

Implementation of Differential Learning in Accommodating Students' Learning Styles in Primary Schools

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ABSTRACT

Education in an independent curriculum is an approach that provides freedom and flexibility to schools and educators to design learning that is appropriate to local needs and context, and emphasizes the development of 21st century skills, deep understanding and student creativity. So that students' learning needs can be maximally accommodated, a learning approach is needed that is able to meet these needs, one of which is through differentiated learning. This research aims to explore the application of differentiated learning in accommodating students' learning styles in elementary schools. The research method used is qualitative with a case study approach. Data was collected through classroom observations, in-depth interviews with teachers, and analysis of documents related to learning plans and student evaluations. The research results show that teachers use differentiation learning strategies through the use of video media, images, group discussions, lectures, listening to audio, putting together puzzles, practical activities and so on to meet students' visual, auditory and kinesthetic learning needs. However, teachers face challenges such as limited time, the need for further training, and limited resources, classroom management, various evaluations or assessments. Differentiated learning has been proven to increase student participation, motivation and academic achievement, where students feel more interested and motivated when the material is delivered according to their learning style.

KEYWORDS

differentiated learning; elementary schools; learning styles

1. INTRODUCTION

Education is one of the main pillars in the development of quality human resources (Herwina, 2021). Therefore, developments or changes in the education system are essential to ensure the achievement of this goal. Education plays a significant role in shaping individuals who possess the potential and skills to develop holistically, achieve their life goals, and contribute positively to society (Achmad, n.d.). Education in the current "Kurikulum Merdeka" (Independent Curriculum) is an approach that provides schools and educators with the freedom and flexibility to design learning according to local needs and contexts, emphasizing the development of 21st-century skills, deep understanding, and student creativity (Thana & Hanipah, 2023). The goal of the Independent Curriculum is to provide meaningful, relevant, and inclusive learning experiences for every student, enabling them to develop optimally and be prepared to face future challenges (Fakhri Akhmad, 2023). In this regard, it emphasizes the active involvement of students in the learning process, making students the main actors in the teaching and learning process. This does not mean that the role of the teacher is diminished, but that teachers must have the ability to explore and develop the potential and skills of their students. Additionally, one of the roles of teachers is to implement innovations in teaching to meet students' needs and create a liberating learning environment. These teaching innovations are expected to help students think freely, innovate, learn independently and creatively, and achieve happiness in their learning process (Daga, 2021).

A teacher is not only someone who teaches, but must also be able to adapt to changes, including transforming traditional teacher-centered teaching methods (such as lectures) into more creative and innovative approaches. This is expected to develop the potential for quality education, in line with the principles of Ki Hajar Dewantara, which are encapsulated in the motto of the Ministry of Education and Culture, "Tut Wuri Handayani." According to Ki Hajar Dewantara, each individual has unique characteristics. He emphasized that children's education must consider their innate nature and connect it with the nature of the times. The diversity of children's innate nature leads to differences in learning styles, absorption capacity, and other aspects. Therefore, teachers must be sensitive to this diversity and should not impose a single learning method based on theories they consider good. Each student has the right to receive education that aligns with their individual learning style, as this is their natural inclination.

Teachers have a great responsibility to recognize and understand the differences among their students. They cannot apply the same teaching methods to all students, as what is effective for one student may not be effective for another. Instead, teachers must be flexible and creative in choosing and designing teaching methods that suit the individual needs of their students. They need to adjust their approaches based on observations and in-depth understanding of each student. Additionally, it is crucial for teachers not to impose certain teaching theories simply because they are deemed ideal. Instead, they should adjust educational theories and practices to the realities and specific needs of each student. Ki Hajar Dewantara reminds us that every student has the right to receive education that matches their own learning style (Eko Mujito, 2017). This is important because learning methods tailored to students' natural inclinations help them develop optimally and feel valued in their learning environment. Education that considers both innate nature and the nature of the times not only aids academic development but also supports students' emotional and social development. Therefore, student-centered education, as advocated by Ki Hajar Dewantara, aims to enhance academic achievement and also to shape well-rounded and balanced individuals (Masitoh & Cahyani, 2020). This is the essence of

quality education, which prepares students to face the challenges of the times with confidence and adequate skills.

