



Primary School Teachers' Perceptions of Differentiation Learning

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Abstract. This research was conducted because of the need to implement differentiated learning optimally. This research describes how elementary school teachers perceive the differentiated learning model applied to elementary school students. The research method used in this study is descriptive qualitative research. Data was obtained through questionnaires involving 30 elementary school teachers. The data analysis process involves the steps of data reduction, data presentation, and conclusion. Data reliability is guaranteed through triangulation techniques. The research results show that teachers' perceptions of several aspects, including teaching materials, interactions in differentiated learning, learning environments, and learning models in general, tend to fall into the poor category. These findings indicate that teachers need more perceptions of the effectiveness of differentiated learning for elementary school students. This research implies that the results can be used as a basis for developing differentiated learning approaches that are more appropriate to the needs of elementary school students.

Keywords: Differentiation, Elementary School, Perception, Teacher

1 Introduction

The differentiated learning approach is very suitable for use in elementary schools because students at this level significantly differ in abilities, interests, learning styles, and readiness levels [1]. Differentiated learning aims to accommodate these differences and provide a more personalized learning experience for each student [2]. In elementary school, students are at varying stages of development. Some may learn faster than others, and some may take longer. Thus, teachers can use a differentiated approach to design teaching tailored to students' abilities. Apart from that, differences in student learning styles are also very striking [3]. Some may be more responsive to certain learning methods, such as visual or practical, whereas others may prefer different methods. By using differentiated learning, teachers can present material in various ways that suit each student's learning style. Primary schools also have students with special needs, and they may need additional support in some subjects [4]. By implementing a differentiated approach, teachers can provide support that meets the needs of these individuals. The use of differentiated learning can also

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increase student engagement. When students feel that learning is tailored to their interests and abilities, they are more motivated to learn. These conditions also help build a solid foundation for learning at higher levels. By considering student diversity and implementing differentiated learning, teachers in elementary schools can create a learning environment that supports growth, respects differences, and helps each student achieve maximum learning potential [5]. Concepts are critical to helping students build a strong educational foundation for their future.

The introduction of differentiated learning in Indonesia began in 2021 through an initiative known as the independent curriculum. The independent curriculum aims to give teachers more freedom in designing learning experiences that are more suited to the needs of each student [6]. One of the main components of the independent curriculum is integrating differentiated learning into the learning process. Although this effort is a positive step in supporting the diversity of student needs, its implementation still faces several obstacles. Based on a literature review conducted by researchers, several factors influenced the non-optimality of differentiated learning. Most teachers face challenges in managing differentiated learning materials because developing materials that suit students' needs can be challenging [7]. Interaction in the context of differentiated learning can also be a problem [8]. Teachers need to adapt to learning methods that are more interactive and support diverse student learning styles, which in turn requires adequate training and support [9], [10]. In addition, it is necessary to change the learning environment to suit the differentiated learning approach. Limited physical resources and support from the school environment and parents can hinder the creation of an optimal learning environment [11]. Therefore, obstacles related to differentiated learning materials, interactions in differentiated learning, and creating a differentiated learning environment still need to be overcome to ensure that the implementation of differentiated learning in Indonesia reaches an optimal and effective level. Differentiated learning will help create a more inclusive learning environment and support the individual development of each student according to their potential.

Based on this, efforts are needed to determine the current implementation process of differentiated learning. One way is to find out teachers' perceptions of the implementation of differentiated learning that has been carried out in elementary schools. Teacher perception refers to the subjective views and responses a teacher has towards various aspects of learning, including teaching methods, learning strategies, and student engagement. In the context of differentiated learning, teachers' perceptions include their assessments and views of the effectiveness of the learning process, which is tailored to students' needs and individual characteristics.

Research related to teacher perceptions of differentiated learning has begun to be carried out. Robinson et al. (2014) carried out related research, which examined teacher perceptions regarding differentiated learning [12]. The research results highlight that teachers are still constrained by time when implementing differentiated learning. In this research, it was stated that teachers still have difficulty in the time management process. This research shows that the study of teacher perceptions regarding new differentiated learning is only perceptions related to time. Therefore, researchers want to study it from different aspects based on the problems encountered in the literature review.

Researchers want to examine elementary school teachers' perceptions of

implementing differentiated learning in terms of learning material, learning interactions, and the learning environment of elementary school students.

So, this research aims to determine the perceptions of elementary school teachers in implementing differentiated learning in terms of learning material, learning interactions, and the learning environment of elementary school students. This research is important to carry out. Knowledge of teachers' views of the learning environment is important because it allows us to identify barriers that need to be overcome so that the learning environment can be adapted to needs.

