



Optimizing Differentiated Instruction in *Sekolah Penggerak*: A Case Study at the Elementary School Level

Rahmatul Hayati^{1*}, Wahyu Prima², Desri Jumiarti³

^{1,2} Departemen Pendidikan Matematika, Universitas Adzkia, Indonesia

³ Universitas Islam Negeri Mahmud Yunus Batusangkar, Indonesia

Correspondence: E-mail: rahmatulhayati341@gmail.com

ABSTRACT

Differentiated instruction is a key educational strategy tailored to each student's unique needs. Within Sekolah Penggerak, this approach holds significant potential for enhancing educational quality. This study employs a case study method to assess its implementation across five elementary schools: three from Sekolah Penggerak Cohort 1 (SP1) and two from Cohort 2 (SP2). Conducted in early 2023, data were collected through interviews, observations, questionnaires, and field notes. The findings show that 33% of SP1 schools have designed their own School Operational Curriculum (KOSP) according to students' needs, while 67% are still modifying KOSP from the Ministry of Education while involving stakeholders. All SP2 schools are also modifying KOSP but involve stakeholders in the design. However, teachers struggle to find appropriate methods, and differentiated assessment remains suboptimal. The implementation of differentiated learning in SP1 is more effective compared to SP2 due to comprehensive guidance and longer experience. Sustained mentorship and professional development are crucial aspects in enhancing effective teaching by teachers. This research underscores the need for a contextual and focused instructional and assessment model to better meet students' needs and serve as a guide for differentiated instruction implementation.

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1. INTRODUCTION

Curriculum changes and improvements in Indonesia have been ongoing since 1947 up to 2022 (Fauzi, 2022; Malikah et al., 2022; Sumarsih et al., 2022). The current curriculum, known as the Merdeka Curriculum, is more flexible as it allows educational institutions the freedom to design their own curricula according to their unique characteristics (Fauzi, 2022; Kemendikbudristek, 2022b, 2022a; Malikah et al., 2022; Sumarsih et al., 2022). Curriculum development aims to improve education quality, as it is the heart of any education system (Siregar et al., 2021). The curriculum serves as a guide for educational institutions to implement the educational process in accordance with their specific characteristics and those of their students, enabling them to fully develop the students' potential in line with national educational goals. The Merdeka Curriculum is expected to help schools develop their curricula according to their specific characteristics, particularly the needs of their students.

However, in practice, educational institutions have not fully managed to develop flexible curricula that align with the unique characteristics and needs of their students. Students have varying characteristics. Even within a single classroom, students have different interests, talents, learning styles, readiness, and comprehension levels. Therefore, instruction needs to be tailored to each student's characteristics to help them optimally develop their potential. An effective instructional method that provides customized support to students based on their needs is required, and differentiated instruction is one such approach.

Tomlinson, an educator since 1955, introduced the idea of instruction that acknowledges individual differences. In this approach, teachers must consider students' readiness, interests, and learning styles. This concept has evolved into what is now known as differentiated instruction.

Differentiated instruction is a teaching strategy that provides services tailored to each student's needs (Ferlianti, 2022; Polka et al., 2016; Siagian et al., 2022). The concept aligns with Ki Hajar Dewantara's system among used in the Taman Siswa education system, where students are given the freedom to address learning challenges according to their nature (Firdiansah et al., 2013; Ikhwan., 2018; Polka et al., 2016; Siagian et al., 2022; Wangid, 2009; Wiryanto, 2021). Differentiated instruction is one of the teacher's efforts to help students excel and be globally competitive according to their potential (Kemendikbudristek, 2022b; Siagian et al., 2022; Suwartiningsih, 2021). However, based on surveys, interviews, and observations in several elementary schools in the Sekolah Penggerak Group, teachers have not fully implemented differentiated instruction in their classrooms. Although instruction is now student-centered, it does not fully cater to the varied needs of different students. As elementary education is foundational for students' holistic development in subsequent stages, differentiated instruction is crucial.

