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The Effect of Differentiated Instruction on Fourth-Grade Students' Learning Outcomes in Pancasila Education at SD Inpres 3 Talise

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ABSTRACT

Low student learning outcomes in Pancasila Education remain a challenge in elementary schools due to learning processes that have not fully accommodated differences in students' readiness, interests, and learning profiles. Preliminary observations conducted in Grade IV of SD Inpres 3 Talise revealed that 18 out of 31 students had not achieved the Minimum Learning Mastery Criteria (KKM). Therefore, an instructional approach that addresses diverse learning needs is required. This study aimed to determine the effect of the differentiated instruction approach on students' learning outcomes in Pancasila Education. The study employed a quantitative approach using a pre-experimental method with a one-group pretest-posttest design. The sample consisted of 31 Grade IV students selected through a saturated sampling technique. Data were collected using multiple-choice pretest and posttest instruments and analyzed through validity, reliability, and normality tests, followed by the Wilcoxon Signed-Rank test using SPSS version 25. The findings showed a substantial improvement in students' learning outcomes, with the average score increasing from 54.42 on the pretest to 89.48 on the posttest. The hypothesis test yielded a significance value of <0.001 (<0.05), indicating that the differentiated instruction approach had a significant positive effect on students' learning outcomes in Pancasila Education.

1. Introduction

Classroom learning is considered effective when teachers are able to create an active, conducive, and student centered learning environment, allowing students to be optimally involved in the learning process (Faradilla et al., 2024; Yemifaira & Gagaramusu, 2026). In the learning process, teachers not only play a role in delivering learning materials but also help students develop thinking skills, attitudes, and competencies that can be applied in daily life (Dewi et al., 2025).

However, Pancasila Education learning in elementary schools is still often carried out conventionally through lecture methods, resulting in low student engagement during the learning process (Ardiana & Lapasere, 2025; Wahyuni & Fathurrohman, 2025).

Differences in students' characteristics in terms of learning readiness, interests, and learning profiles present particular challenges in the learning process. If these differences are not properly accommodated, they may lead to disparities in students' learning outcomes (Isky et al., 2025). Learning outcomes are important indicators for determining the level of students' success in achieving learning objectives (Azizah & Paksi, 2024). Low learning outcomes indicate that the learning process has not been carried out optimally; therefore, a learning approach that can accommodate students' learning needs in a more flexible and adaptive manner is required (Agustiana et al., 2023; Setyo Adji Wahyudi et al., 2023).

One approach considered capable of accommodating students' learning needs is the differentiated instruction approach. Differentiated learning is an approach that adjusts learning content, processes, and products based on students' needs (Agustiana et al., 2023). This approach provides opportunities for students to learn according to their abilities and learning styles, thereby improving student engagement and learning outcomes (Setyo Adji Wahyudi et al., 2023). Previous studies have shown that the differentiated instruction approach can improve learning activities, motivation, and students' understanding in various subjects at the elementary school level (Istiqori et al., 2022; Rohman et al., 2025).

In Pancasila Education learning, the implementation of the differentiated instruction approach is highly relevant because the learning materials emphasize not only cognitive aspects but also the strengthening of students' values, attitudes, and character (Erna Listyaningsih & Yuliasih, 2023). Through differentiated learning, teachers can provide more meaningful learning experiences through discussion activities, problem-solving, and group work based on students' needs (Rahmi & Erita, 2022; Surtikawati et al., 2022). Nevertheless, the implementation of differentiated instruction in elementary schools is still not optimal because some teachers continue to experience difficulties in designing learning activities that suit students' characteristics (Sakti & Ainiyah, 2024).

The results of preliminary observations in Pancasila Education learning in Grade IV at SD Inpres 3 Talise showed that learning activities were still dominated by the lecture method, which teachers considered easier for delivering the material. However, the lecture method was only used at the beginning of the lesson. During the learning process, teachers at SD Inpres 3 Talise, especially in Grade IV, more frequently applied the inquiry model, which emphasizes investigation processes and finding answers to problems through scientific thinking activities. In essence, the inquiry model encourages students to ask questions, observe, analyze, and draw conclusions.

