]. Jurnal Pendidikan dan Konseling (JPDK), 5(1), 2936-2941.
- Laia, I. S. A. (2022). Pengaruh strategi pembelajaran berdiferensiasi terhadap hasil belajar peserta didik sma negeri 1 lahusa [the effect of differentiated learning

- strategy on learning outcomes of students of sma negeri 1 lahusa]. Scientific Journal of Wahana Pendidikan, (20), 314-321.
- Made, R. K. N. (2022). Penerapan pembelajaran berdiferensiasi model vak dengan multimoda untuk meningkatkan minat dan prestasi belajar siswa [application of differentiated learning vak model with multimodal to increase student interest and learning achievement]. Majalah Ilmiah Universitas Tabanan, 19(1), 55-60.
- Mahanum, M. (2021). *Tinjauan Kepustakaan* [Literature Review]. ALACRITY: Journal of Education, 1-12.
- Mahdiannur, M. A., Erman, E., Martini, M., Nurita, T., Rosdiana, L., & Qosyim, A. (2022). *Pendampingan pengembangan modul ajar berdiferensiasi untuk guru mata pelajaran ipa smp/sederajat berorientasi esd* [Assistance in developing differentiated teaching modules for junior high school science subject teachers with ESD orientation]. BERNAS: Jurnal Pengabdian Kepada Masyarakat, 3(4), 801-808.
- Marantika, J. E., Tomasouw, J., & Wenno, E. C. (2023). *Implementasi pembelajaran berdiferensiasi di kelas* [Implementation of Differentiated Learning in the Classroom]. German für Gesellschaft (J-Gefüge), 2(1), 1-8.
- Marita, P. L. (2023). *Pembelajaran berdiferensiasi dalam kurikulum merdeka belajar pada mata pelajaran pendidikan agama kristen* [differentiated learning in merdeka belajar curriculum in christian religious education subjects]. Jurnal Shanan, 7(1), 159-174.
- Marzoan, M. (2023). Penerapan pembelajaran berdiferensiasi di sekolah dasar (tinjauan literature dalam implementasi kurikulum merdeka) [implementation of differentiated learning in elementary schools (literature review in the implementation of merdeka curriculum)]. Renjana Pendidikan Dasar, 3(2), 113-122.
- Maulidia, F. R., & Prafitasari, A. N. (2023). *Strategi pembelajaran berdiferensiasi dalam memenuhi kebutuhan belajar peserta didik* [differentiated learning strategies in meeting learners' learning needs]. ScienceEdu, 6(1), 55-63.
- Menekse, M., Stump, G. S., Krause, S., & Chi, M. T. (2013). Differentiated overt learning activities for effective instruction in engineering classrooms. Journal of Engineering Education, 102(3), 346-374.
- Meyad, N. A., Roslan, S., Abdullah, M. C., & HajiMaming, P. (2014). The effect of differentiated learning method in teaching arabic language on students' motivation. Journal of Social Science Research, 5(1), 671-678.
- Mills, M., Monk, S., Keddie, A., Renshaw, P., Christie, P., Geelan, D., & Gowlett, C. (2014). Differentiated learning: From policy to classroom. Oxford review of education, 40(3), 331-348.
- Mirzachaerulsyah, E. (2023). Analisis pelaksanaan pembelajaran berdiferensiasi pada mata pelajaran sejarah (studi pada sma negeri di pontianak) [analysis of the implementation of differentiated learning in history subjects (study at state senior high schools in pontianak]. Jurnal Ilmiah Wahana Pendidikan, 9(2), 1-6.
- Morgan, H. (2014). Maximizing student success with differentiated learning. The Clearing House: A Journal of Educational Strategies, Issues and Ideas, 87(1), 34-38.

- Mubarok, H. (2023). Studi literatur menumbuhkan motivasi belajar siswa melalui strategi pembelajaran berdiferensiasi dalam konteks pedagogi [literature study on fostering student learning motivation through differentiated learning strategies in a pedagogical context]. Jurnal Ilmu Pendidikan Nasional (JIPNAS), 1(1), 01-07.
