



Article History

Received : 31 January 2026;
Revised : 02 March 2026;
Accepted : 25 March 2026;
Available online : 23 April 2026.

Effects of Differentiated Learning on Motivation and Learning Outcomes Students

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Abstract:

Setiap siswa di kelas memiliki karakteristik dan kebutuhan yang berbeda-beda. Guru harus dapat membuat pembelajaran yang memahami kebutuhan dan karakteristik setiap siswa yang berbeda-beda. Penelitian ini bertujuan untuk membuktikan efek pembelajaran diferensiasi terhadap motivasi belajar dan hasil belajar siswa sekolah dasar. Jenis penelitian ini adalah penelitian kuantitatif. Subjek penelitian ini yaitu siswa kelas 5 sekolah dasar. Metode pengumpulan data yang digunakan yaitu angket untuk mengukur motivasi siswa dan tes untuk mengukur hasil belajar siswa. Data motivasi siswa dihitung dengan nilai rata-rata ideal dan standar deviasi ideal, sedangkan data hasil belajar siswa menggunakan SPSS versi 24.00 for windows. Hasil penelitian menunjukkan: (1) terdapat pengaruh pembelajaran diferensiasi pada motivasi siswa kelas 5 sekolah dasar yang memperoleh hasil dalam kategori baik. (2) terdapat pengaruh pembelajaran diferensiasi pada hasil belajar siswa kelas 5 sekolah dasar melalui tes yang ditunjukkan dengan rata-rata skor siswa menjadi meningkat. Disimpulkan bahwa terdapat efek pembelajaran diferensiasi terhadap motivasi belajar dan hasil belajar siswa kelas 5 sekolah dasar. Pembelajaran diferensiasi membuat pembelajaran menjadi efektif dan memberikan layanan pembelajaran sesuai kebutuhan siswa.

Kata Kunci: pembelajaran berdiferensiasi, hasil belajar, motivasi

Each student in the class has different characteristics and needs. Teachers must be able to make learning that understands the different needs and characteristics of each student. This study aims to prove the effect of differentiation learning on learning motivation and learning outcomes of students. This type of research is quantitative research. The subjects of this study were grade 5 elementary school students. The data collection method is a questionnaire to measure student motivation and a test to measure student learning outcomes. Student motivation data is calculated using the ideal average value and ideal standard deviation, while the data on student learning outcomes use SPSS version 24.00 for Windows. The results showed: (1) there is an effect of differentiation learning on the motivation of grade 5 elementary school students who get results in the good category. (2) there is an effect of differentiation learning on the learning outcomes of grade 5 elementary school students through tests as indicated by the average student score increasing. It is concluded that there is an effect of differentiation learning on the motivation and learning outcomes of grade 5 elementary school students. Differentiation learning makes learning effective and provides learning services according to student needs.

Keywords: *differentiated learning, learning outcomes, motivation*



INTRODUCTION

Education is a medium or means that forms a generation that is intelligent and has good character. In education, there are goals and hopes to achieve prosperity and be able to improve the standard of living for all mankind. In addition, education is a driving force of culture that encourages innovative, creative things to happen, and creates generations that can bring about changes towards better things from generation to generation. Thus, quality education is needed, namely education that can provide and facilitate the needs of each student. The foundation of education lies in the interaction between teachers or educators and students during the learning process to achieve educational objectives. This interaction occurs within an educational setting that encompasses not only the physical environment but also the social and intellectual dimensions (Fitra, 2022; Masitoh et al., 2020). In the educational environment, the teacher plays a very strategic and important role, namely as a driving force for the entire process of activities in the world of education. The teacher has an important role in creating an educational context, which means that students depend on the teacher's teaching practices and strategies offered by the teacher (Decristan et al., 2017; Mustafa, 2022).

A competent educator is expected to possess strong knowledge and a deep understanding of the subject matter. However, having sufficient knowledge alone is not enough to effectively support student learning without proper preparation beforehand, especially since students in the classroom have diverse needs and characteristics. The varying needs of students can be seen from aspects of culture, intelligence, economic background, motivation, and interests (Tomlinson et al., 2015; Tomlinson & Eidson, 2003). Based on the varied needs of students, the teacher must be based on subject matter that can understand the personal characteristics and development possibilities of students, because every student is an individual who possesses distinct characteristics that differ from others (Crow & Crow, 1989; Nakayama et al., 2021). Variations in students' learning activities can be observed through three key aspects, one of which is learning readiness, which refers to the students' initial ability to process and integrate new information in order to develop their cognitive structures; interest as an important motivating factor to encourage students to get better learning satisfaction; and learning styles as habits and methods students use to acquire, process, and retain information (Dong & Van, 2022; Tomlinson et al., 2015). The diverse characteristics and needs of students require an appropriate pedagogical reaction that is free from discrimination against differences and guarantees the right of every student to receive learning (McMurray & Thompson, 2016). A teacher's success in instruction is largely determined by their sensitivity to students' developmental progress, including the evolving needs and inherent abilities that each student possesses (Baharuddin, 2010).