During the preliminary observation conducted in Grade IV at SD Inpres 3 Talise, the researcher found that some students had achieved the Minimum Mastery

Criteria (KKM), while others had not. With a KKM score of 75, 18 out of 31 students had not achieved mastery, representing 58%, while only 13 students achieved mastery, representing 41.94%, rounded to 42%. Some students were able to understand the material quickly, while others required further assistance. However, these differences had not been optimally accommodated in the learning process, resulting in low learning outcomes, as indicated by the large number of students who had not yet achieved the Minimum Learning Mastery Criteria (KKM). Therefore, this study was conducted to determine the effect of the differentiated instruction approach on students' learning outcomes in Pancasila Education for Grade IV students at SD Inpres 3 Talise.

2. Methodology

This study employed a quantitative approach using a pre-experimental method. According to (Sugiyono, 2019), quantitative research is a research method based on the philosophy of positivism, used to examine specific populations or samples through data collection using research instruments and statistical data analysis to test predetermined hypotheses. Quantitative research is an approach that uses numerical data analyzed through statistical techniques to test hypotheses and determine relationships or influences among variables.

The experimental design used in this study was a pre-experimental design with a one-group pretest and posttest design. This design was selected because the researcher aimed to compare the average student learning outcomes before and after the treatment was administered. The purpose was to determine the effect of the differentiated instruction approach on students' learning outcomes. The following is an illustration of the research design shown in table 1.

Table 1. Research Design

Pretest	Treatment	Posttest
O1	X	O2

According to (Djonomiarjo, 2020), population refers to the entire group of objects that become the target of a study. The population in this study consisted of 31 fourth-grade students of SD Inpres 3 Talise. According to Sugiyono, a sample is a part of the population used for research purposes. The sample is used to collect data, which are then analyzed to draw conclusions about the population. In this study, the sample consisted of fourth-grade students of SD Inpres 3 Talise in the second semester of the 2025/2026 academic year. The selection of Grade IV students as the sample was based on the consideration that, at this level, students have begun learning the basic concepts of Pancasila Education, which require engaging learning media to support their understanding of the material.

The sampling technique used in this study was saturated sampling, also known as total sampling, which is a sampling technique in which all members of the population are used as the research sample. In other words, all students in Grade IV were included as research participants. This technique was chosen because the

number of students in the class was relatively small, making it possible to involve the entire population as research subjects.

The data collection technique used in this study was a test to measure students' learning outcomes in the Pancasila Education subject. The tests were administered to fourth-grade students of SD Inpres 3 Talise in the form of objective multiple-choice questions prepared based on competency achievement indicators. The tests were conducted twice: a pretest administered before the treatment to determine students' initial abilities, and a posttest administered after the implementation of the differentiated instruction approach to determine the improvement in students' learning outcomes. The results of both tests were then compared to determine the effect of the differentiated instruction approach on students' learning outcomes in Pancasila Education. Data analysis techniques are processes used to process, analyze, and interpret numerical data with the aim of answering research questions or proving a hypothesis. In this study, several tests were conducted, including validity testing, reliability testing, normality testing, and hypothesis testing.

3. Results and Discussion

The researcher conducted the study in Grade IV at SD Inpres 3 Talise. Prior to conducting the research, the researcher first requested permission directly from the principal of SD Inpres 3 Talise on April 17, 2026, to carry out the study at the school. After obtaining permission from the principal, the researcher was asked to meet with the homeroom teacher of grade IV. She assisted and accompanied the researcher during the classroom observations. Subsequently, the researcher and the teacher arranged the research schedule.

