

The Effectiveness of the Differentiation Approach in Accommodating Students' Learning Styles in Inclusive Classrooms

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ABSTRACT

This study aims to evaluate the effectiveness of differentiated learning approaches in accommodating different learning styles of students in inclusive classrooms. In the context of education that increasingly emphasizes the principle of inclusivity, the diversity of learning styles, abilities, and needs of students is a challenge for teachers in designing effective teaching strategies. This study uses a descriptive qualitative approach through literature studies and empirical data analysis from various relevant sources. The results of the study show that the application of differentiated learning is able to increase students' active participation, motivate them to be involved in the learning process, and has a positive impact on the achievement of learning outcomes. By customizing the content, processes, products, and learning environment, teachers can create a more personalized and meaningful learning experience for each individual. In addition, this approach also contributes to building a supportive, collaborative, and inclusive classroom atmosphere. However, the effectiveness of implementation is greatly influenced by factors such as limited time, resources, and teachers' competence in designing and implementing differentiated learning.

Keywords: Differentiated learning, learning style, inclusive classroom

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INTRODUCTION

Inclusive education is an educational approach that emphasizes the importance of providing fair and equal learning opportunities for all students, including those with special needs. Within this framework, each student is valued as an individual with unique potential that needs to be facilitated through adaptive and difference-responsive teaching strategies. One of the fundamental challenges in the implementation of inclusive education is how teachers can meet the very diverse learning needs of a single classroom. Each student has a different cognitive, social, emotional, and learning background. Therefore, a teaching strategy is needed that is able to accommodate these diversity effectively. One promising approach to addressing this challenge is a differentiated learning approach.

The differentiation approach is a teaching strategy that adjusts the content, processes, products, and learning environment to accommodate differences in students' learning styles, interests, and readiness (Tomlinson, 2014). In the context of an inclusive classroom, this approach is particularly relevant because it allows teachers to provide a more personalized and meaningful learning experience for each student. Previous research has shown that the effective application of differentiation can improve learning motivation, student engagement, and academic outcomes, especially for students with special educational needs (Yulaichah et al., 2024; Danuri, 2023).

The need to apply a differentiated approach is increasingly urgent in today's increasingly diverse learning situation, both in terms of academic ability, cultural background, and the emotional and social challenges faced by students. In an inclusive classroom, there are students who may excel in verbal skills but have difficulty in social interactions, or vice versa. There are also students who understand the material better through visuals, while others are more responsive to auditory or kinesthetic approaches (Robiyanto, 2021). Therefore, it is important for teachers to have a deep understanding of students' learning styles and be able to develop flexible learning strategies.

Several studies have highlighted the importance of mapping student learning styles in designing differentiated learning. Rahadian and Budiningsih (2023) developed a classroom management model based on a database of student learning styles and found that this strategy can help teachers in designing learning activities that are more in line with student characteristics. Meanwhile, Sari (2025) shows that Islamic Religious Education (PAI) teachers who implement differentiated learning strategies based on learning styles have succeeded in increasing student participation and understanding of teaching materials.

However, the implementation of the differentiation approach in inclusive classes is not without obstacles. One of the main challenges is the limited time and resources that teachers have. Teachers are required to conduct initial assessments, develop varied learning plans, and manage classrooms with complex dynamics. In addition, not all teachers have sufficient training or understanding of the principles of differentiation (Purwani, 2024). Institutional support in the form of professional training, the provision of varied learning media, and supportive policies are needed so that this approach can be applied optimally.

The effectiveness of the differentiation approach also depends on the teacher's ability to recognize students' learning readiness and perform strategic grouping. Homogeneous grouping based on learning styles, as suggested by Robiyanto (2021), can be an effective initial strategy in arranging appropriate learning activities. However, in the long term, teachers need to encourage collaboration between students with different learning styles to create an inclusive and complementary learning environment.

In the context of implementation in inclusive primary schools, several studies provide encouraging findings. Iryani et al. (2025) found that the application of differentiated learning models in an inclusive setting can increase students' courage in expressing opinions and strengthen their social skills. Meanwhile, Sumilat and Tunas (2024) emphasized that the success of differentiated learning is highly dependent on teachers' commitment to understanding the diversity of students and their willingness to adjust their teaching practices.