However, in practice, teachers often adjust instruction to align with their established teaching habits, without implementing changes that could influence or improve their learning approaches (Baharuddin, 2010; Khusniyah, 2020). The learning done by the teacher still prioritizes memorization and is exam-oriented (Allen et al., 2016; Mitana, 2018). In line with this, teachers tend to do one-size-fits-all learning, namely serving as many students as possible



by assuming that all students can be handled similarly and this practice tends to overlook the diverse learning needs of students (Fox & Hoffman, 2011; Subban, 2006). In contrast, heterogeneous classrooms that incorporate varied instructional approaches are more effective in preparing students to navigate real-life situations, both in the present and future. Such environments also support students in adapting to new roles and relationships, while fostering learning experiences that are personally meaningful, fulfilling, transferable, and enduring (George, 2005; Herppich et al., 2018). The implementation of differentiated learning to develop students' potential is inevitably accompanied by various challenges in practice. In many cases, teachers continue to apply uniform instructional approaches, treating all students similarly during the learning process. This tendency is often driven by concerns over maintaining fairness and preventing feelings of jealousy among students, as differentiated treatment is sometimes perceived as unequal or preferential. Consequently, the fear that certain students may receive special attention leads teachers to prioritize uniformity over responsiveness to individual learning needs (Mulyawati, 2022). Moreover, teachers often do not implement instructional practices that accommodate students' diverse needs, as they experience difficulty in designing and delivering learning activities that are appropriate for each individual learner (Dixon et al., 2014; Purba et al., 2021). This results in students feeling frustrated and in the end they have no interest in learning so that which affects student learning outcomes.

Teachers' understanding of how to design learning materials that address the diverse needs of students remains limited, largely due to gaps in their knowledge and insufficient comprehension of the content, processes, products, and learning environments that need to be developed (Geisler et al., 2009; Marlina et al., 2019). Teachers often perceive themselves as inadequately prepared and lacking the prerequisite skills required to effectively teach students with diverse learning needs (Heacox, 2014; Suprayogi & Valcke, 2016). Another reason that becomes a teacher's obstacle is the limited time available for planning differentiated learning due to the teacher's high workload, limited resources, and learning opportunities which have an impact on the teacher's low capacity in implementing differentiated learning effectively (Chien, 2015; Shareefa et al., 2019). Teachers have less confidence in differentiating classes with different students, especially novice teachers, and need strong beliefs in developing teaching skills for differentiated learning (Scarparolo & Subban, 2021; Wan, 2016). In addition, teachers need facilities and support from school leaders and administrators to implement differentiated learning effectively (Jarvis & Bell, 2016; Sharp et al., 2020; Watson & Wildy, 2014). Teachers are better able to respond effectively when supported through targeted changes and provided with clear guidance on how to design instructional materials and learning activities that accommodate the diverse needs of students (Goddard et al., 2010).

There is a knowledge gap among fifth grade elementary school teachers in Purworejo Regency in preparing learning materials that are oriented towards meeting the diversity of students' learning needs. This is reflected in teachers' limited capacity to incorporate differentiated and inclusive learning principles into the planning of instructional materials, so that material tends to be prepared uniformly and does not optimally accommodate variations in



students' abilities, characteristics and individual needs. This condition shows that teachers' pedagogical capacity in designing material that is adaptive to student heterogeneity is still relatively low and requires strengthening through structured competency development. Based on data from observations and interviews, it was found that fifth grade elementary school teachers still experienced difficulties in determining appropriate learning strategies and designs to accommodate the diversity of student characteristics. These difficulties are mainly related to the selection of methods, preparation of materials, and adjustments to learning activities that are able to accommodate differences in students' abilities, learning styles and interests. This condition contributes to suboptimal improvements in both student learning outcomes and learning interest, thereby highlighting the need to strengthen teachers' pedagogical competence in designing instruction that is more adaptive and responsive to student diversity.

