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The Effect of Using Problem Based Learning (PBL) Learning Model on Student Learning Outcomes in Indonesian Language Subject, Grade IV of SDN 4 Sindue

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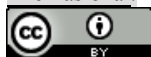
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ABSTRACT

This study aims to prove the influence of the Problem-Based Learning (PBL) model on students' learning outcomes in the Indonesian Language subject for fourth-grade students at SDN 4 Sindue. The population in this study consisted of all fourth-grade students in the 2024/2025 academic year, totaling 27 students, comprising 12 male and 15 female students. Data collection was carried out using multiple-choice tests. Data analysis involved normality testing and hypothesis testing. Hypothesis testing was conducted using a paired sample t-test with the aid of SPSS Statistics version 22. The results of the hypothesis test showed a significance value (sig) of 0.000, which is less than the predetermined significance level of 0.05 ($0.000 < 0.05$), meaning that the alternative hypothesis (H_a) is accepted and the null hypothesis (H_0) is rejected. Therefore, it can be concluded that the use of the Problem-Based Learning (PBL) model has a significant effect on students' learning outcomes in the Indonesian Language subject for fourth-grade students at SDN 4 Sindue

INTRODUCTION

Instruction could be a learning preparation that plays an basic part in creating the abilities, information, abilities, and potential of each person. Through instruction, a individual can learn unused things, extend their understanding, and construct the capacities required to seize different openings in life. Instruction may be a humanistic handle regularly alluded to as the exertion to humanize people; subsequently, it is anticipated that we regard each human being's essential rights (Marisyah, 2019). Instruction too serves as an operator of social alter, and as such, it is continuously coordinated towards accomplishing national objectives. The national objectives of instruction point to deliver Indonesian citizens who are devout and ethical, have dominance of science and abilities, are physically and rationally sound, have solid identities, and are mindful people (Setiyorini, 2023). To attain these objectives, it is fundamental to ceaselessly create educational instruction programs. At the side of the times, the educational modules must be too advanced to meet instructive requests.

The "Merdeka Curriculum" (Autonomous Educational modules) could be a reaction to the challenges confronted by the instruction segment within the repercussions of the widespread emergency. This educational module was planned with the trust of forming a millennial era competent of rapidly understanding the information conveyed by teachers—not only memorizing learning materials but moreover utilizing innovation in their learning prepare. The learning results focused on by the Merdeka Educational modules emphasize students' capacities to lock in in dialogs with peers and instructors, learn exterior the classroom, create autonomous and civilized character, and most vitally, have the competencies fundamental to compete in today's time (Indrata, 2022). Competency accomplishment can be reflected in students' learning results; moo learning results demonstrate that understudies have not however been effectively locked in within the learning handle. Subsequently, advancement in learning exercises is required, which can take the shape of learning

models that actuate understudies all through the learning preparation (Rerung, 2017).

A learning show may be a system or arrangement utilized by instructors to organize, convey, and evaluate the learning preparation in arrange to attain the expected goals. It is valuable for overcoming learning troubles and hence making strides students' learning results. One such demonstration is Problem-Based Learning (PBL), which points to shape and development understudies by preparing them with abilities to fathom issues experienced amid learning exercises, as well as empowering them to create considering aptitudes that cultivate basic considering (Eismawati, 2019). Through Problem-Based Learning (PBL), understudies can learn by locking in problem-solving exercises that sharpen their considering aptitudes (N, 2017).

The Problem-Based Learning (PBL) show could be a student-centered learning approach in which understudies are effectively included within the learning handle by fathoming real-life issues they experience in their day by day lives. As expressed by Farhana (2023), the common steps of the PBL show are as takes after:

1. Situating students to the issue,
2. Organizing students for learning,
3. Guiding people or bunch investigations,
4. Displaying the comes about of the discourse
5. Analyzing and assessing the problem-solving handle

