



Original Article

Strengthening Student Character through the Implementation of Differentiated IPAS Learning Based on the Merdeka Curriculum

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Abstract:

This study aims to analyze the implementation of differentiated Natural and Social Sciences (IPAS) learning in the Merdeka Curriculum as a means of strengthening student character at Uswatun Hasanah Elementary School in Lubuklinggau. The focus of the study is on the extent to which differentiation strategies can foster values of responsibility, discipline, cooperation, and curiosity in students. The research uses a quantitative and qualitative descriptive approach. Data were collected through observation, interviews, documentation, and student character assessment questionnaires filled out after the learning process. The research subjects involved teachers and 52 fourth and fifth grade students. The questionnaire analysis results showed that 82% of students were in the excellent category in the responsibility indicator, 79% in the cooperation indicator, 75% in the discipline indicator, and 81% in the curiosity indicator. These findings were reinforced by observation results showing an increase in student active participation in group discussions and perseverance in completing project-based assignments. Interviews with teachers also confirmed that differentiation of content, process, and product helped students learn according to their individual needs and learning styles. In conclusion, the implementation of differentiated IPAS learning in the Merdeka Curriculum has proven to be effective in strengthening the character of elementary school students, with questionnaire data showing positive improvements in almost all aspects of character. This study recommends that teachers continue to develop differentiation strategies as an integral part of character education in elementary schools.

Keywords: Character Building, IPAS, Differentiated Learning, Merdeka Curriculum, Elementary School



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Introduction

Education in the 21st century requires a paradigm shift in learning that not only emphasizes cognitive aspects but also integrates the strengthening of character values into every learning process (Agus Susilo, et al., 2024). The Merdeka Curriculum is one answer to this need, placing *the Pancasila Student Profile* as its main orientation (Astuti et al., 2024). The six dimensions of the student profile, which include faith and noble character, global diversity, mutual cooperation, independence, critical thinking, and creativity, are expected to produce a generation that is both intelligent and has strong character (Rosiyani et al., 2024). Thus, the basic education process is not only directed at achieving academic results, but also at shaping behavior, attitudes, and strong national values (Otniel Nasozaro, 2019).

Natural and Social Sciences (IPAS) as a new subject in the Merdeka Curriculum has a strategic position in fostering character values. IPAS integrates aspects of science with social sciences so that it is close to the reality of students' daily lives (Rosiyani et al., 2024). Through IPAS learning, students are not only encouraged to understand natural and social phenomena, but also trained to care for the environment, think critically about social issues, and have a high level of curiosity (Fauzia & Hadikusuma Ramadan, 2023). With a contextual approach, IPAS can be an effective means of internalizing character values such as responsibility, discipline, cooperation, and curiosity, which are very much needed in social life (Rosiyani et al., 2024).

The Merdeka Curriculum also emphasizes differentiated learning, which is a strategy that provides opportunities for students to learn according to their needs, interests, and learning styles. Tomlinson (2017), explains that differentiated learning provides fair access for all students to develop, even if their abilities differ. Teachers can modify the content, process, and product of learning so that every student feels facilitated. This approach is in line with the principle of inclusive education that values diversity and emphasizes the meaningfulness of learning experiences. With differentiation, IPAS learning can be designed to be more flexible and able to foster active student engagement (Salma Rozana et al., 2025).

The implementation of differentiated IPAS learning is believed to contribute to strengthening student character. Varied learning activities such as group discussions, simple experiments, and environment-based projects encourage the development of responsibility in completing tasks, cooperation in groups, discipline in following rules, and curiosity in exploring surrounding phenomena (Kusumaningpuri, 2024). Teachers no longer act as the sole source of information but become facilitators who help students discover knowledge while shaping positive attitudes through real experiences. Thus, IPAS learning not only produces academically intelligent students but also students with good character (Yasar & Mede, 2025 ; Yasa, 2024).

The reality on the ground, particularly at Uswatun Hasanah Elementary School in Lubuklinggau, shows that the implementation of the Merdeka Curriculum has begun to be implemented by teachers using differentiated learning strategies. However, the effectiveness of this strategy in fostering character values in students still needs to be studied further. Some students have shown improvement in terms of cooperation and responsibility, but empirical data through observation, interviews, and questionnaires are needed to ascertain the extent to which students' character has actually been shaped through this learning process.