Teachers as educators must guide and guide children according to their potential, interests, talents, and different abilities to achieve children's success and happiness in learning (Masitoh et al., 2020). By taking these differences into account, learning is expected to become more effective, as students are motivated to engage with content that aligns with their individual interests and needs. This approach not only enhances knowledge and skills but also contributes to the development of students' attitudes (George, 2005). Therefore, teachers' knowledge and competencies are essential in addressing the diverse needs of students across different classroom contexts, in order to facilitate an effective and meaningful learning process (Khusniyah, 2020; Mustafa, 2022; Sopianti, 2022). There is learning that guides learning activities that address the different needs of students which are called differentiation learning (Tomlinson, 2012). Differentiation learning addresses differences in readiness, interest, and learning profiles to maximize each student's capacity (Tomlinson, 2017). Within a differentiated learning framework, students engage with subject matter in ways that align with their abilities, needs, and preferences, thereby reducing frustration and preventing feelings of failure in their learning experiences (Fox & Hoffman, 2011; Tomlinson, 2017).

Differentiated learning is a learning strategy that allows teachers to ensure that all students have positive learning situations and access to independent learning (Loreman, 2017). Differentiated learning by the teacher is focused on paying attention to the strengths and needs of students knowing the diversity of student characteristics will help teachers meet student needs, restore or accelerate instruction, and provide learning opportunities for all students (Bayumi et al., 2021). Through differentiation learning that specifically responds to student learning progress on an ongoing basis, what they already know and what they have learned with different capacities in the same class (Bohannon, 2016; Heacox, 2014). This implies that learning is systematically and strategically planned based on a comprehensive understanding of students, with consideration given to their learning styles, intelligence, prior knowledge, and diverse learning approaches as the foundation for instructional implementation (Fox & Hoffman, 2011; Gregory & Chapman, 2022; Tomlinson, 2017). In differentiation learning, there is a modification of learning outcomes which include, content, process, and learning outcomes based on student readiness, interests, and profile (Joseph et al., 2013; Qiu et al., 2014).



The purpose of implementing differentiation learning carried out by the teacher is to achieve optimal student learning outcomes students are not required to be the same in all respects, but students can express themselves according to their respective characteristics (Purba et al., 2021; Suprayogi & Valcke, 2016).

Differentiated learning does not simply promote individualized instruction, rather, it emphasizes accommodating students' potentials and learning needs through flexible learning pathways that align with each student's capabilities (Marlina et al., 2019). In addition, during the implementation of differentiation learning four elements are adapted, namely content (what students learn), process (how students achieve knowledge), products (output that shows what students learn), and learning environment (Tomlinson, 2017). In conclusion, differentiated learning recognizes student characteristics as dynamic and diverse, thereby requiring instructional approaches that cannot be uniformly applied to all learners. Furthermore, the implementation of differentiated learning aligns with the principle of flexibility within an independent learning curriculum, which is designed to accommodate variations in students' needs, characteristics, social environments, and cultural backgrounds (*Kemdikbud*, 2022). The independent learning policy seeks to move away from a standardized approach towards a heterogeneous approach by emphasizing the centrality of student learning so that the curriculum will be characterized by flexibility based on competence. A flexible curriculum enables students to take greater control over their learning processes and environments, resulting in more varied learning experiences that align with their individual characteristics (Amherst & Barber, 2014; Collis & Moonen, 2004). The implementation of differentiated learning can be applied to elementary and secondary schools. Elementary school is the initial foundation of education which contributes to building the knowledge base of students to be used in further education so that they can be responsible for national development through their talents, interests, abilities, and environment (Aka, 2016).

Several studies have demonstrated the positive impact of differentiated learning, including a review of 21 studies which found that its implementation contributes positively to students' academic achievement (Deunk et al., 2018; Kulakow, 2020). Other empirical studies indicate that students tend to achieve higher academic performance when instructional strategies are designed to accommodate the diversity of their characteristics and needs (Felder & Brent, 2005; Rogers, 2009). Then differentiation learning does not only have an impact on academic achievement but has a potential effect on non-academic students (Goddard et al., 2010; Pozas & Schneider, 2019). In addition, differentiation learning can guide students in developing their potential and skills because differentiation learning provides opportunities for students to have an in-depth view of the ability to see students in new ways and increase students' confidence in communicating (Mulyawati, 2022; Sahril et al., 2021). Differentiation learning functions as a motivator for each student because it makes learning involve students in learning situations rather than comparing one student's performance to another (Roy et al., 2015). Students feel more valued and included in the social environment and feel the encouragement and stimulation of learning provided by the teacher when differentiating



learning is applied in class (Lindner et al., 2019). Differentiation learning becomes interesting because this learning is required to think about the differences between students, recognize the quality of students, and requires to be the ability to overcome obstacles in learning (Heacox, 2014; Subban, 2006; Tomlinson & Eidson, 2003). Therefore, the application of differentiation learning to elementary school students as a domain of teaching quality has been proven empirically as very effective learning (Maulana et al., 2020; van de Grift et al., 2017).