Perceptions conducted within the fourth-grade course of SDN 4 Sindue, comprising of 27 understudies, uncovered that the educator transcendently utilized customary instructing models, such as addresses and assignments, without effectively including understudies. The educator tended to rule the learning handle ceaselessly, whereas understudies were just inactive audience members. When the instructor given openings for understudies to specific conclusions or reply questions, most understudies showed up detached and reluctant to talk. This demonstrates that a need of certainty among understudies in communicating

their contemplations remains an deterrent within the learning prepare. On the off chance that this circumstance continues, the learning handle will stay ineffectual, driving to lessened self-confidence caused by a few components such as a need of understanding of the fabric and non-interactive learning models, which in turn brings down students' learning results. This circumstance recommends the requirement for inquiry about utilizing a more changed learning show where understudies are displayed with genuine cases to analyze and are given the opportunity to form choices based on the data given. Such an approach will make learning less dull, move forward students' certainty through a more profound understanding of the fabric, and improve their learning results.

Based on the over issues, the analyst prescribes the utilization of the Problem-Based Learning (PBL) show, which offers a few points of interest, counting cultivating students' certainty in confronting issues by making a difference them create basic consideration and problem-solving aptitudes (Ningrum, 2023). Moreover, concurring to Hotimah (2020), the Problem-Based Learning (PBL) show has different preferences, counting: challenging students' capacities, expanding understudy inspiration, helping understudies in exchanging information, making a difference understudies create unused information, improving students' basic considering abilities, giving openings for understudies to apply their information to real-world circumstances, developing understudy intrigued, and encouraging students' authority of concepts required to illuminate real-world issues.

Based on the explanation above, it is deemed necessary to conduct research aimed at improving students' learning outcomes. Considering the various problems and materials as well as the

limitations of the researcher, this study is limited in scope and entitled: "The Effect of Using Problem-Based Learning (PBL) Learning Model on Student Learning Outcomes in Indonesian Language Subject, Grade of SDN 4 Sindue."

METHODS

Type of Research

The investigation utilized is quantitative investigate employing a quasi-experimental plan. Quasi-experimental investigate points to decide the cause (free variable) and impact (subordinate variable) relationship (Sanjaya, 2019). The sort of test plan utilized in this consideration could be a Pre-Experimental Plan. It is alluded to as a Pre-Experimental Plan since this plan isn't a genuine exploration, as there are still external factors which will impact the arrangement of the subordinate variable. This plan is executed by arbitrarily selecting a single gather, regulating a pre-test (O_1) to that bunch some time recently applying the treatment (X), and after that conducting a post-test (O_2) after the treatment has been connected (Ali, 2014).

The plan utilized in this ponder is the One Bunch Pre-test and Post-test Plan. This plan was chosen to decide the impact of actualizing the Problem-Based Learning (PBL) show on students' learning results within the Indonesian dialect subject for fourth-grade understudies at SDN 4 Sindue. Through this plan, the analyst measures the students' beginning capacities (pre-test) sometime recently the execution of the Problem-Based Learning (PBL) shows, and after that measures the students' learning results after the usage (post-test). This permits the analyst to watch the contrasts in learning results that happen as an impact of utilizing the Problem-Based Learning (PBL) demonstrate.

Table 1. One Group Pretest-Posttest Desain

Pretest	Treatment	Posttest
O_1	X_1	O_2

Explanation:

O_1 = Initial test (pre-test) conducted before the treatment

X_1 = Treatment in the experimental class using the Problem-Based Learning (PBL) model

O_2 = Final test (post-test) conducted after the treatment

Type of Data

The sort of information utilized in this inquire about is quantitative information. Quantitative information alludes to information that can be measured, communicated in numbers, and calculated. This sort of information is exceedingly appropriate for factual investigation.

Source of Research Data

The sources of information in this think about comprise of essential and auxiliary information.

- Primary Data

Essential information alludes to information that's collected straightforwardly by people or bunches from the investigate subjects for purposes related to the consider, which may incorporate interviews or perceptions (Inayah, 2023). In this think about, essential information was gotten through perceptions and students' learning result test sheets.

- Secondary Data

Auxiliary information alludes to information that's not gotten straightforwardly from the information source but through middle people such as other people or reports (Sugiyono, 2016). In this consider, auxiliary information was gotten from reports such as educating modules.