2 Method

This research is a descriptive qualitative study [13]. The collected data is analyzed in the form of descriptions that reflect the teacher's views regarding social and science learning in primary school. This research was conducted in Langsa City, and the subjects were elementary school teachers. The population in this study was 63 elementary school teachers who taught grade 4 elementary schools. Sampling using a purposive sampling technique. The criteria taken for the samples were 4th-grade teachers who taught using differentiated learning for at least one year. A total of 30 teachers from elementary schools in the area were taken as research samples. Data was collected using a questionnaire distributed via the Google Form platform.

The research began by identifying relevant indicators for the research variables, and these indicators became the basis for preparing measuring instruments in the form of questionnaires. This measuring tool covers three main aspects, namely learning materials, learning interactions, and learning environment, and consists of eight indicators with thirteen questions in the questionnaire. This measuring instrument has gone through a validation stage by 3 validators before being used. After being validated and considered valid, the measuring instrument is tested to ensure its validity and reliability. Data was collected by sending respondents a questionnaire link created via Google Forms. After the data collection process is complete, the collected data will be analyzed. Analyze data in research by finding the average value and changing it into percentage form.

3 Result and Discussion

3.1 Results

Teachers' perceptions of aspects of teaching materials in differentiated learning.

In analyzing teachers' perceptions of teaching materials, the data has been arranged based on gender, period of teaching experience, and teacher education level.

Table 1. Trends in teacher perceptions of teaching material aspects

Categories	Grouping						
	Gender		Length of teaching			Education units	
	Man	Woman	0-10 Years	11-20 Years	21-30 Years	bachel or	Master s

Completely disagree	0%	0%	0%	0%	0%	0%	0%
Disagree	0%	66.67%	0%	0%	0%	0%	0%
Not completely agree	63.33%	33.33%	73.33%	70.00%	66.67%	96.67%	3.33%
Agree	36.67%	0%	26.67%	30.00%	33.33%	3.33%	96.67%
Completely agree	0%	0%	0%	0%	0%	0%	0%

Based on the data in Table 1, it can be concluded that there is a tendency for teachers to disagree with the currently available differentiated learning teaching materials.

Teachers' perceptions of aspects of learning interaction in differentiated learning. In analyzing teachers' perceptions of learning interactions, data has been arranged based on gender, period of teaching experience, and teacher education level.

Table 2. Trends in teacher perceptions of learning interaction aspects

Categories	Gender		Length of teaching			Education units	
	Man	Woman	0-10 Years	11-20 Years	21-30 Years	Bachel or	Masters
Completely disagree	0%	0%	0%	0%	0%	0%	0%
Disagree	0%	73.33%	0%	0%	0%	0%	0%
Not completely agree	56.67%	26.67%	66.67%	73.33%	63.33%	96.67%	0%
Agree	43.33%	0%	33.33%	26.67%	36.67%	3.33%	100.00%
Completely agree	0%	0%	0%	0%	0%	0%	0%

Based on the data in Table 2, there is a tendency for teachers' perceptions to show disagreement with the form of learning interaction using the differentiated learning model that is currently taking place.

Teachers' perceptions of aspects of the learning environment in differentiated learning. In analyzing teachers' perceptions of learning, data has been arranged based on gender, period of teaching experience, and teacher education level.

Table 3. Trends in teacher perceptions of aspects of the learning environment

Categories	Gender		Length of teaching			Education units	
	Man	Woman	0-10 Years	11-20 Years	21-30 Years	Bachel or	Masters
Completely disagree	0%	0%	0%	0%	0%	0%	0%
Disagree	0%	73.33%	0%	0%	0%	0%	0%
Not completely agree	63.33%	26.67%	63.33%	76.67%	63.33%	96.67%	0%
Agree	36.67%	0%	36.67%	23.33%	36.67%	3.33%	100.00%

Completely agree	0%	0%	0%	0%	0%	0%	0%
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Based on the data presented in Table 3, male and female teachers tend to disapprove of the learning environment implemented during differentiated learning. This finding is also seen in the level of agreement based on the length of teaching experience and teacher education level. So overall, from the aspects of teaching materials, learning interactions, and the learning environment, teachers tend to disagree with these components in the differentiated learning process in elementary schools.

3.2 Discussion

The results of this study indicate that elementary school teachers require an improved understanding of the differentiated learning process tailored to elementary school students. The results of previous research support these findings. Research by Santangelo and Tomlinson (2012) examined teacher perceptions in implementing differentiated learning. The findings state that teachers must implement differentiated learning optimally [14]. Similar results were also carried out by research by Shareefa et al. (2019), which stated that teachers were still overwhelmed in implementing differentiated learning [15]. These two findings indicate that teachers still experience obstacles in the differentiated learning process. It is a new finding from research results that teachers tend to disagree with the differentiated learning process, viewed from the aspects of teaching material, learning interactions, and learning environment.