At the elementary school level, one of the challenges faced by teachers in the classroom is the diversity of students' learning styles. According to (Jean Imaniar Djara, Mahrati Imaniar, Ester Sae, & Sentike Anin, 2023), a learning style is the preferred method by which an individual receives and processes information. Learning styles are divided into three categories: visual learning, auditory learning, and kinesthetic learning. Each student has a different way of processing information, which can affect the effectiveness of their learning. Different learning styles, such as visual, auditory, and kinesthetic, require different teaching approaches. Based on initial observations in grade V, diagnostic tests through questionnaires distributed by the class teacher revealed a diversity of learning styles among students. Out of 24 observed students, there were variations in learning styles: 8 students with auditory learning styles, 10 students with visual learning styles, and 6 students with kinesthetic learning styles. These differences in learning styles resulted in students struggling to understand the material presented by the teacher and a lack of motivation to learn.

Based on the diversity of learning styles found, teachers must be able to accommodate these learning style needs from the preparation of teaching materials to the implementation of the learning process. Accommodating diverse learning styles can enhance the effectiveness of learning and ensure that each student has an equal opportunity to succeed in the educational process. The solution for teachers to accommodate students' learning needs can be seen from the aspect of diverse learning styles through the implementation of differentiated instruction. Teachers can ensure that each student receives a learning experience that matches their learning needs and preferences. Differentiated instruction is a pedagogical approach designed to accommodate individual differences in learning, allowing each student to reach their maximum potential. According to Tomlinson (2000), differentiated instruction is an effort to tailor classroom learning processes to meet the individual learning needs of each student (Swandewi, 2021). Through differentiated instruction, teachers can adjust content, processes, and learning products according to students' needs and interests (Ramadhini & Sukmawan, 2024). In elementary schools, where variations in abilities and learning styles are particularly prominent, the implementation of differentiated instruction becomes increasingly relevant and important. It is hoped that through this approach, the differences and diversity of individuals in the classroom, in terms of readiness, interests, and learning styles, can be accommodated. This will impact improved understanding, motivation to learn, and interaction among students in the classroom (Masitoh & Cahyani, 2020).

This research aims to explore the implementation of differentiated instruction in elementary schools to accommodate various student learning styles. The focus of this study is to identify the strategies used by teachers, the challenges faced, and the impact of implementing differentiated instruction on student participation and achievement. Thus, this research is expected to provide practical contributions to the development of more inclusive and effective teaching strategies in elementary schools.

2. METHODOLOGY

This research uses a qualitative approach with a case study design to explore the application of differentiated learning in elementary school classes. The qualitative research method is an approach that aims to understand and explain the meaning of a phenomenon in its original context (Sugiarto, 2016). The research location chosen was a state elementary school that had implemented differentiated learning. The research

participants consisted of 24 students in class V, each student representing a different learning style, and 2 class teachers. Data was collected through classroom observations, in-depth interviews, and document analysis. Observations were carried out for two months with a frequency of twice per week, while interviews were carried out individually with evidence in the form of voice recordings previously recorded with the permission of the source. Documents analyzed included learning implementation plans, student evaluation notes, and teaching materials used in implementing differentiated learning. . Data analysis was carried out using thematic analysis techniques, which include interview transcription, data coding, theme identification, and interpretation (Jean Imaniar Djara et al., 2023). Data validity is maintained through triangulation of techniques and data sources, as well as member checking. This study adhered to ethical principles, including obtaining informed consent from all participants and maintaining their anonymity.

3. RESULTS AND DISCUSSION

The elementary school that is the location of this research is an elementary school that has been designated as a driving school, where this school has implemented differentiated learning in the learning process. Students in class V have diverse characteristics, interests, initial abilities and learning styles. To accommodate this diversity, teachers implement differentiated learning, one of which is differentiation which facilitates learning styles through content and processes. There were 24 students, this learning style mapping was obtained from the class teacher. Based on the results of observations that have been made, before starting learning, a non-cognitive assessment is carried out to determine the learning style of each student. This non-diagnostic assessment is very important to carry out. The aim of the non-cognitive diagnostic examination is to determine the psychological and social-emotional health of students. Understand the exercises when studying at home (3). Be aware of family circumstances, (4). Be aware of students' social background, (5). recognize students' personalities, interests and learning styles (Nur Budiono & Hatip, 2023).