Data Collection Technique

Information collection strategies are the starting step within the prepare of gathering data for inquire about, as the most objective of this think about is to get significant information. To guarantee that the information collected adjusts with the reason of the inquire about, the analyst utilized the taking after information collection methods:

- Learning Outcome Test

A test could be a extraordinarily outlined information collection apparatus. The specificity of a test can be seen within the development of its things (questions) (Faiz, 2022). In this think about, the test comprised of 20 things. Some time recently being managed to understudies, the test things were subjected to legitimacy and unwavering quality testing to guarantee that they were both substantial and dependable. The tests managed included a pre-test and a post-test. The pre-test was given to decide the students' beginning condition some time recently the application of the Issue Based Learning (PBL) show.

- Document Study

Report consider was utilized as a procedure to gather and analyze different reports or composed sources with the point of understanding issues inside the learning handle. The archives analyzed included educating modules.

- Observation

Perception may be a information collection method conducted by methodically watching and recording marvels that are the protest of investigate. This procedure was utilized to carry out coordinate perception at the investigate location, such as observing the circumstance amid the learning prepare in Lesson IV of SDN 4 SINDUE.

Research Instrument

The inquire about disobedient utilized in this consider comprise of a test sheet, a educating module investigation sheet, and an perception sheet.

Information collection was carried out by regulating a multiple-choice test comprising of 20 questions related to Indonesian dialect fabric. The test was given within the frame of a pre-test and a post-test. In creating the test things, it is basic to consider the dissemination of cognitive levels. Anderson, L.W., and Krathwohl, D.R. created six cognitive levels: C1 (recollecting), C2 (understanding), C3 (applying), C4 (analyzing), C5 (assessing), and C6 (making). This consider alters the test things concurring to the cognitive levels created by Anderson to adjust with the Indonesian dialect learning handle. In expansion, the investigation of the educating module was conducted utilizing an analysis sheet, and classroom learning exercises were watched utilizing an perception sheet.

Data Analysis Technique

The analyst will analyze the information gotten through tests managed to the respondents (understudies). In this ponder, the analyst utilizes quantitative information examination. Quantitative information investigation includes organizing the information based on factors from all respondents, organizing the information agreeing to each variable considered, and performing calculations to test the proposed speculations. The collected information is at that point analyzed quantitatively utilizing graphic measurable strategies. Expressive measurements are utilized to supply an diagram of students' learning results. This diagram presents the students' learning accomplishments some time recently and after the usage of the Problem-Based Learning (PBL) show.

a. Instrument Trial

1. Validity Test

Concurring to Septi (2019), legitimacy alludes to the degree of exactness between the information on the investigate protest and the information that can be detailed by the analyst. Legitimacy may be a degree that demonstrates the level of exactness of an instrument. A substantial instrument contains a calculated r-value (r tally) more noteworthy than the r table or a noteworthiness esteem (sig) less than 0.05. Then again, an instrument that's less substantial features a calculated r-value lower than the r table or a centrality esteem

more noteworthy than 0.05. This test was conducted utilizing IBM SPSS Statistics 22.

2. Reliability Test

Agreeing to Ayudya (2017), a test is considered solid on the off chance that it can give reliable comes about when managed to the same subjects. The unwavering quality test utilizes the Cronbach's Alpha equation, as takes after:

$$r_{11} = \frac{K}{K-1} \left[1 - \frac{\sum +i^2}{\sum +t^2} \right]$$

Explanation:

r_{11} = instrument reliability

$\sum +i$ = the sum of the variances of each item score

K = the number of items

$\sum +t^2$ = total variance

This test was conducted using IBM SPSS Statistics 22.

b. Assumption Test

1. Normality Test

The ordinariness test could be a strategy utilized to decide whether the information comes from a populace that's regularly disseminated or falls inside a typical conveyance. In this think about, the analyst utilized the Lilliefors ordinariness test. Concurring to Sundari (2019), the Lilliefors ordinariness test is utilized to decide whether the test scores are regularly conveyed or not. The steps of the test are as takes after :

Discover the standard score by deciding the esteem of Z_i the Z_i esteem is calculated utilizing the taking after equation

$$Z_i = \frac{X_i - M}{SD}$$

Explanation:

X_i = target score

M = mean

SD = standard deviation

The test was conducted utilizing IBM SPSS Insights 22. The typicality test criteria are as takes after: in case the importance esteem (sig) is more prominent than 0.05, the information are regularly conveyed; on the off chance that the noteworthiness esteem (sig) is less than 0.05, the information are not regularly dispersed.