Based on findings from previous studies, the implementation of differentiated learning has been shown to produce positive outcomes. Currently, differentiated learning has gained significant attention in the field of education due to its emphasis on accommodating the diversity of students' potential, which contributes to improvements in learning processes, motivation, and academic achievement. This study aims to examine the effect of differentiated learning in supporting students' learning, not only in enhancing their motivation but also in enabling them to achieve intended learning objectives. The novelty of this research aligns with the policy of the Minister of Education regarding the implementation of the independent learning curriculum across all educational levels, which emphasizes the importance of addressing the diversity of student characteristics. In this context, teachers are expected to ensure that all students experience a positive learning environment, regardless of their varying characteristics. Therefore, this study seeks to provide teachers with a clearer understanding of instructional approaches that consider students' characteristics and needs, and how these approaches influence the motivation and learning outcomes of elementary school students.

METHODS

This study employs a quantitative research design using an ex-post facto approach. The ex-post facto approach refers to a systematic empirical investigation in which researchers do not directly control the independent variables, either because the events have already occurred or because the variables cannot be manipulated (Kerlinger, 2006). The research subjects were taken from 5th-grade elementary school students from each school and a total of 224 students were obtained which can be seen in Table 1. Data were collected using a questionnaire with a four-point scale to assess student motivation, as well as tests to measure student learning outcomes. The results of the instrument validation indicated that all developed instruments met the criteria for validity. The instrument grids in this study are presented in Table 2 is the student motivation questionnaire which was developed based on the theory of Uno (Uno, 2010) and Table 3 is student learning outcomes based on the curriculum.



Table 1. Population and Sample Distribution

School	Amount	Sample
SD Negeri 1 Baledono	176	24
SD Negeri 1 Pangenrejo	156	21
SD Negeri Semawung	153	21
SD Muhammadiyah	218	25
SD Maria	184	24
SD Negeri Tambakrejo	270	20
SD Negeri Sidomulyo	206	23
SD Negeri Brengkelan	199	22
SD Negeri 2 Mranti	178	25
SD Negeri 2 Cangkreplor	168	19
Total	1908	224

Table 2. Student Motivation Questionnaire Instrument Grid

Indicator	Grain
Persevere in facing the task	1, 2, 3
Tenacious in the face of adversity	4, 5, 6
Shows asking for unknown problems	7, 8, 9
Prefer to work independently	10, 11, 12
Get bored quickly with routine tasks	13, 14, 15
Can defend his opinion	16, 17
Always try to perform as best as possible	18, 19
Enjoy problems solving	20, 21

Table 3. Student Learning Outcomes Test Grid

KD	Grain
3. 3 Examine the socio-cultural diversity of society.	1, 2, 3, 4, 5
3.4 Identify the important factors that caused the Indonesian people's colonization and the Indonesian people's efforts to defend their sovereignty.	15, 16, 17, 18, 19, 20, 21
3.5 Understanding regional artworks.	22, 23, 24, 25
3.7 Analyze heat's influence on temperature changes and objects' existence in life.	11, 12, 13, 14
3.9 Observing the use of effective sentences and deep spelling invitation letters (birthday),	6, 7, 8, 9, 10
4.3 Organize activities that support the socio-cultural diversity of society.	
4.4 Present the results of identifying the important factors that caused the Indonesian people's colonization and the Indonesian people's efforts to defend their sovereignty.	
4.5 Create a work of art area.	
4.7 Report test results effect of heat on objects.	
4.9 Make invitation letters (birthdays, school activities, grade increases, etc) with effective sentences and pay attention to the use of spelling.	

The method of analyzing student motivation with 21 questions given to students after being given material by the teacher using differentiation learning. This study employs Cronbach's alpha to evaluate the reliability of the questionnaire used as a measurement instrument. Cronbach's alpha is used to measure questionnaires. To be considered reliable, a questionnaire measuring instrument must have an alpha value of at least 0.5. The alpha value is used as an indicator in evaluating whether the measuring instrument used is reliable or not. If a questionnaire reaches a minimum alpha value of 0.5, it can be said that the measuring instrument has an adequate level of reliability for use in research.