- Muslimin, M., Hirza, B., Nery, R. S., Yuliani, R. E., Heru, H., Supriadi, A., ... & Khairani, N. (2022). *Peningkatan hasil belajar matematika siswa melalui pembelajaran berdiferensiasi dalam mewujudkan merdeka belajar* [improving student mathematics learning outcomes through differentiated learning in realizing independent learning]. Jurnal Pendidikan Matematika RAFA, 8(2), 22-32.
- Ngaisah, N. C., & Aulia, R. (2023). *Perkembangan pembelajaran berdiferensiasi dalam kurikulum merdeka pada pendidikan anak usia dini* [development of differentiated learning in the merdeka curriculum in early childhood education]. Bunayya: Jurnal Pendidikan Anak, 9(1), 1-25.
- Nikolaou, X. E., Zafiri, D. M., & Pliogou, D. V. (2017). The implementation of differentiated instruction in english language learning to students with dyslexia in a'senior class (a1) in an english language center: action research. Journal of Studies in Education, 7(3), 130.
- Ningrum, M., & Andriani, R. (2023). *Kurikulum merdeka belajar berbasis pembelajaran berdiferensiasi di madrasah ibtidaiyah* [independent learning curriculum based on differentiated learning in madrasah ibtidaiyah]. EL Bidayah: Journal of Islamic Elementary Education, 5(1), 85-100.
- Nur'azizzah, N., Pramuditya, S. A., & Rosita, C. D. (2023). *Analisis kemampuan penalaran matematis siswa melalui pendekatan pembelajaran berdiferensiasi* [analysis of mathematical reasoning ability based on student learning style through differentiated learning approach]. JUMLAHKU: Jurnal Matematika Ilmiah STKIP Muhammadiyah Kuningan, 9(1), 13-20.
- Nurdini, D. H. (2021). *Pembelajaran berdiferensiasi pada mata pelajaran pendidikan agama islam dan budi pekerti* [Differentiated Learning in Islamic Religious Education and Budi Pekerti Subjects]. Asaatidzah, 1(2), 124-138.
- Nurlaili, N., Suhirman, S., & Lestari, M. (2023). *Pembelajaran berdiferensiasi dengan memanfaatkan multimedia pada pembelajaran pendidikan agama islam (pai)* [differentiated learning by utilizing multimedia in islamic religious education learning]. Belajea: Jurnal Pendidikan Islam, 8(1), 19-34.
- Pane, R. N. P. S., Lumbantoruan, S., & Simanjuntak, S. D. (2022). *Implementasi pembelajaran berdiferensiasi untuk meningkatkan kemampuan berpikir kreatif peserta didik* [implementation of differentiated learning to improve learners' creative thinking ability.]. BULLET: Jurnal Multidisiplin Ilmu, 1(03), 173-180.
- Pebriyanti, D. (2023). *Pengaruh implementasi pembelajaran berdiferensiasi pada pemenuhan kebutuhan belajar peserta didik tingkat sekolah dasar* [the effect of differentiated learning implementation on fulfilling the learning needs of primary school level learners]. Jurnal Kridatama Sains dan Teknologi, 5(01), 89-96.
- Pramudya, M. I., & Hidayati, H. N. (2022). Penerapan pembelajaran berdiferensiasi terhadap hasil belajar siswa pada mata pelajaran agama islam jenjang sekolah dasar [the application of differentiated learning to student learning outcomes in islamic religion subjects at the elementary school level]. In Islamic Religious Education (Vol. 2, Issue 1).

- Pratama, A. (2022). Strategi pembelajaran berdiferensiasi meningkatkan kemampuan literasi membaca pemahaman siswa [differentiated learning strategies improve students' reading comprehension literacy skills]. Jurnal Didaktika Pendidikan Dasar, 6(2), 605-626.
- Progella, A. A. (2019). Differentiated instruction approach using triarchic teaching: students' learning assessment in science. Ascendens Asia Journal of Multidisciplinary Research Abstracts, 3(2L).
- Qomari, M. N., Lestari, S. A., & Fauziyah, N. (2022). Learning trejectory pada pembelajaran berdiferensiasi materi keliling bangun datar berdasarkan perbedaan gaya belajar [learning trejectory on differentiated learning of flat building perimeter material based on different learning styles]. Jurnal Pemikiran Pendidikan, 28(2), 29-41.