Before the learning activities were implemented, the researcher first identified students' learning needs through classroom observations and the administration of a pretest. These activities aimed to determine students' learning readiness, interests, and learning profiles in the Pancasila Education subject. Based on the pretest results, students were grouped into several ability categories, namely high, medium, and low. In addition, the researcher also observed students' learning characteristics, such as students who more easily understood the material through pictures and videos, students who were active in discussions, and students who better understood the lessons through practice and group work.

Students' learning outcomes in the Pancasila Education subject were still relatively low. Based on the results of the pretest administered to 31 students, the average score obtained was 54.42. Of these students, the majority had not yet achieved the Minimum Learning Mastery Criteria (KKTP) established by the school, which was 75. The low learning outcomes indicated that the previous learning process had not fully accommodated the diverse learning needs of students. In implementing the differentiated instruction approach in Pancasila Education learning, the teacher adjusted learning activities based on students' learning readiness and characteristics. Differentiation was carried out through process and product differentiation. In process differentiation, students were divided into several groups

according to their learning ability levels. Students with high abilities were given more complex analytical and discussion tasks, while students who still required guidance received more intensive assistance through simple explanations and concrete examples. In addition, the teacher used various learning media such as pictures, videos, and student worksheets (LKPD) to help students understand the material according to their learning styles. Differentiated learning enables teachers to provide learning services that match students' needs, making the learning process more effective and meaningful (Rohman et al., 2025).

In product differentiation, students were given the freedom to present their learning outcomes through group presentations, simple poster creation, or written responses to questions. During the learning process, students appeared more active and enthusiastic compared to previous learning activities. Most students participated in group discussions, confidently expressed their opinions, and more easily understood the material because the learning activities were adjusted to their learning needs. This increased student engagement indicates that the differentiated instruction approach can create a more meaningful learning environment and support the improvement of students' learning outcomes. This finding is consistent with (Ardiana & Lapasere, 2025), who stated that differentiated learning can increase students' active participation and help students understand the material according to their learning abilities. In addition, (Azizah & Paksi, 2024) also explained that differentiation in content, process, and product positively affects students' learning outcomes in Pancasila Education learning.

After the implementation of the differentiated instruction approach, students' learning outcomes showed a significant improvement. Based on the posttest results, the students' average score increased to 89.48. In addition, the number of students who achieved learning mastery also increased compared to before the treatment was administered. This improvement indicates that the differentiated instruction approach was able to help students understand the learning materials according to their learning readiness and individual characteristics.

Validity Test

The test instrument consisted of 25 multiple-choice questions that were piloted on 31 students of SD Inpres 1 Tondo. The validity test was then conducted using SPSS version 25. The r-table value was determined based on the number of respondents involved in the study. Since the study involved 31 respondents, the r-table value at a 5% significance level was 0.355. The results of the instrument validity test are presented as in table 2.

Table 2. Instrument Validity Test Results

Item	Pearson Correlation	Sig. Value	Conclusion
Question 1	0.418	0.027	Valid
Question 2	0.395	0.037	Valid
Question 3	0.519	0.005	Valid
Question 4	0.550	0.002	Valid
Question 5	0.387	0.042	Valid

Question 6	0.538	0.003	Valid
Question 7	0.582	0.001	Valid
Question 8	0.673	<0.001	Valid
Question 9	0.547	0.003	Valid
Question 10	0.161	0.412	Invalid
Question 11	0.538	0.003	Valid
Question 12	0.283	0.144	Invalid
Question 13	0.519	0.005	Valid
Question 14	0.436	0.020	Valid
Question 15	0.476	0.011	Valid
Question 16	0.668	<0.001	Valid
Question 17	0.160	0.417	Invalid
Question 18	0.075	0.703	Invalid
Question 19	0.500	0.007	Valid
Question 20	0.852	<0.001	Valid
Question 21	0.596	<0.001	Valid
Question 22	0.491	0.008	Valid
Question 23	0.105	0.594	Invalid
Question 24	0.016	0.935	Invalid
Question 25	0.686	<0.001	Valid

Based on the results of the validity test presented in the table, it can be seen that out of the 25 test items that were piloted, only 19 items were declared valid, while the remaining 6 items were excluded because they were considered too easy and less capable of challenging students' abilities.