The tendency of the variable learning motivation of grade 5 elementary school students is determined after the minimum score and maximum score are known, so then look for the ideal average value and ideal standard deviation. Meanwhile, the analysis of data on learning outcomes of 5th grade elementary school students from 224 students was processed using SPSS version 24.00 for Windows.

RESULTS

The implementation of differentiated learning among elementary school students enables teachers to approach instruction from multiple perspectives, beginning with an understanding of students' learning profiles, which requires educators to provide appropriate attention and learning activities that address individual needs. Students' learning readiness can be identified through their responses to instruction that accommodates these differences, as well as through their levels of learning motivation. When teachers continuously strive to understand student diversity, reflect on their own limitations, and use these reflections as a basis for ongoing improvement, learning can become more professional, efficient, and effective. Student learning motivation was measured using a questionnaire consisting of 21 items administered after students received instruction through differentiated learning. This was intended to examine the extent to which learning motivation emerged during the implementation of differentiated learning in the classroom. The distribution of the learning motivation variable among fifth-grade elementary students was analyzed by first determining the minimum and maximum scores, followed by calculating the ideal mean and ideal standard deviation.

The following data, derived from the research findings, indicate the distribution of students' learning motivation in differentiated learning among fifth-grade elementary school students, categorized into high, moderate, and low groups. In the high-category group, the majority of students demonstrated learning motivation within the good category, accounting for 35 students (52.2%), followed by 31 students (46.3%) in the moderate category, and 1 student (1.5%) in the low category. These findings suggest that students classified in the high category predominantly exhibit good levels of learning motivation. Similarly, in the moderate-category group, most students showed learning motivation in the good category, totaling 100 students (66.7%), while 50 students (33.3%) were categorized as moderate. This indicates that students within the moderate category also tend to demonstrate good learning motivation. In the low-category group, 4 students (57.1%) were classified as having good learning motivation, 2 students (28.6%) as moderate, and 1 student (14.3%) as low. These results suggest that even among students in the low category, learning motivation generally tends to be in the good category.



Referring to the categorization of tendencies that have been calculated, the distribution of student motivational tendencies using differentiation learning based on the responses of respondents is as follows:

Table 4. Learning Motivation of Grade 5 Elementary School Students

Category	Frequency	Percentage (%)
Good	139	62,05
Medium	83	37,05
Low	2	0,9
Total	224	100

The implementation of differentiated learning by teachers in the classroom enhances students' learning motivation, as it allows them to engage in learning activities that align with their individual needs and characteristics. These findings are consistent with McClelland's theory, which suggests that when individuals experience strong or urgent needs, they are motivated to exert greater effort to fulfill those needs (Mc Clelland, 1988). Students will have a strong motivation to learn because the learning they feel is by the needs they must fulfill. In addition, the results of the research show that there are differences in the level of motivation between students who use differentiation learning and those who do not use differentiation learning because it makes learning that involves students in learning situations rather than comparing student performance with one another (Rahimi et al., 2019; Roy et al., 2015).

Data on the learning outcomes of fifth-grade elementary school students in differentiated learning were obtained from 224 participants through tests administered after the completion of instruction. The data were analyzed using SPSS version 24.00 for Windows, yielding a highest score of 100.00 and a lowest score of 69.00. The results of the analysis indicate a mean score of 78.61, a median of 78, and a mode of 80, with a standard deviation of 6.03. Based on this analysis, the classification criteria were established as follows: a good category for scores of $X \geq 81.75$, a moderate category for scores of $75 \leq X < 81.75$, and a low category for scores of $X < 75$. Referring to the categorization of tendencies that have been calculated, the distribution of learning outcomes for grade 5 elementary school students can be seen as follows.

Table 5. Learning Outcomes of Grade 5 Elementary School Students

Category	Frequency	Percentage (%)
Good	65	29
Medium	96	42,9
Low	63	28,1
Total	224	100

Differentiation learning used by teachers in the class apart from motivating students also increases student learning outcomes because students find learning more enjoyable according to their characteristics. This is also to Sapne & Mede's research that both students and teachers consider differentiation learning to be effective and useful in improving learning outcomes (Sapan & Mede, 2022). Differentiation learning takes into account student differences through



lesson modification to be able to accelerate student achievement and academic levels (Guay et al., 2017; Harmini & Effendi, 2018). Schools that use differentiation practice and teaching have a significant positive effect on student achievement (Chen & Chen, 2017; Goddard et al., 2010).