- Rafiska, R., & Susanti, R. (2023). *Analisis profil gaya belajar peserta didik sebagai data pembelajaran berdiferensiasi di kelas xii sma negeri 1 palembang* [analysis of learners' learning style profile as differentiated learning data in class xii sma negeri 1 palembang]. Research and Development Journal of Education, 9(1), 474-482.
- Ramadhan, A. R., Afif, A., Chaerani, A., & Putranto, H. H. (2023). *Implementasi pembelajaran berdiferensiasi pada mata pelajaran ppkn dalam mewujudkan merdeka belajar di smp labschool jakarta* [implementation of differentiated learning in civics subjects in realizing independent learning at smp labschool jakarta]. Ideas: Jurnal Pendidikan, Sosial, dan Budaya, 9(2), 417-426.
- Rigianti, H. A. (2023). The concept of differentiated learning: elementary school learning diversity solution. Jurnal PAJAR (Pendidikan dan Pengajaran), 7(2), 285-298.
- Rompis, F. F. (2023). *Peningkatan hasil belajar siswa pada materi aritmetika sosial melalui pembelajaran berdiferensiasi* [improving student learning outcomes on social arithmetic materials through differentiated learning]. Jurnal Didaktika Pendidikan Dasar, 7(1), 219-236.
- Saadah, N., Wastri, L., Asmendri, A., & Sari, M. (2023). *Pendekatan berdiferensiasi dalam pembelajaran bahasa inggris* [differentiated approach in english language learning]. Jurnal Pendidikan Tambusai, 7(2), 4643-4653.
- Safarati, N., & Zuhra, F. (2023). *Literature review: pembelajaran berdiferensiasi di sekolah menengah* [literature review: differentiated learning in secondary schools.]. Jurnal Genta Mulia, 14(1).
- Sanjaya, P. A. (2022). Pengembangan pembelajaran sejarah berdiferensiasi menggunakan e-module berbasis book creator. Prodiksema, 1(1), 52-60.
- Saputri, D. A., Nuroso, H., & Sulianto, J. (2023). *Implementasi pembelajaran berdiferensiasi terhadap perkembangan kognitif peserta didik sekolah dasar* [implementation of differentiated learning on cognitive development of elementary school learners]. Journal on Education, 6(1), 4083-4090.
- Siagian, B. A., Simbolon, E. G., Bangun, K., Sidabutar, S., & Girsang, A. (2022). *Penerapan pembelajaran berdiferensiasi dalam menulis teks persuasi di kelas viii smp gajah mada medan tahun ajaran 2021/2022* [the application of differentiated learning in writing persuasive texts in class viii of gajah mada medan junior high school in the 2021/2022 academic year]. Diglosia: Jurnal Pendidikan, Kebahasaan, dan Kesusastraan Indonesia, 6(2).

- Suprayogi, M. N., Valcke, M., & Godwin, R. (2017). Teachers and their implementation of differentiated instruction in the classroom. Teaching and teacher education, 67, 291-301.
- Sutrisno, L. T. (2023). Penerapan pembelajaran berdiferensiasi sebagai salah satu pemecahan masalah masih kurangnya keaktifan peserta didik saat proses pembelajaran berlangsung [The application of differentiated learning as one of the solutions to the problem of the lack of student activeness during the learning process]. COLLASE: Creative of Learning Students Elementary Education, 6(1), 111-121.
- Suwartiningsih, S. (2021). Penerapan pembelajaran berdiferensiasi untuk meningkatkan hasil belajar siswa pada mata pelajaran IPA pokok bahasan tanah dan keberlangsungan kehidupan di Kelas IXb semester genap SMPN 4 Monta tahun pelajaran 2020/2021 [application of differentiated learning to improve student learning outcomes in science subjects on the subject of land and sustainability of life in class IXb Even Semester of SMPN 4 Monta for the 2020/2021 Academic Year]. Jurnal Pendidikan Dan Pembelajaran Indonesia (JPPI), 1(2), 80-94.