Based on the results of non-diagnostic assessments at this school, it shows that there is a diversity of learning styles from the 24 students observed, there are variations in learning styles, namely 8 students with an auditory learning style, 10 students with a visual learning style, and 6 students with a kinesthetic learning style. . The percentage of learning styles can be observed from the following diagram:

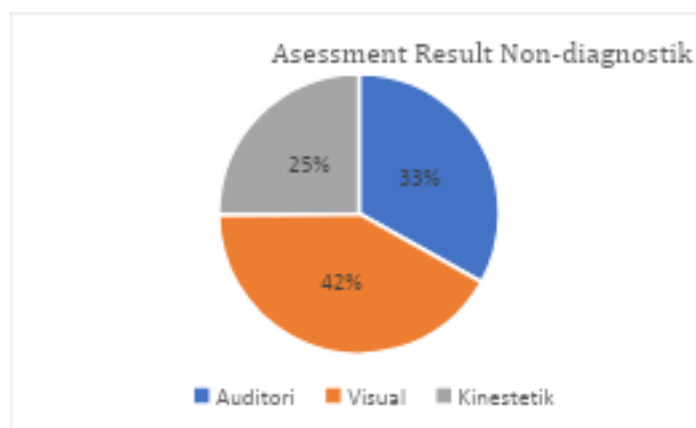


Figure 1. Percentage of class V learning styles

These percentage results show that students tend to have a visual learning style. This does not indicate that they are not more likely to use a visual learning style than an aural or kinesthetic learning style. However, although kinesthetic learners are more likely to use auditory or auditory learning methods, they can also use visual learning techniques. Consequently, there is sufficient understanding of the various learning styles that children have. Finding the fact that each student has a different learning style shows that each student learns differently, therefore it is important to have a teacher who can support learning. A teacher's efforts involve implementing different teaching (Derici & Susanti, 2023). Apart from that, choosing the right models, tactics, methods and learning media for learning activities in the classroom and outside the classroom is crucial for educators.

3.1. Strategy for Implementing Differentiated Learning

Class observations and interviews with teachers show that differentiated learning strategies are implemented to accommodate students' learning styles. Teachers use visual media such as pictures and videos for visual students, listening to audio, sound recordings, lectures, discussions and debates for auditory students, as well as practical and movement activities for kinesthetic students, for example by putting together puzzles, role playing, guessing treasures. treasure and so on. A concrete example of this differentiated learning strategy, for example, in the science and science subject "Harmony in the Ecosystem" the teacher carries out learning style mapping and designs learning according to the students' learning styles, by including visual, auditory and kinesthetic components and finally the teacher evaluates and reflects on the learning that has been done. implemented, in differentiated learning not all students are given the same treatment, services to students are adjusted to their learning needs, implementing differentiated learning in this class can be said to be not easy, teachers must be able to creatively organize and implement learning activities to meet students' needs, teachers must have broad insight and ways of thinking. In its application there are 3 strategies including: 1) Content differentiation, related to the material being taught, and grouping students based on their learning readiness; 2) Process differentiation, related to the process of students understanding the information provided, students are grouped based on their learning style, for example in the learning process students who have a visual learning style, the teacher uses pictures and videos to explain the water cycle, students with an auditory learning style are given services in the form of lectures and discussions, while the kinesthetic learning style, for example by carrying out simple experiments. 3) Product differentiation, reflects students' understanding, in the form of the final result of the learning process, or the product produced by the diversity of these differences. For example, visual learning style products, students create water cycle diagrams, concept maps, infographics, charts or simple comics. For example, in the auditory learning style, students carry out discussions, record videos telling about the water cycle, and finally, in the kinesthetic learning style, the products produced by students are by making water cycle models, role playing or water cycle experiments.

3.2. Challenges in Implementing Differentiated Learning

Based on the results of interviews with class V teachers, there are several challenges in implementing differentiated learning, including (1) limited time, before implementing differentiated learning, a learning plan is needed that takes quite a long time, the teacher designs various activities to accommodate the needs of students, the teacher must develop various different learning materials and strategies, and teachers are required to actively create innovations and new ideas in arranging learning activities. (2) Teacher training needs, many teachers do not understand the concept of differentiated learning so additional training is needed for teachers to understand and apply strategies effective

differentiated learning. Without training, teachers will have difficulty managing the diversity that exists in the classroom, in addition to the challenge teachers have to keep up with the latest developments in differentiated learning practices (3) Limited resources, teachers often lack the visual, audiovisual and kinesthetic aids needed to accommodate various styles learning, in addition to the lack of access to relevant and up-to-date supporting materials can hamper teachers' ability to provide appropriate content for students. (4) Class management, teachers face challenges in managing classes with students who have diverse learning needs, here teachers must ensure that each student is involved and motivated, and avoid injustice to students; (5) Evaluation and assessment, different assessments become obstacles for teachers, teachers must develop and apply assessments that are fair and appropriate for each student, teachers must be able to assess students' progress based on their individual goals, besides that it takes time to provide assessments because of the this diversity.