This study stems from the need to analyze the implementation of differentiated IPAS learning within the framework of the Merdeka Curriculum and its implications for

strengthening the character of elementary school students. This study is expected to contribute to the development of learning strategies that are more effective and relevant to students' needs, as well as to provide recommendations for teachers, schools, and policy makers in optimizing the implementation of the Merdeka Curriculum.

Methods

This study uses a descriptive approach by combining quantitative and qualitative methods to obtain a comprehensive picture of the implementation of differentiated IPAS learning based on the Merdeka Curriculum and its influence on strengthening student character (Ahyar, H., & Juliana Sukmana, 2020). The quantitative approach was used through questionnaires to determine the extent to which students' character values developed after the learning process, while the qualitative approach was used through observation, interviews, and documentation to deepen understanding of learning practices in the classroom (Kurniawan, A. W. & Puspitaningstyas, 2016).

The subjects of the study were teachers and students in grades IV and V at Uswatun Hasanah Elementary School in Lubuklinggau, with a total of 52 students participating. The subjects were selected based on the consideration that these classes had already implemented the Merdeka Curriculum and actively used differentiated learning strategies. The teachers involved were selected because they played a direct role in designing and implementing IPAS learning, so they could provide accurate information about the process and challenges in the field.

Data collection was conducted using four techniques. First, classroom observation to see the implementation of content, process, and product differentiation in IPAS learning and student responses to these activities. Second, interviews with teachers and several students to explore learning experiences, perceptions, and the impact of learning on character. Third, a student character questionnaire designed based on indicators of responsibility, discipline, cooperation, and curiosity to obtain measurable quantitative data. Fourth, documentation in the form of learning notes, lesson plans, and student work as supporting evidence (Sugiyono, 2015).

The questionnaire instrument was developed using a four-point Likert scale, ranging from excellent to poor, to facilitate the analysis of students' character achievement levels. The validity of the instrument was tested through expert review, while its reliability was obtained through internal consistency testing. Quantitative data were analyzed using percentage techniques to see the distribution of student scores on each character indicator (Paramisuari, 2020). Qualitative data were analyzed using the Miles and Huberman technique(2014), which includes data reduction, data presentation, and conclusion drawing. Data triangulation was carried out by comparing the results of questionnaires, observations, and interviews so that the research findings were more reliable. With this combination of methods, the study is expected to provide an objective and in-depth picture of the implementation of differentiated IPAS learning in the Merdeka Curriculum and its contribution to strengthening the character of elementary school students.

Results

Research Results

The implementation of differentiated IPAS learning at Uswatun Hasanah Elementary School in Lubuklinggau was carried out in grades IV and V, involving 52 students. Teachers applied differentiation strategies in three aspects, namely content, process, and product. In terms of content, teachers adjusted teaching materials based on students' ability levels, so that students with high abilities were given more challenges, while students with low abilities were given simpler but still meaningful material. In terms of process, teachers varied learning methods through group discussions, simple experiments, and environment-based projects. In terms of product, students were given the freedom to present their learning outcomes in the form of written reports, posters, or oral presentations according to their learning styles.

Based on observations, the application of differentiation was able to increase student participation. Students appeared to be more involved in discussion activities, helped each other in groups, and showed a high level of curiosity when conducting simple experiments. Teachers also acted as facilitators by providing personal guidance to students who experienced difficulties, thereby creating a more inclusive and conducive learning environment.

Quantitative data was obtained through student character questionnaires containing indicators of responsibility, discipline, cooperation, and curiosity. The results of the questionnaire recapitulation can be seen in the following table.

Table 1. Student Character Questionnaire Results

| Character Indicators | Very Good (%) | Good (%) | Fair (%) | Poor (%) | Average (%) |
|-----------------------------|----------------------|-----------------|-----------------|-----------------|--------------------|
| Responsibility | 48 | 34 | 14 | 4 | 82 |
| Discipline | 42 | 33 | 18 | 7 | 75 |
| Collaboration | 46 | 33 | 15 | 6 | 79 |
| Curiosity | 50 | 31 | 13 | 6 | 81 |

In general, the average scores indicate that students have good to excellent character development. The responsibility indicator achieved an average of 82%, showing that students are able to complete tasks on time and with sincerity. The cooperation indicator was 79%, reflecting students' skills in discussing, sharing ideas, and completing group tasks. The discipline indicator has an average percentage of 75%, which is relatively lower than other indicators, indicating that some students are still inconsistent in obeying class rules. Meanwhile, the curiosity indicator has an average of 81%, reflecting students' enthusiasm in asking questions and exploring.