Reliability Test

The reliability test was conducted after the test instrument had been validated. A research instrument is considered reliable if it produces consistent results even when measurements are repeated multiple times. The reliability test of the test instrument was conducted using SPSS version 25, which automatically calculated the results using Cronbach's Alpha formula. The results of the calculations using Cronbach's Alpha are presented in table 3.

Table 3. Reliability Test Results

Cronbach's Alpha	N of Items
0.858	19

Based on the reliability test, the Cronbach's Alpha value obtained was 0.858, indicating that the instrument was reliable and categorized as good for use in this study.

Normality Test

The normality test was conducted to determine whether the obtained data were normally distributed or not. In this study, the normality test was performed using the Shapiro-Wilk test with the assistance of SPSS Statistics 25 software. The testing criterion used to assess normality in this study was as follows: if the significance value (Sig.) was greater than 0.05, the data were considered normally distributed. Conversely, if the significance value (Sig.) was less than 0.05, the data is considered not normally distributed as in table 4.

Table 4. Results of the Normality Test

Result	Statistic	Df	Sig
Pretest	.142	31	.116
Posttest	.216	31	<.001

Based on the results of the normality test using the Shapiro-Wilk method, the significance value for the pretest was 0.116, while the posttest significance value was < 0.001 . Since the posttest significance value was less than 0.05, the data were considered not normally distributed. Therefore, hypothesis testing was continued using the Wilcoxon Signed-Rank test.

Hypothesis Testing

Hypothesis testing was conducted to statistically examine the validity of a statement and to determine whether the hypothesis was accepted or rejected. In this study, hypothesis testing was carried out to identify differences in students' learning outcomes before and after the treatment. Based on the results of the normality test, which indicated that the data were not normally distributed, hypothesis testing was performed using a non-parametric test, namely the Wilcoxon Signed-Rank test. This test was conducted with the assistance of IBM SPSS version 25. The hypothesis test was performed at a significance level of 0.05. The decision-making criterion was as follows: if the significance value (Sig.) was less than 0.05, H_0 was rejected and H_a was accepted; conversely, if the significance value (Sig.) is greater than 0.05, then H_0 is accepted and H_a is rejected as presented in table 5.

Table 5. Results of the Wilcoxon Signed-Rank Test

Wilcoxon Signed-Rank Test Results	Value
N	31
Test Statistic	496.000
Z (Standardized Test Statistic)	4.861
Sig.	< 0.001

Based on the results of the Wilcoxon Signed-Rank test, the significance value (Asymp. Sig. 2-tailed) was found to be < 0.001 . Since this significance value was less than 0.05, H_0 was rejected and H_a was accepted. This result indicates that there was a significant difference between students' pretest and posttest scores. Therefore, it can be concluded that there was an improvement in students' learning outcomes after the treatment was administered.

4. Conclusion

Based on the results of the study and data analysis, it can be concluded that the use of the differentiated instruction approach had a significant effect on students' learning outcomes in Pancasila Education for Grade IV students at SD Inpres 3 Talise. This was indicated by an increase in the students' average score from 54.42 on the pretest to 89.48 on the posttest after the implementation of the differentiated instruction approach. In addition, the results of the statistical test using the

Wilcoxon Signed-Rank test at a significance level of 0.05 showed a significance value of < 0.001 , indicating that the H_a hypothesis was accepted and the H_o hypothesis was rejected. Descriptively, this improvement was reflected in the increase in the students' average score from 54.42 on the pretest to 89.48 on the posttest. Therefore, it can be empirically concluded that the differentiated instruction approach was effective in improving students' learning outcomes in Pancasila Education.

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