Research findings also indicate that introducing foundational concepts at an early age is essential to provide a strong basis for further learning (Clements et al., 2002; Hayati, 2018a, 2018c; Hayati et al., 2019a; Hughes et al., 2000; Hayati et al., 2023). Further research shows that understanding these concepts is a prerequisite for enhancing cognitive abilities at higher levels, both within and across contexts (Hayati et al., 2021a). Therefore, it is essential to implement instruction that meets students' needs so that their abilities can be developed holistically (Hayati, 2018c; Hayati et al., 2017, 2018; Hayati et al., 2019a).

This article examines in detail the implementation of differentiated instruction at five Sekolah Penggerak schools, with three from Cohort 1 and two from Cohort 2. It also

discusses the challenges and obstacles encountered in the implementation, providing insights for government-led improvements in the future.

2. METHODS

This research adopts a case study approach, where the researchers delve into a specific phenomenon (case) related to the implementation of differentiated instruction in Sekolah Penggerak Cohorts 1 (SP1) and 2 (SP2). Multiple information sources were used in this study, including interviews, observations, and questionnaires. Interviews followed a pre-designed guide referencing instruments provided by Kemendikbudristek and supplementary instruments developed by the researchers based on Kemendikbudristek's guidelines. Observations were conducted during field visits to Sekolah Penggerak, where the implementation of differentiated instruction was examined using a checklist tailored to the characteristics of differentiated learning.

To assess the effectiveness of differentiated instruction implementation, questionnaires were distributed to students. The questionnaires were designed to align with the characteristics of differentiated instruction. The study subjects consisted of three Sekolah Penggerak Cohort 1 (SP1) schools and two Sekolah Penggerak Cohort 2 (SP2) schools. As these five Sekolah Penggerak are mentored by the researchers, accurate data was collected through Project Management Office (PMO) activities conducted monthly for Cohort 1 schools and every two months for Cohort 2 schools, field visit reports, and reflections from each educational institution. This case study was conducted in early 2023. The instruments used include interview guides, checklists, field notes, and questionnaires. The data analysis incorporated both qualitative and quantitative descriptive methods. Qualitative data was analyzed by describing the results of observations and interviews from SP1 and SP2. Quantitative data was analyzed using the PMO questionnaire prepared by the Ministry of Education and Culture. The PMO data was analyzed based on the results of the SP1 and SP2 questionnaires, as follows:

$$\text{Persentase (\%)} = \frac{\text{Many "Sekolah Penggerak" fulfill the aspects}}{\text{Number of Sekolah Penggerak}} \times 100\%$$

3. RESULTS AND DISCUSSION

3.1. Research Findings

Based on the results from interviews, observations, and questionnaires on the implementation of differentiated instruction in SP1 and SP2, the findings are as follows:

3.1.1 Interview Results

Interviews were conducted through the Project Management Office (PMO), held every two months for SP1 (model 2) and monthly for SP2 (model 1). According to the interviews with the principals and teachers involved in the learning committee, differentiated instruction at SP1 has been implemented well, although some teachers face challenges due to the need for suitable methods, techniques, approaches, strategies, and teaching models that align with student characteristics. In SP2, the implementation is not yet optimal as teachers still struggle to design suitable methods, techniques, approaches, strategies, and models that meet students' needs. Before implementation, teachers administered formative

tests at the start of instruction to use as a basis for planning their lessons in both SP1 and SP2.

Interviews with the five Sekolah Penggerak schools revealed that some still struggle to design differentiated teaching modules, particularly in determining suitable methods, techniques, approaches, strategies, and models. Additionally, some schools find it challenging to design differentiated assessments. In two SP1 schools, the teaching modules are still modified versions of those provided by Kemendikbudristek, while in other schools, the modules have been independently developed. In SP2, schools face difficulties in designing differentiated instruction and assessments, largely due to the teachers' limited teaching experience. Teachers in SP2 are generally quite young, so their teaching experience is minimal.