2. Hypothesis Testing

This speculation testing points to decide whether there's a critical contrast between students' learning results some time recently and after the usage of the Problem-Based Learning (PBL) show. The test was conducted utilizing the T-test.

The T-test was performed at a important level of 0.05 ($\alpha = 5\%$). The criteria for tolerating or dismissing the theory are as takes after:
 Ha: There's an impact of utilizing the Problem-Based Learning (PBL) demonstrate on the learning results of fourth-grade understudies in Bahasa Indonesia at SDN 4 Sindue.
 Ho: There's no impact of utilizing the

Problem-Based Learning (PBL) show on the learning results of fourth-grade understudies in Bahasa Indonesia at SDN 4 Sindue. The theory testing in this ponder was carried out utilizing IBM SPSS Statistics 22.

RESULTS AND DISCUSSION

Trial Test Data

a. Descriptive Statistical Data

Graphic factual investigation was carried out utilizing IBM SPSS Statistics 22 to get an diagram of the information collected from the pretest and posttest comes about. This examination given different pieces of data, counting the cruel, standard deviation, as well as the least and most extreme scores. The number of understudies who taken part within the pretest and posttest learning result tests in this think about was 27.

This think about was conducted within the fourth review including all understudies, where the learning prepare was to begin with conveyed straightforwardly by the homeroom educator some time recently the pretest questions were managed. The taking after is the graphic investigation of the pretest and posttest comes about:

Table 2. Description of Research Data

Descriptives			Statistic	Std. Error
Prettest	Mean		39.63	2.947
	95% Confidence Interval for Mean	Lower Bound	33.57	
		Upper Bound	45.69	
	5% Trimmed Mean		39.03	
	Median		40.00	
	Variance		234.473	
	Std. Deviation		15.313	
	Minimum		15	
	Maximum		75	
	Range		60	
	Interquartile Range		20	
Skewness		.709	.448	

	Kurtosis		.010	.872
Posttest	Mean		82.59	2.004
	95% Confidence Interval for Mean	Lower Bound	78.47	
		Upper Bound	86.71	
	5% Trimmed Mean		82.81	
	Median		85.00	
	Variance		108.405	
	Std. Deviation		10.412	
	Minimum		60	
	Maximum		100	
	Range		40	
	Interquartile Range		15	
	Skewness		-.235	.448
	Kurtosis		-.457	.872

Based on Table 2, there's a noticeable contrast within the scores gotten from the pretest comes about some time recently the execution of the Problem-Based Learning (PBL) demonstrate and the posttest comes about after the usage of the Problem-Based Learning (PBL) show. The most noteworthy pretest score was 75, whereas the most noteworthy posttest score was 100. The least pretest score was 15, and the least posttest score was 60. The cruel score for the pretest was 39.63, whereas the cruel score for the posttest was 82.59. The standard deviation for the pretest was 15.313, while for the posttest it was 10.412. These comes about show that the posttest scores were way better than the pretest scores.