Furthermore, the differentiation approach can also increase students' learning autonomy. By giving them choice in how they learn and showing their learning outcomes, students feel more valued and motivated. Ramadhani (2025) highlights that differentiation strategies that give inclusive students the freedom to choose activities that suit their learning styles can significantly increase their involvement in the learning process. This is important in creating a more meaningful learning experience and empowering students to become independent learners.

The application of differentiation in inclusive classes is also closely related to effective class management. Teachers need to design learning activities that are diverse but still within the framework of the same learning objectives. One of the important principles of differentiation is that all students learn in the same direction (goals), even though they use different paths (means). In other words, differentiation does not mean lowering standards, but rather providing various ways to achieve those standards (Tomlinson, 2014). Therefore, teachers need to have a strong understanding of the curriculum and learning standards, as well as the ability to modify teaching strategies to suit the individual needs of students.

In this study, the research is focused on exploring the effectiveness of differentiated learning approaches in accommodating various learning styles of students in inclusive classrooms. Through a literature analysis and empirical findings, this study aims to answer several key questions: To what extent can differentiation approaches improve inclusive student participation and learning outcomes? What are some of the challenges teachers face in implementing this strategy? What are the most effective strategies for implementing differentiation in heterogeneous class contexts?

This research is important not only to make a theoretical contribution in the field of inclusive education, but also to have practical implications for teachers, policymakers, and educational institutions. With the increasing number of schools implementing inclusive systems, the need for an adaptive and student-based approach to teaching is increasingly urgent. The results of this research are expected to be a reference for teachers in developing learning strategies that are more responsive to student diversity, as well as encouraging the development of education policies that support differentiated learning practices.

Thus, the differentiation approach is not only a pedagogical solution in dealing with the challenges of an inclusive classroom, but also reflects educational values oriented towards justice, equality, and respect for diversity. In an era of increasingly inclusive and personalized education, teaching strategies that consider individual differences are no longer an option, but an urgent need that must be accommodated in every educational policy and practice.

METHODS

This study uses a descriptive qualitative approach that aims to gain an in-depth understanding of the effectiveness of differentiated learning approaches in the context of inclusive classes. This approach was chosen because it is able to provide a comprehensive and contextual picture of the learning practices carried out by teachers in dealing with the diversity of student learning styles.

Data was obtained through an in-depth literature study of various national and international scientific journals relevant to the topic. The literature reviewed includes the results of empirical research, theoretical studies, and implementation reports of differentiation practices in inclusive classrooms at the elementary school level.

Data analysis was carried out thematically by identifying patterns that emerged from the results of previous studies, especially those related to implementation strategies, challenges, and impacts of the implementation of differentiated learning. Implementation strategies include how teachers tailor materials, processes, and assessments according to students' needs and learning styles. Meanwhile, the challenges found are generally related to time constraints, teacher workload, lack of professional training, and limited learning resources. The impact includes increasing student involvement, academic achievement, and strengthening social interaction between students. Through this approach, this research is expected to contribute to the development of educational policies and practices that are more responsive to the needs of students in inclusive classrooms.

RESULT AND DISCUSSION

Implementation Strategy

A differentiated learning approach is a strategy designed to respond to individual students' needs, interests, and learning readiness. In the context of inclusive classes, this strategy is increasingly crucial given the diversity of student characteristics, including differences in academic, social-emotional, and learning styles. Differentiated learning seeks to create a learning experience that is fair but not uniform, by adjusting the four main components of learning, namely content (material), process (learning activities), products (learning outcomes), and learning environment (classroom setting) to suit the student's profile.

Content adjustments are made by providing various levels of depth or complexity of the material. For example, students with high literacy abilities may be given analytical readings, while students with reading challenges may be given visual or audio materials. In the learning process, teachers provide varied activities according to students' learning styles. Visual students are provided with graphic or diagram assistance; auditory students are invited to discuss or listen to learning audio; Meanwhile, kinesthetic students are facilitated through simulations or physical activities related to teaching materials. For products, teachers give students the freedom to choose ways to demonstrate their understanding, such as through oral presentations, posters, essays, or collaborative projects. The learning environment is also adapted, for example by providing an independent learning corner for students who need calm or a group discussion area for students who are more socially active.