To address these issues, school principals encourage teachers to improve their skills through various competency-enhancing activities, such as workshops, school PMOs, peer discussions, and other relevant events. Teachers also participate in various activities to enhance their instructional skills. However, not all teachers fully embrace these opportunities, as some are reluctant to step out of their comfort zones or change their mindset regarding the Merdeka Curriculum. This mindset also poses a challenge in implementing the curriculum.

3.1.2 Observation Results

Observations were conducted during field visits to the mentored schools. According to field visit observations, differentiated instruction in SP1 has been relatively well implemented, with teachers demonstrating good classroom management and employing various methods that align with students' needs. However, some teachers have not fully embraced differentiated instruction, even though their teaching is now more student-centered. Similarly, SP2 teachers still lack a thorough understanding of differentiated instruction and assessment, so their teaching does not yet fully align with students' needs. The following documentation illustrates the implementation of differentiated instruction, collected during field visits to the mentored schools. **Figure 1** illustrates a learner-centered and differentiated instructional process.



Student-Centered Learning Process

Figure 1. Student-Centered Learning Process

Figure 1 captures the documentation of differentiated instruction implemented by several teachers at Sekolah Penggerak. This activity was documented during field visits to SP1 and SP2. Observations at SP1 showed that teachers conduct contextual, student-centered instruction. However, there are still some challenges, such as understanding differentiated instruction and classroom implementation, which requires creativity and innovation due to the diverse characteristics of students. Despite these challenges, teachers consistently strive to overcome them.

In SP2, teachers have implemented student-centered learning, but it is not yet clear that the instruction is adapted to students' needs. This remains a challenge for teachers to find effective methods that align with the students' varying requirements. In response, school principals have organized programs to improve teachers' skills, including workshops, learning communities, and activating the school PMM. This effort is reflected in the school's planned programs, but time constraints remain an issue, especially for one SP2 school that implements full-day learning. As a result, the Merdeka Curriculum has not been optimally implemented. However, the principal and teachers continue to work together to address these challenges.

3.1.3 Questionnaire Analysis Results

The questionnaire was a modified version of that provided by Kemendikbudristek. It was administered during PMO-level school activities. Below is an analysis of the questionnaire results obtained during the Project Management Office (PMO) activities conducted every two months for SP1 model 2 and monthly for SP2 model 1. The items analyzed were aligned with the aspects relevant to differentiated instruction, as established by Kemendikbudristek. **Table 1** presents the analysis results for SP1.

Table 1. Analysis of Differentiated Instruction Questionnaire at SP1

No	Aspect	Percentage
1	Designing the flow of differentiated learning objectives	100%
2	Planning differentiated instruction and assessment	92%
3	Using and developing differentiated teaching materials	92%
4	Implementing student-centered instruction	100%
5	Integrating assessment into instruction	100%
6	Teaching according to students learning stages (primary and secondary education)	92%
7	Teacher collaboration for curriculum and instruction purposes	100%
8	Collaboration with parents/families in instruction	100%
9	Reflection, evaluation, and improvement of curriculum implementation quality	100%
10	The principal leads the planning and execution of student-centered learning	93%
11	The principal leads efforts to develop a student-centered learning environment	93%

From the questionnaire analysis results, it is evident that SP1 has implemented various efforts in delivering differentiated instruction. This includes designing differentiated teaching tools, creating a student-centered learning environment, and working to improve the competencies of both principals and teachers. Table 2 presents the analysis results for the SP2 questionnaire.

Table 2. Analysis of Differentiated Instruction Questionnaire at SP2

No	Aspect	Percentage
1	Designing the flow of differentiated learning objectives	100%
2	Planning differentiated instruction and assessment	75%
3	Using and developing differentiated teaching materials	75%
4	Implementing student-centered instruction	75%
5	Integrating assessment into instruction	75%
6	Teaching according to students' learning stages (primary education)	75%
7	Teacher collaboration for curriculum and differentiated instruction purposes	100%
8	Collaboration with parents/families in instruction	87,5%
9	Reflection, evaluation, and improvement of curriculum implementation quality	100%
10	The principal leads the planning and execution of student-centered learning (5-point scale)	80%
11	The principal leads efforts to develop a student-centered learning environment (5-point scale)	80%