DISCUSSION

Based on the results of the data analysis, it was found that differentiated learning has a significant effect on the motivation and learning outcomes of fifth-grade elementary school students, as explained by the following factors. Based on data, it shows that the learning motivation of 5th grade elementary school students at several schools in Purworejo shows a good category, namely 62.05%. Data on learning outcomes for grade 5 elementary school students also increased, which was shown in the medium category, namely 42.9%. This shows that differentiation learning has an influence on learning because the main focus is on how to handle classes that have a diversity of characteristics.

First, differentiation learning affects the motivation of grade 5 elementary school students because in a learning environment that uses differentiation learning the teachers and professional support staff collaborate to create optimal learning experiences for students (Singh & Singh, 2014). Also in this environment, students' unique abilities are valued and given opportunities to demonstrate their skills through various assessment techniques (Singh & Singh, 2014; Tomlinson & Eidson, 2003). In addition, the existence of very diverse students, such as characteristics, strengths that exist within students, the diversity of learning styles, interests, and knowledge that students have are valued when learning (Tomlinson, 2012). Students feel more valued and included in the social environment and feel the encouragement and stimulation of learning provided by the teacher (Lindner et al., 2019). Differentiated learning should be grounded in addressing students' learning needs and in how teachers respond to those needs. Therefore, teachers are required to identify students' learning needs more comprehensively in order to provide more accurate and appropriate instructional responses.

Second, differentiation learning affects the learning outcomes of grade 5 elementary school students. Differentiated learning has been conceptualized as a domain of teaching quality (Maulana et al., 2020) and has been empirically proven to be highly effective learning (van de Grift et al., 2017) because differentiation learning seeks to match teaching according to student's abilities and learning styles (Roy et al., 2015) and is guided by their needs and interests (Nusser & Gehrler, 2020). Other empirical studies indicate that students with diverse learning styles tend to attain higher academic achievement when instructional strategies are designed to accommodate a wide range of characteristics and needs (Felder & Brent, 2005; Rogers, 2009). This is in line with research that compares two learning environments which reveals that students who use differentiation learning obtain a higher academic level than students who use traditional learning (Kulakow, 2020). Furthermore, differentiated learning can support students in achieving optimal learning outcomes, as it allows them to produce outputs aligned with their interests, such as articles, songs, poems, posters, animated videos, or other formats that correspond to their individual abilities and preferences (Mulyawati, 2022). Findings from quasi-



experimental research indicate that there are differences in students' achievement levels following the implementation of differentiated learning, highlighting its positive effect on improving student academic performance (Chen & Chen, 2017). When student learning motivation appears, this will also affect student learning outcomes after participating in learning. Learning outcomes are something that is obtained by someone after doing or carrying out an activity. Learning is needed that provides learning opportunities for all students in the class by making the most effective teaching and learning activities that can pay attention to the different teaching of each student.

In conclusion, differentiated learning accommodates students within the instructional process by enabling them to learn in accordance with their individual needs and characteristics, which in turn influences their learning motivation and outcomes. This approach does not group students solely based on their level of ability, whether high or low, but rather organizes them according to their learning tendencies and specific needs. The implementation of differentiated learning acknowledges the diversity among students, including their characteristics, strengths, learning styles, interests, and prior knowledge. Therefore, differentiated learning is highly relevant and appropriate to be applied in instructional settings to address the wide range of student diversity. The contribution of this study lies in its ability to demonstrate that differentiated learning has a significant effect on both student motivation and learning outcomes, particularly among fifth-grade elementary school students. Furthermore, a review of previous studies reinforces that differentiated learning enhances both motivation and academic achievement during the teaching and learning process. In addition, it supports students in developing their potential and skills. It is expected that the findings of this study will encourage further research on the impact of differentiated learning in various educational contexts.

CONCLUSION

The rationale for implementing differentiated learning lies in the recognition that students possess diverse characteristics, and that learning experiences become more effective when they are engaging, relevant to students' contexts, and meaningful. In differentiated classrooms, teachers are expected to understand and respond to the unique needs of each student, thereby supporting students in taking greater responsibility for their own learning and development. Furthermore, differentiated learning environments encourage students to actively participate in the learning process, evaluate their decisions, and develop a sense of responsibility, particularly through collaborative activities within diverse groups. Such conditions foster students' intrinsic motivation to deepen their understanding, which, in turn, contributes to the improvement of their learning outcomes.

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