The student grouping strategy is also an important aspect in the implementation of differentiation. Teachers can group students based on learning style, interests, or readiness levels. These groupings are dynamic and flexible, tailored to specific learning objectives. Sari (2025) shows that Islamic Religious Education teachers who apply a grouping strategy based on learning styles have succeeded in increasing students' involvement and active participation in learning. In the study, teachers divided students into three groups based on dominant learning styles (visual, auditory, kinesthetic), then compiled relevant learning activities for each group. As a result, students become more focused, actively participate, and demonstrate a better understanding of concepts.

Furthermore, the implementation strategy also involves modifying the method of delivering the material. Teachers not only use lectures or textbooks, but also utilize various learning media such as videos, infographics, digital simulations, educational games, and project-based worksheets. This aims to make the material optimally accessible to students with different learning styles. Group discussion activities, hands-on practice, experiments, and case studies are effective alternatives to increase student engagement.

In order for the differentiation strategy to run well, teachers need to conduct diagnostic assessments at the beginning of learning. This assessment serves to identify students' learning styles, readiness levels, and interests. This information is then used as a basis for designing learning. Assessment also does not stop at the initial stage, but continues to be carried out formatively throughout the learning process to ensure that the strategies applied remain relevant and adaptive to changes in student dynamics.

It is also important for teachers to document the learning process and reflect periodically on the effectiveness of the strategies used. This reflection helps teachers make adjustments when there is a discrepancy between the strategies applied and the actual needs of students. In addition, collaboration with other teachers, education staff, and parents is essential to support the successful implementation of differentiation. Open and understanding communication

between all parties involved helps create an inclusive, supportive, and adaptive learning environment.

The following is a general representation of differentiation implementation strategies based on the results of the literature analysis:

Table 1 Implementation Strategy for Differentiation Approach in Inclusive Classrooms

Differentiation Components	Implementation Strategy	Example Practice
Content (Material)	Provide materials of different difficulty levels	Illustrated modules for visual students; Narrative Text for Auditory Students
Process (Activity)	Adapt activities to your learning style	Discussion for auditory; experiments for kinesthetics; Animated Videos for Visuals
Products (Learning Outcomes)	Provides a choice of final project form	Essays, presentations, posters, or practical projects as per the student's preference
Learning Environment	Creating flexible and inclusion-friendly learning spaces	Group work area, individual study corner, quiet space for relaxation
Student Grouping	Dynamic based on learning style, interests, or readiness	Students are divided into groups based on dominant learning styles
Diagnostic Assessment	Identify the student's initial characteristics	Learning style questionnaire, preliminary observation, short interview
Formative Assessment	Monitor and evaluate the learning process on a regular basis	Light quiz, study journal, reflective discussion
Learning Resources	Varied and technology-based or conventional	Books, infographics, online simulations, interactive audio

These strategies are not rigid and can be modified according to the contextual needs of the class. Teachers need to develop pedagogical sensitivity to read students' needs and responses, as well as flexibility in adapting the approach used. The application of differentiation is not only a matter of method variation, but also requires a deep understanding of the characteristics of students and a commitment to make learning an inclusive, fair, and meaningful process. When this strategy is implemented carefully and consistently, inclusive classrooms can become spaces that support the growth and success of all students, without exception.

Positive Impact

The implementation of differentiated learning approaches in inclusive classrooms has a variety of significant positive impacts on students' cognitive, social, and affective development. This approach provides ample space for students to develop to their potential without having to be hampered by the limitations of a single teaching method that does not take into account individual differences. In the context of inclusive education that places diversity as the starting point for learning, differentiation is not only a technical strategy, but a concrete form of respect for the learning rights of all children.