Discussion

The results of this study indicate that the implementation of differentiated IPAS learning is effective in strengthening student character in elementary schools. Content, process, and product differentiation strategies have been proven to be able to adapt to the learning needs of heterogeneous students. This is in line with Tomlinson's opinion (2017), which states that differentiation allows teachers to create learning experiences that are relevant to the readiness level, interests, and learning styles of students.

The strengthening of student character is clearly evident in the indicators of responsibility and curiosity. The high responsibility score (82%) shows that learning strategies that give freedom and personal responsibility, such as projects or individual assignments, can build students' independence. This is in line with the research by [Hastuti & Arifah\(2025\)](#) on the use of comic media, which has a significant effect on the learning motivation of sixth-grade students at SDN Guyung 02. Students who are taught with comics show higher motivation because this media is interesting and suits the learning characteristics of children. Although the sample is limited, the results reinforce the importance of innovation in learning media to increase student engagement.

A high level of curiosity (81%) is also a positive result of contextual IPAS learning. Simple experiments and exploration of the real environment make students more enthusiastic about asking questions and seeking answers. This finding supports [Vygotsky's view \(1978\)](#) in social constructivism theory that interaction with the surrounding environment is the main driver for the formation of new knowledge and attitudes. The value of cooperation, which is in the good category (79%), shows that group discussions and collaborative projects can improve students' ability to work together. However, there are still students who are passive or contribute less to the group. This shows that teachers need to give clear roles to each group member so that cooperation is more evenly distributed.

[Adnan Syah Sitorus's](#) research (2025) shows that the implementation of the Merdeka Curriculum requires adaptive and student-centered learning, but teachers still find it difficult to understand differentiation strategies. Through a literature study (2020–2025) with content analysis, it was found that differentiation is able to accommodate student diversity, but is hampered by limitations in teacher competence, time, and resources. These findings emphasize the importance of teacher training and the development of flexible learning media and evaluation.

Meanwhile, research by [Maula et al.,\(2024\)](#) emphasizes that learning success is largely determined by the teacher's ability to adapt to student characteristics. Through interviews and data analysis, he found that differentiated IPAS learning includes mapping student needs, individualized planning, and reflective evaluation. Its application has been proven to increase student motivation and enthusiasm for learning.

In general, the results of this study confirm that differentiated IPAS learning in the Merdeka Curriculum can have a positive impact on strengthening student character. This success is determined by the role of teachers as creative facilitators in designing differentiation strategies. Teachers who are able to accommodate student diversity not only improve academic results but also shape character in accordance with the values of the Pancasila Student Profile.

The findings of this study have important implications for basic education practices. First, teachers need to continue to develop creativity in designing differentiated learning by paying attention to student characteristics. Second, schools need to provide support in the form of facilities, training, and innovation spaces for teachers so that the implementation of the Merdeka Curriculum runs optimally . Third, the results of this study can be a reference for the development of education policies that emphasize the importance of integrating character building in every subject.

Conclusion

This study shows that the implementation of differentiated IPAS learning based on the Merdeka Curriculum at Uswatun Hasanah Elementary School in Lubuklinggau can make a real contribution to strengthening student character. The application of differentiation in terms of content, process, and product has succeeded in increasing student active participation while fostering key character values, namely responsibility, discipline, cooperation, and curiosity. The questionnaire results show that student responsibility reached the excellent category (82%), curiosity was at a high level (81%), cooperation was in the good category (79%), and discipline was in the good category, although relatively lower (75%). This data is reinforced by observation and interview results that show an increase in student involvement in discussions, task completion, and enthusiasm for exploration.

Effective differentiated IPAS learning not only meets the diverse learning needs of students, but also serves as a strategic means of internalizing character values in accordance with the Pancasila Student Profile. This study confirms that teachers play an important role as creative facilitators in designing inclusive and contextual learning strategies. The implication of these findings is the need for ongoing support from schools in the form of training and facilities so that teachers can be more optimal in implementing differentiated learning that is oriented towards strengthening student character.

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