Regarding the teaching material aspect, it was found that the teacher explained that within a differentiated learning framework, learning material may become more complicated, especially when adapted to meet the needs of diverse students. Conditions become more challenging at the elementary school level, where students are still in the basic developmental stages and may need help understanding material that is too complex. To overcome this problem, teachers can consider simplifying or breaking down complex material into smaller parts that are easier to digest and appropriate to the level of understanding of students in elementary schools. Concrete examples and more playful teaching methods may help students understand complex material [16]. Teachers highlighted limited resources in elementary schools, including a lack of textbooks and technological devices to support differentiated learning. It is essential to invest in enhanced educational resources, encompassing suitable textbooks and technological tools that can aid teachers in delivering a diverse range of instructional materials [17].

Additionally, teachers note that in elementary school, students may still need to gain high motivation or sufficient autonomy to manage their learning. Therefore, teachers can act as facilitators who support students in understanding the material, provide guidance, and help them choose learning paths that suit their interests and abilities [18]. The role of parents is also important in supporting student motivation at home by providing support and creating a conducive learning environment. With a more interactive approach and more personalized attention from teachers and parents, students in elementary schools can be more effective in managing differentiated learning.

From the learning interaction aspect, it was found that teachers noted that students in elementary school were still in their basic development stage, which means they still needed to gain sufficient social skills to manage complex interactions. As a result, the more complex interaction methods in differentiated learning may be too difficult for students of this age. To face this challenge, teachers can consider simpler and more intuitive approaches to learning interactions. These activities include using concrete examples, games, or simulations that are easy for elementary school students to understand [19]. In addition, teachers can provide additional guidance and support in understanding concepts or tasks that involve more complex interactions.

Teachers also emphasized that students in elementary schools often face cognitive limitations. Interactions that are too complex or full of information can confuse them. Therefore, teachers need to ensure that learning interactions are adapted to students' levels of cognitive development. One solution is to design more structured interactions and break them down into smaller stages. This condition allows students to understand concepts or tasks gradually. Visualization or graphical representation can also help students process information more effectively [20]. Teachers also noted that the time available for learning in primary schools is limited. Differentiated learning often requires more time because it involves various activities and diverse learning experiences. This time limitation can be an obstacle to creating effective interactions. To overcome this problem, teachers can plan the use of time more carefully during learning. Prioritize the most important activities and adjust interactions based on available time. Supporting technology, such as computer-based learning, can also help manage time more efficiently.

Findings from the learning environment aspect found that teachers explained that several obstacles needed to be overcome in the context of differentiated learning in elementary schools. First, there are obstacles related to physical facilities, including limited classroom space. A differentiated approach requires greater spatial flexibility to support a variety of learning methods. These constraints can limit teachers' efforts in creating an optimal learning environment. Investments in improving physical facilities are needed to overcome this problem, such as increasing classroom space and adapting more flexible settings [21]. In addition, utilizing available outdoor areas for learning can be an alternative that supports a variety of learning environments [22].

Teachers also highlighted the importance of support from schools and parents in the context of differentiated learning. When schools do not give enough priority to this approach, such as a lack of adequate time allocation for differentiated aspects, teachers may feel limited in implementing this method. The solution involves schools actively supporting and facilitating a differentiated approach. These activities include providing sufficient time for training and teacher coordination [23]. In addition, effective communication with parents is key. Parents must be invited to support differentiated learning at home [24]. With collaboration between schools, teachers, and parents, differentiated approaches can be implemented more effectively and support student development.

Teachers also emphasize that differentiated learning often involves different learning methods and tools for different students. Managing a complex learning environment like this can be difficult, especially at the elementary school level, where students are still in their basic developmental stages and need extra guidance in

managing their own learning. To overcome this problem, teachers must focus on simplifying and structuring using various learning methods and tools. Providing clear guidelines and supporting students in understanding how to use various learning tools can help manage a more structured learning environment and minimize student confusion [25]. With more structured management, teachers can help students benefit from a differentiated approach without excessive difficulty.

This fact is the scientific reason that elementary school teachers tend to disagree with the differentiated learning process in elementary school. This tendency to disagree is seen from the aspects of teaching materials, learning interactions, and the learning environment currently used.

4 Conclusion

The research results show that teachers' perceptions of several aspects, including teaching materials, interactions in differentiated learning, learning environments, and learning models in general, tend to fall into the poor category. These findings indicate that teachers need more perceptions of the effectiveness of differentiated learning for elementary school students. This research implies that the results can be used as a basis for developing differentiated learning approaches that are more appropriate to the needs of elementary school students.

5 Authors' Contributions

Asnawi acts as the scriptwriter, Dini Ramadhani as a translator, Tengku Muhammad Sahudra as an editor, and Ary Kiswanto Kenedi as a data processor.

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