One of the most tangible impacts of the implementation of differentiated learning is the increased participation of students in the learning process. When teachers present activities that suit students' learning styles and interests, they become more actively engaged. This participation is not only reflected in physical presence in the classroom, but also in the form of students' intellectual and emotional involvement with the learning material. Students who were previously passive and reluctant to interact in discussions became more confident to express their opinions. Research conducted by Iryani et al. (2025) shows that the integration of differentiated learning in an inclusive classroom is able to encourage students to be more courageous in conveying ideas and establish healthy communication with classmates.

Another impact that is no less important is the improvement of student learning outcomes. Differentiation allows teachers to tailor the difficulty of the assignment to the individual abilities of the student, so that they can understand the concepts more deeply. Students no longer feel left behind or pressured because they have to follow the same learning standards. Instead, they feel more valued and get the opportunity to learn as they can, which ultimately strengthens their internal motivation to learn. In the long term, this condition encourages an increase in academic achievement, both in the form of test scores and critical thinking skills.

On the social-emotional side, differentiated learning creates a more inclusive and supportive classroom atmosphere. Students learn in an environment that values differences and supports collaboration. Through heterogeneous group assignments or collaborative projects designed around shared interests, students learn to respect each other and work closely with individuals who have different learning styles or needs. This strengthens students' social skills, reduces discriminatory attitudes, and increases empathy between students.

Another positive impact is increased learning autonomy. The differentiation approach gives students choice in how they learn and express their understanding. When students have control over the learning process, they tend to become more responsible and reflective of their learning. Ramadhani (2025) stated that providing assignment choices and flexibility of working time that is in accordance with the characteristics of inclusive students can increase learning motivation and initiative in completing assignments. Students also tend to be more focused because the assignments given are aligned with their strengths and interests.

Classes that apply differentiation also show an improvement in the teacher-student relationship. When teachers get to know each student's learning profile better and adjust their approach, students feel personally valued. Interactions are built to be more positive, warm, and support a fun learning process. These interpersonal relationships are an important foundation in building trust and comfort in learning, especially for students with special needs who often experience stigma or exclusion in the conventional learning system.

The following is a representation of the positive impact of the implementation of differentiated learning in inclusive classrooms:

Table 2 Positive Impact of Implementation of Differentiated Learning in Inclusive Classrooms

Impact Aspects	Positive Impact	Concrete Examples in the Classroom
Student Participation	Increased active student involvement in learning	Students often ask, answer, and discuss according to their respective learning styles
Learning Outcomes	Improved understanding of concepts and academic achievement	Test scores increased, problem-solving skills improved

Social Skills	Increased cooperation and empathy between students	Group projects result in collaboration across learning styles and learning needs
Learning Autonomy	Growing student learning responsibilities and initiatives	Students choose the form of assignments according to their strengths and complete them on time
Teacher-Student Relationship	More personal and supportive relationships between teachers and students	Teachers better understand the needs of each student and students feel more valued
Confidence	Increased confidence in expressing opinions and taking action	Students who were previously passive begin to actively speak in class discussions

The data in the table above show that differentiation has a holistic positive impact, going beyond academic achievement. In differentiated learning, students not only learn subject matter, but also learn to know themselves, work together, make decisions, and solve problems. The learning environment becomes more humanistic and conducive to the growth and development of students as a whole. Especially in inclusive education, this strategy narrows the gap in participation and achievement between regular students and students with special needs. Consistent implementation of this approach has the potential to change the face of education to be more equitable, equitable, and adaptive to real diversity in the classroom. Thus, differentiation is not just a strategy, but a reflection of the true spirit of inclusive education.

Challenge

Although differentiated learning approaches have proven to be effective in improving the quality of learning in inclusive classrooms, their implementation in the field is inseparable from complex challenges. One of the main challenges is the limited time that teachers experience in designing and managing learning that is responsive to student diversity. The process of identifying individual learning needs, adjusting materials and activities, and ongoing assessments requires extra time and effort. Teachers often have to manage classes with large student numbers, making it difficult to give personal attention to each student. Under these conditions, differentiation becomes difficult to apply consistently.