According to (Aminuriyah, Markhamah, & Utama, 2022) there are several challenges felt by teachers in differentiated learning, including: Grouping students based on readiness, interest in learning, and preferred way of learning presents the first fundamental obstacle in adopting differentiated teaching. The second is the use of differentiation of content (material) in the classroom; the third is time management, especially in student-made learning product projects; and the fourth is the teacher's difficulty in creating assessment questions, especially on knowledge competencies.

3.3. The Impact of Differentiated Learning for Students

From document analysis and interviews with students, it was found that differentiated learning increases students' participation in class and their academic achievement. Students report that they feel more interested and motivated in learning when the material is delivered according to their learning style. Evaluation data shows an increase in students' average scores in Mathematics and Science subjects after implementing the differentiation strategy. Based on in-depth interviews with the homeroom teacher, it was stated that there had been an increase in student interaction, especially in group activities designed to accommodate various learning styles. Students learn to work together and appreciate existing differences. The teacher expressed, "Varied group activities allow students to learn from each other and appreciate the differences in their friends' learning styles. This also helps improve their social skills." Apart from that, the impact of differentiated learning is that students are more interested and motivated when the material is presented in a way that suits their learning style, students also show enthusiasm and enthusiasm in carrying out group assignments based on their wishes. The fifth grade teacher revealed that "when I try to implement differentiated learning in class, students feel happy doing group assignments because they do things according to their wishes so they don't feel burdened.

The impact of differentiated learning was also researched by (Khasanah & Alfiandra, 2023), where according to the implementation of differentiated learning that occurred in class IX.8 of SMPN 33 Palembang it had a good influence on students' learning motivation because after the implementation of differentiated learning only around 5% of students still lacking in that motivation. Then according to (Sri Yanti, Montessori, & Nora, 2022) research findings show that the use of differentiated learning influences how students behave when they learn, as evidenced by observations that students participate more actively in class activities and use creativity to complete tasks that are in line with goals. learning. These results support research by Anderson (2007) and Hall (2002) which states that differentiated learning can improve student learning outcomes. When students learn

in a way that suits their preferences, they tend to be more engaged and able to understand the material better, which ultimately improves their academic performance.

4. CONCLUSION

This research aims to explore the application of differentiated learning in accommodating the learning styles of students in elementary schools. Through a qualitative approach with a case study design, data was collected from classroom observations, in-depth interviews with teachers, students, and analysis of related documents. Based on the research findings, several main conclusions can be drawn as follows: (1) Strategies for Implementing Differentiated Learning: Teachers in elementary school classes use various strategies to accommodate students' learning styles, including visual media, group discussions, and practical activities. The use of concept maps, verbal discussions, and simple experiments helps meet the learning needs of visual, auditory, and kinesthetic learners. This strategy reflects the teacher's efforts to adapt learning content, processes and products according to the individual needs of students. (2) Challenges in Implementing Differentiated Learning: Although differentiated learning has significant benefits, teachers face several challenges in implementing it. Limited time to plan diverse activities and the need for further training are major obstacles. Support from schools in the form of resources and ongoing professional training is needed to help teachers overcome these obstacles and optimize the implementation of differentiated learning. (3) Impact of Differentiated Learning on Student Participation and Achievement: Differentiated learning has been proven to increase student participation in class and their academic achievement. Students feel more interested and motivated when the material is delivered according to their learning style. Evaluation data shows an increase in students' average scores in Mathematics and Science subjects after implementing the differentiation strategy. This shows that when students learn in a way that suits their preferences, they tend to be more engaged and able to understand the material better.

Overall, this research confirms the importance of implementing differentiated learning in elementary school classrooms to accommodate the diversity of students' learning styles. Differentiated learning can increase student participation and achievement, although it requires further support in the form of adequate training and resources. The practical implication of this research is the need to develop comprehensive teacher training programs and provide sufficient resources to support the implementation of differentiated learning. In this way, it is hoped that a learning environment that is more inclusive and responsive to the learning needs of each student will be created.

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