From the questionnaire analysis results, it is evident that SP2 has implemented student-centered instruction, but it has not yet fully adapted to students' needs. Based on Table 1 and Table 2, the differences in the results of the analysis of the implementation of differentiated learning for each item can be seen in **Figure 2**. The following are the percentages of differentiated instruction implementation achievements in both SP1 and SP2:

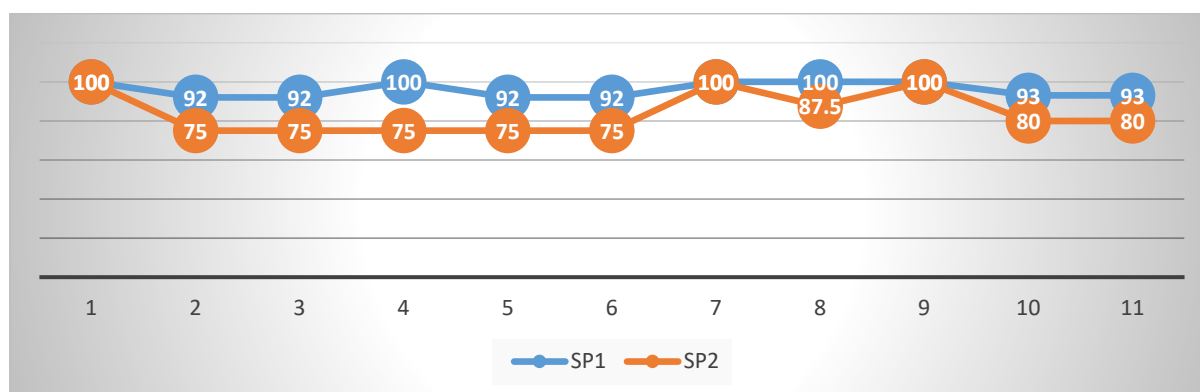


Figure 2. The Percentages of Differentiated Instruction Implementation Achievements In Both SP1 and SP2

Figure 2 illustrates that some items in SP1 have a higher percentage compared to SP2, particularly in the planning and implementation of differentiated instruction. This discrepancy is attributed to the fact that SP1 has entered its second year of mentorship, while SP2 is still in its first year.

3.2 Discussion

Based on the results of interviews, observations, and questionnaire analyses conducted with five elementary schools in both SP1 and SP2, it is clear that differentiated instruction is being implemented across both cohorts, but challenges and obstacles remain. In SP1, the implementation of the Merdeka Curriculum, particularly differentiated instruction, has proceeded well despite challenges. These challenges were effectively addressed through two years of facilitation support, enabling the successful implementation of the Merdeka Curriculum. In SP2, intensive guidance is required from facilitators to resolve issues in differentiated instruction.

The data analysis shows that creativity and innovation are crucial for teachers in delivering differentiated instruction because they play a pivotal role in developing students' potential holistically (Oktiani, 2017a; Pakpahan, 2022; Pentury, 2017a; Somatanaya et al., 2017; Nurhidayati, 2022; Werdayanti, 2008; Yestiani et al., 2020). Other studies also emphasize that teacher creativity is vital in increasing student motivation, addressing learner diversity, enhancing conceptual understanding, improving critical thinking skills, and making learning both enjoyable and meaningful (Abdullah, 2017; Oktaviani, 2014; Oktiani, 2017b; Pentury, 2017b; Untari, 2020). Further research reveals the significant role of teachers in education (Hayati et al., 2018; Hayati, 2018d, 2018b; Hayati et al., 2021b; Hayati et al., 2019b). Teacher competence positively influences student achievement (Sanberk & Bağış, 2016).