In addition to time, resource limitations are also a serious obstacle. Many schools, especially in remote areas or with limited budgets, do not have adequate learning facilities to support the implementation of differentiated learning. The absence of varied learning media, inflexible classrooms, and lack of access to technology are factors that weaken the carrying capacity of this approach. Teachers often have to use limited teaching materials or create their own without adequate technical and logistical support.

Another factor that is also crucial is the lack of in-depth training and professional development related to differentiation. Many teachers do not yet have a strong conceptual understanding of differentiation principles and practices, or are not accustomed to integrating them into daily lesson plans. Purwani (2024) emphasized that teachers' ability to implement this strategy is highly dependent on continuous training, academic supervision, and the support of a community of professional learners. Without adequate debriefing, teachers tend to revert to a uniform one-way learning approach, which is ineffective in an inclusive context.

Challenges also arise from the high administrative burden faced by teachers. Excessive administrative tasks, such as assessment reports, curriculum reporting, and other bureaucratic tasks, take up time and energy that could otherwise be allocated to designing differentiated

learning. As a result, teachers experience burnout and decreased motivation to innovate in teaching. In addition, the lack of support from school management, both in the form of policies and resource allocation, exacerbates this condition.

The disparity in perceptions among teachers about inclusive education is also a challenge. There are still teachers who consider student diversity as an obstacle, not as a strength that should be celebrated through an appropriate approach. This hinders collaboration between teachers and affects the overall inclusive learning atmosphere. For this reason, a comprehensive effort is needed from educational institutions, ranging from principals, teachers, to supervisors, in building an inclusive and collaborative school culture.

The following table summarizes the main challenges in implementing differentiated learning approaches in inclusive classrooms:

Table 3 Challenges of Implementing Differentiated Learning in the Inclusive Classroom

Challenge Aspect	Explanation	Impact on the Field
Time Limitations	Teachers struggle to design individual learning in the midst of routine tasks	Learning tends to be uniform and less adaptive
Resource Limitations	Lack of media, tools, and supporting facilities	Students do not get a learning experience that suits their learning style
Lack of Training	Teachers do not understand the principles and practices of differentiation comprehensively	Differentiation strategies are not implemented or implemented on a limited basis
Administrative Beban	Administrative tasks take time to design innovative learning	Teachers are exhausted, reduced creativity and motivation to teach
Institutional Support	Lack of policy, logistical and supervisory support from schools	Implementation is not sustainable and depends on individual initiative
Negative Perceptions of Teachers	Some teachers see diversity as a burden, not a strength	Learning environments become less inclusive and collaborative

From the table, it can be concluded that the challenges in implementing differentiation come not only from technical factors, but also from structural and cultural aspects in the educational environment. Therefore, solutions to overcome these barriers must be systemic, involve various stakeholders, and emphasize the importance of strengthening the capacity of teachers as key agents of change in inclusive education. Strong institutional support, ongoing training, and a paradigm shift in education that values diversity are key to making differentiation a sustainable practice with real impact.

CONCLUSION

The conclusion of this study confirms that the differentiated learning approach is an effective strategy in accommodating students' learning styles in inclusive classrooms. By providing flexibility in content, processes, products, and learning environments, this approach is able to increase students' active participation and improve their learning outcomes. This approach also provides space for students with special needs to develop according to their potential without feeling left behind or marginalized in the learning process.

However, the effectiveness of differentiation in practice is greatly influenced by various supporting factors. The availability of adequate learning resources, such as teaching media, flexible classrooms, and educational technology, is an important prerequisite for teachers to develop varied and adaptive learning strategies. In addition, the professional capacity of teachers greatly determines the success of implementation. Teachers need to be provided with continuous training to understand the concept of differentiation, design appropriate activities, and conduct in-depth assessments of student characteristics.

On the other hand, education policies that favor inclusive education and encourage learning innovation are also very necessary. For this reason, close collaboration is needed between teachers, schools, the government, and the education community in creating a learning environment that is inclusive, equitable, and responsive to diversity. Only with the synergy of all stakeholders, the differentiation approach can be applied optimally and sustainably in an education system that respects differences.

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