Assumption Test

a. Normality Test Results

This consider conducted a ordinariness test to decide whether the students' learning result information, both pretest and posttest, were regularly dispersed or not. The typicality test for the pretest and posttest information was calculated utilizing the Shapiro-Wilk test with the help of IBM SPSS Statistics 22. In the event that the noteworthiness esteem (Sig.) is more prominent than 0.05, the information are considered to be ordinarily conveyed; in the event that the centrality esteem (Sig.) is less than 0.05, the information are considered not ordinarily disseminated. The ordinariness test comes about gotten in this ponder are as takes after:

Table 3. Results of the Normality Test of Pretest and Post Test Data

Tests of Normality						
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Pretest	.141	27	.182	.944	27	.153
Posttest	.110	27	.200*	.970	27	.607

*. This is A Lower Bound of True Significance

A. Lilliefors Significance Correction

Based on the information in Table 3, the comes about of the ordinariness test utilizing the Lilliefors (Shapiro-Wilk) strategy with the help of IBM SPSS Statistics 22 appear that all inquire about information have a centrality esteem (Sig.) more noteworthy than 0.05. The importance esteem for the pretest is 0.153 (> 0.05), and for the posttest is 0.607 (> 0.05). Hence, it can be concluded that all information are ordinarily disseminated, and the information investigation can be proceeded.

Hypothesis Test Results

After conducting the typicality test, it was found that the Indonesian dialect learning result information on the fabric of great participation are ordinarily dispersed. In this manner, in this ponder, the combined test t-test was utilized to look at whether there was a critical impact of utilizing the Problem-Based Learning (PBL) demonstrate on the learning results of fourth-grade understudies in Bahasa Indonesia at SDN 4 Sindue. The combined test t-test was performed with the help of IBM SPSS

Statistics 22. The speculations for the matched test t-test examination are as takes after:

- Ha : There is an effect of using the Problem-Based Learning (PBL) model on the learning outcomes of fourth-grade students in Bahasa Indonesia at SDN 4 Sindue.
- Ho: There is no effect of using the Problem-Based Learning (PBL) model on the learning outcomes of fourth-grade students in Bahasa Indonesia at SDN 4 Sindue.

The theory testing was carried out at a importance level of 5% (0.05). The decision-making criteria for tolerating or dismissing the theory in this test are as takes after: in the event that the noteworthiness esteem is more noteworthy than 0.05, at that point Ha is rejected and Ho is acknowledged; then again, in case the noteworthiness esteem is less than 0.05, at that point Ha is acknowledged and Ho is rejected. The comes about of the combined test t-test investigation utilizing IBM SPSS Statistics 22 can be seen in Table 4 underneath:

Table 4. Paired samples T Test Results Paired Samples Test

		Paired Differences				t	df	Sig. (2-tailed)	
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower				Upper
Pair 1	Prettest - Posttest	-42.963	15.520	2.987	-49.103	-36.823	14.384	.000	

Based on the information in Table 4, the importance esteem gotten from the matched test t-test is 0.000. Since this significance value is smaller than 0.05 ($0.000 < 0.05$), Ha is accepted and Ho is rejected. In this manner, it can be concluded that the utilize of the Problem-Based Learning (PBL) demonstrate includes a noteworthy impact on the learning results of fourth-grade understudies in Bahasa Indonesia at SDN 4 Sindue. The discoveries of this ponder are too significant to past investigate, counting a think about conducted by Muna (2023),

which uncovered that the execution of the PBL show can progress learning results in Bahasa Indonesia. In expansion, investigate conducted by Azhad (2023) shown that the comes about of the combined test t-test calculation were lower than the foreordained noteworthiness level, which suggests there was a noteworthy contrast within the application of the Problem-Based Learning (PBL) demonstrate on students' cognitive learning results compared to some time recently utilizing the PBL show within the learning prepare.

Discussion of Research Results

This think about was conducted at SDN 4 Sindue, found at Jl. Sidanggio No. 9, Dusun III, Sumari Town, Sindue Locale, Donggala Rule. The inquire about exercises were carried out in February, particularly within the third week, and kept going for two successive days. The sort of inquire about utilized was a quasi-experiment, with all fourth-grade understudies serving as the test. The analyst connected the Problem-Based Learning (PBL) demonstrate as the treatment within the course. This think about pointed to demonstrate the impact of the Problem-Based Learning (PBL) show on the learning results of fourth-grade understudies in Bahasa Indonesia at SDN 4 Sindue.