According to Tomlinson, the essential characteristics of differentiated instruction that teachers should understand include: 1) Teachers must be proactive in teaching; 2) Teachers evaluate students based on their readiness, talents, interests, and abilities; 3) Teachers provide opportunities for students to develop their potential according to their needs; 4) Teachers design, implement, reflect, evaluate, and follow up on learning (Gusteti & Neviyarni, 2022). Therefore, teacher creativity is crucial for implementing differentiated instruction to meet students' needs.

To this end, several initiatives have been implemented by teachers, principals, and Kemendikbudristek to improve teacher competence. These include webinars, workshops on

differentiated instruction and assessment organized by the Balai Guru Penggerak (BGP) for principals and teachers involved in learning committees, workshops at schools, and other activities that can serve as learning resources. Kemendikbudristek also provides the Merdeka Mengajar Platform (PMM) as a resource for learning and sharing best practices, helping teachers and principals improve their competence in implementing the Merdeka Curriculum, particularly for differentiated instruction.

Differentiated instruction is a student-centered approach tailored to students' needs, enabling them to develop their potential holistically. Other research explains that differentiated instruction is flexible and suitable for students' needs, thus fostering the Pancasila Student Profile: 1) Devout in faith, piety, and noble character; 2) Independent; 3) Collaborative; 4) Globally minded; 5) Critical thinker; and 6) Creative (Ferlianti, 2022; Murtianto, 2013; Siagian et al., 2022; Subhan, 2022). Differentiated instruction is also contextual and suitable for elementary students, who are at the concrete operational stage. Contextual learning is a concept that helps teachers link the material to students' real-world experiences, enabling them to apply their knowledge practically (Hayati, 2013, 2014, 2015; Lutfianto et al., 2013; Murwati, 2022; Stylianides, 2007; Widjaja, 2013).

Based on data analysis and relevant studies, the following recommendations are proposed for teachers implementing differentiated instruction:

- 1) Utilizing Technology in Assessment:** Future researchers should investigate the effectiveness of using digital platforms or software for formative testing and ongoing assessment. Technology can help teachers analyze student data more quickly and comprehensively, providing deep insights to inform instructional design.
- 2) Enhancing Teacher Capacity through Practice Communities:** Further research could focus on forming and managing teacher practice communities. These communities serve as forums for sharing ideas, challenges, and solutions, and promoting relevant resource exchanges. With the support of such communities, teachers can give constructive feedback to one another.
- 3) Focused Classroom Action Research:** Teachers are encouraged to conduct classroom action research focusing on specific areas of differentiated instruction, such as grouping strategies or providing flexible resources. This will yield specific data that can be used as a guideline for developing instructional strategies.
- 4) Developing Independent Learning Modules:** Differentiated instruction modules should be developed for independent use by other teachers, especially in areas with limited access to intensive training. These modules should include examples of instructional strategies, assessment, and resources tailored to local contexts.
- 5) Collaborative Evaluation:** It is recommended to develop an evaluation model involving various stakeholders, such as students, parents, and other teachers. This collaboration provides a holistic perspective on differentiated instruction implementation, strengthening support and commitment for its continuity.

4. CONCLUSION

This study on differentiated instruction implementation in Sekolah Penggerak provided valuable insights into its effectiveness and challenges. The findings lead to the following conclusions: 1) Effectiveness of Differentiated Instruction: Differentiated instruction in SP1 has been implemented effectively due to comprehensive mentorship and experience, whereas in SP2, it is not yet fully optimized, highlighting the need for continued support, 2) Teacher's Role: Teachers play a pivotal role in facilitating differentiated instruction, requiring creativity and innovation to meet the diverse needs of students. Their ability to

adapt methods, techniques, and strategies is crucial to the success of this approach, 3) Impact of Mentorship: Mentorship and facilitation significantly impact the successful implementation of the Merdeka Curriculum. SP1's positive results demonstrate the value of sustained guidance, which should also be extended to newer cohorts like SP2, 4) Necessity for Effective Strategies: Effective strategies—including methods, techniques, approaches, and models—are essential for the successful implementation of differentiated instruction. Teachers should be empowered through ongoing professional development and collaborative practice to develop and refine these strategies.

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6. AUTHORS' NOTE

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