- Syarifuddin, S., & Nurmi, N. (2022). *Pembelajaran berdiferensiasi dalam meningkatkan hasil belajar matematika siswa kelas ix semester genap smp negeri 1 wera tahun pelajaran 2021/2022* [differentiated learning in improving mathematics learning outcomes of class ix even semester students of smp negeri 1 wera for the 2021/2022 academic year]. JagoMIPA: Jurnal Pendidikan Matematika dan IPA, 2(2), 93-102.
- Tahiri, J. S., Bennani, S., & Idrissi, M. K. (2017). diffMOOC: Differentiated learning paths through the use of differentiated instruction within MOOC. Int. J. Emerg. Technol. Learn., 12(3), 197-218.
- Tanesib, Y. G., Astiti, K. A., & Hali, A. S. (2022). Pengembangan bahan ajar ipa terpadu tipe connected pada materi pencemaran lingkungan berbasis pembelajaran berdiferensiasi [development of integrated science teaching materials connected type on environmental pollution material based on differentiated learning]. Jurnal Pendidikan dan Pembelajaran IPA Indonesia, 12(3), 122-128.
- Thapliyal, M., Ahuja, N. J., Shankar, A., Cheng, X., & Kumar, M. (2022). A differentiated learning environment in domain model for learning disabled learners. Journal of Computing in Higher Education, 34(1), 60-82.
- Variacion, D. A., Salic-Hairulla, M., & Bagaloyos, J. (2021). Development of differentiated activities in teaching science: Educators' evaluation and selfreflection on differentiation and flexible learning. In Journal of Physics: Conference Series (Vol. 1835, No. 1, p. 012091). IOP Publishing.
- Wahyuni, A. S. (2022). *Literature review: pendekatan berdiferensiasi dalam pembelajaran IPA* [Literature Review: Differentiated Approach in Science Learning. Journal of Mathematics and Natural Sciences Education]. Jurnal Pendidikan MIPA, 12(2), 118-126.
- Wahyuningsari, D., Mujiwati, Y., Hilmiyah, L., Kusumawardani, F., & Sari, I. P. (2022). Pembelajaran berdiferensiasi dalam rangka mewujudkan merdeka belajar [differentiated learning in order to realize independent learning]. Jurnal Jendela Pendidikan, 2(04), 529-535.

- Widiastuti, Y., & Fana, L. L. Z. (2023). *Pembelajaran berdiferensiasi dalam perspektif pendidikan islam* [differentiated learning in the perspective of islamic education]. Humanistika: Jurnal Keislaman, 9(1), 67-79.
- Widiastuti, Y., Rani, A., & Wahyuni, S. (2023). *Implementasi dan asesmen pembelajaran berdiferensiasi pada materi anekdot untuk siswa sma* [implementation and assessment of differentiated learning on anecdote materials for high school students]. Semantik, 12(1), 61-74.
- Wulandari, A. S. (2022). Literature review: pendekatan berdiferensiasi solusi pembelajaran dalam keberagaman [literature review: differentiated approach to learning solutions in diversity]. Jurnal Pendidikan MIPA, 12(3), 682-689.
- Wuryani, T., Wismanto, A., Sudiyati, S., & Fahmy, Z. (2023). *Pembelajaran berdiferensiasi teks hikayat pada peserta didik sma/smk di semarang* [differentiated learning of hikayat text for high school students in semarang]. Paedagoria: Jurnal Kajian, Penelitian dan Pengembangan Kependidikan, 14(2), 173-178.
- Yanti, N. S., Montessori, M., & Nora, D. (2022). *Pembelajaran IPS Berdiferensiasi di SMA Kota Batam* [Differentiated social studies learning in high schools in Batam City]. Ranah Research: Journal of Multidisciplinary Research and Development, 4(3), 252-256.
- Yokoyama, Y., Nadeak, B., & Sitohang, H. (2023). *Penerapan pembelajaran berdiferensiasi oleh guru penggerak di smk pusat keunggulan tana toraja* [Implementation of Differentiated Learning by Driver Teachers in Vocational High Schools]. Jurnal Dinamika Pendidikan, 16(1), 1-11.
- Zulaikha, I. P. N., & Laeli, A. F. (2023). Differentiated learning in diverse students to meet curriculum targets. International Social Sciences and Humanities, 2(2), 436-441.