The analyst managed a pretest for 15 minutes some time recently the break time on Monday, February 17, 2025. The pretest comes about appeared that the students' learning results were still generally moo, with an normal score of 39.63. The moo learning results were caused by the teacher's inclination to utilize routine learning models, such as addresses and assignments, without including understudies effectively. The instructor tended to rule the learning handle persistently, whereas understudies as it were acted as detached audience members. Such conditions made the learning handle less successful.

On Tuesday, February 18, 2025, analysts carried out learning exercises by executing the Issue Based Learning (PBL) show. After the learning exercises were completed, understudies were given a posttest. The execution of learning utilizing the Issue Based Learning (PBL) show incorporates a few interrelated stages within the learning handle. These stages are recorded within the instructing module.

The investigation of the learning result information after the treatment appeared that the normal posttest score was 82.59, whereas the pretest normal was 39.63. Based on perceptions made by the spectator amid the learning handle, the application of the Problem-Based Learning (PBL) show significantly made a difference understudies in understanding the fabric. Through the PBL demonstrate, understudies got to be more effectively

included within the learning prepare, prepared to think fundamentally, and to illuminate issues. Data and information were gotten by understudies through gather discourses, peer intuitive, and direction from the instructor, who acted as a learning facilitator.

The comes about of this consider are in line with the discoveries of Arini (2023), who expressed that the application of the Problem-Based Learning (PBL) demonstrate has an impact on making strides learning results by putting understudies as the most center of learning, whereas the educator acts as it were as a facilitator. The learning prepare utilizing the PBL show trains understudies to illuminate issues freely through gather discourses in arrange to discover information related to the issues they confront.

Based on the inquire about that has been done, pretest and posttest information were gotten. Moreover, a prerequisite investigation test was carried out utilizing SPSS form 22. The comes about of the ordinairiness test appeared in Table 3 appear that the Asymp. Sig. (2-tailed) esteem for pretest learning results is $0.153 > 0.05$ and for posttest is $0.607 > 0.05$. Since both values are more prominent than 0.05, it can be concluded that the learning result information is ordinarily disseminated. After that, a speculation test was carried out employing a combined t-test, as appeared in Table 4. The test comes about appear a noteworthiness esteem (Sig. 2-tailed) of $0.000 < 0.05$. Hence, "Ho" is rejected and "Ha" is acknowledged. This implies that there's a critical distinction between the pretest and posttest comes about. Based on this investigation, it can be concluded that the Problem-Based Learning (PBL) show encompasses a positive impact on understudy learning results within the fabric "Great Participation" in review IV.

The comes about of this ponder are steady with past ponders conducted by Wulan (2024) entitled "The Impact of the Problem-Based Learning Demonstrate Helped by Audio-Visual Media on the Social Science Learning Results of Fourth-Grade Understudies at SD Inpres 3 Birobuli." Moreover, the think about by Wulansari (2020), entitled "Moving forward Civics Learning Results Through Problem-

Based Learning (PBL) in Fifth-Grade Understudies at SDN 9 Sindue," and the investigate by Sholehah (2023), entitled "The Impact of the PBL Demonstrate Helped by Canva on Learning Results in Bahasa Indonesia for Fourth-Grade Understudies," moreover appeared comparative discoveries. All three ponders expressed that the Problem-Based Learning (PBL) demonstrate had an impact on students' learning results within the different areas examined. As laid out in Chapter II beneath significant inquire about, the discoveries from these three thinks about give solid bolster for the comes about of the display investigate.

CONCLUSION

Based on the comes about of the inquire about conducted at SDN 4 Sindue, it can be concluded that the Problem-Based Learning (PBL) show has an impact on the learning results of fourth-grade understudies in Bahasa Indonesia at SDN 4 Sindue. This result was demonstrated through speculation testing utilizing the combined test t-test at a 5% (0.05) importance level, with a centrality esteem of 0.000. The t-test significance value, which is smaller than 0.05 ($0.000 < 0.05$), indicates that H_a is accepted and H_o is rejected. The information examination in this ponder appears that learning utilizing the Problem-Based Learning (PBL) demonstrate encompasses a more critical impact on students' learning results in Bahasa Indonesia compared to learning that does not utilize this show.

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