



# The Effectiveness of the Problem Based Learning (PBL) Model Assisted by Flipbook Media on Improving the Learning Outcomes of Pancasila Education Grade 4 SDN 1 Datar

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## Abstract

*The research is based on the low learning outcomes of students caused by learning still using lecture methods and media that are less interesting. It is proven by the discovery at SDN 1 Datar that the learning outcomes of Pancasila Education for grade 4 students are still relatively low. This study aims to determine the effectiveness of the PBL model assisted by Flipbook media on improving the learning outcomes of Pancasila education in grade 4 SDN 1 Datar. This study uses a quantitative research method with One Group Pretest Posttest involving class IV totaling 34 students as a sample for 5 meetings. The results of the normality test of learning outcome data, namely Pretest 0.261 and Posttest 0.119 ( $> 0.05$ ), mean that the data is normally distributed. The results of the Paired Sample T-test showed a significance value of  $0.000 < 0.05$  meaning that  $H_0$  was rejected and  $H_a$  was accepted. The N-Gain test obtained an average N-Gain Score of 0.7661 in the high category. Based on the results of the study, it was shown that the PBL model assisted by Flipbook media was effective in improving the learning outcomes of Pancasila Education in grade 4 of SDN 1 Datar.*

**Keywords:** PBL, Flipbook Media, Learning outcomes

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## 1. Introduction

Education is a process with certain models that allow individuals to acquire knowledge, understanding, and behaviors that suit their needs. The main goal of education is to form quality human resources. According to (Islami et al., 2022) Education is the main factor that plays a very important role in supporting the progress of a nation in the future. To achieve these educational goals, improving the quality of education is very necessary. The learning process needs to be considered continuously as a way to achieve educational goals. Teachers need guidelines and approaches in carrying out the learning process in order to achieve the expected educational goals, namely the curriculum. According to Amalia et al (2024) One of the approaches that aligns learning with the curriculum.

Currently, the learning process is often dominated by teachers, so students do not get the opportunity to develop independently. According to Ana et al (2023) An effective learning process is student-centered learning (student center) not on the teacher (teacher center). To achieve learning goals, teachers are essential in creating a pleasant environment in the classroom (Zahara et al., 2021). This problem often occurs in teaching and learning activities in the classroom. The implementation of effective learning strategies is indispensable to help students understand the material and provide useful tools in daily life. Student learning success academically is associated

with the learning outcomes achieved by students and the achievements of these students. So that education can be interpreted as a process of changing the behavior of students personally who can live independently. According to (Aliyyah et al., 2021) Student learning outcomes are changes in a person's behavior that occur as a result of the learning process, which in a broader sense includes cognitive, affective, and psychomotor aspects.

The subject of Pancasila Education in elementary schools is very important because it aims to form knowledgeable and characterful citizens. Good character in everyone grows from education (Ikromah et al., 2022). Pancasila Education learning is often considered a subject that aims to teach values and morals (Puji Lestari et al., 2023). Civic education has a general goal to develop the potential of individual Indonesian citizens to have adequate civic insights, attitudes, and skills. According to (Santoso et al., 2020) Character must be formed from primary education to higher education as an important key to realizing the nation's ideals. Thus, they can participate intelligently and responsibly in various aspects of the life of the community, nation, and state (Noerdiansyah et al., 2023). Therefore, synergy is needed between parents, teachers, the government, and students to jointly create a generation that is in accordance with the values of Pancasila and the mandate of the 1945 Constitution.

Based on results interviews with teachers and observations in grade 4 of SDN 1 Datar that student learning outcomes in the content of Pancasila Education are still relatively low, below the KKTP score standard. Learning in grade IV of SDN 1 Datar teachers still tend to use the lecture method and rarely apply various learning models, which causes students to feel bored and passive in class. Media skills used by teachers in learning, especially in Pancasila educational content, are still lacking. Teachers occasionally use media in the form of learning videos taken from the Youtube application. Therefore, teachers need to use various media to make learning more interesting. Teachers need to implement strategies or methods that are tailored to the needs of students. The use of inappropriate models and media can result in low student learning outcomes because students in their learning process are not serious about understanding the material being taught. According to (Nofriyadi et al., 2022) Integrating learning models with teaching aids can create more interesting and fun variations. Therefore, the selection of the right model and media can affect student learning outcomes. In line with the opinion Zuhri (2023) that learning that is still dominant using the lecture model without making optimal use of learning media often has an impact on low student learning outcomes. The lecture model tends to attract less attention to students and minimizes their active involvement in the learning process. As a result, students feel less motivated, and their understanding of the material becomes less profound

The solution to the above problem is to use the Problem Based Learning (PBL) learning model assisted by Flipbook media to improve the learning outcomes of Pancasila Education for 4th grade students of SDN 1 Datar. The Problem Based Learning (PBL) learning model is a student-focused strategy, connecting problem-solving to everyday experiences. According to (Mayasari et al., 2022) The PBL implementation process consists of five stages as follows. 1) student orientation towards authentic problems, where the teacher explains the learning objectives and motivates students, 2) organizes students by dividing them into groups and helps organize relevant learning tasks, 3) guides individual as well as group investigations by encouraging

students to gather information, conduct experiments, and investigate, 4) developing and presenting works with the support of teachers, and 5) assessing and evaluating the problem-solving process through reflection or assessment of investigations and methods used by students. According to (Handayani & Muhammadi, 2020) The advantage of the Problem Based Learning (PBL) model lies in its ability to actively involve students in every stage of the learning process, so that the knowledge they gain can be absorbed more deeply and effectively. Problem Based Learning (PBL), students are not only given the opportunity to overcome the problems they face, but are also invited to find solutions from various sources of information, enriching their perspectives in understanding the material. This model also teaches the importance of cooperation, where students are encouraged to collaborate with their classmates, share ideas, and work together in a team to achieve a common goal. Problem Based Learning (PBL) not only improves academic understanding, but also develops social skills and critical thinking skills that are much needed in the real world.

Flipbook media is the result of technological developments in the form of software to open digital books with various animations, images, videos, and audios designed to be interesting and interactive for students. Aprilutfi (2022) argues that the goal is to create a fun and effective learning experience, both at home and in the classroom. Flipbooks present text, sentences, and colored images to grab students' attention and improve their focus during learning, as well as allow students to learn on the go. According to (Wanda et al., 2022) argues that Flipbook is a virtual learning medium that allows the pages to be opened like a physical book on a monitor screen. Flipbooks have several advantages, such as the ability to present learning materials in the form of colored text, sentences, and images, so that they can attract students' attention. Creating a flipbook is relatively easy and can increase students' interest and learning outcomes.

According to (Noor et al., 2023) Student learning outcomes are behavioral changes that occur as a result of the learning process, which in a broader sense includes cognitive, affective, and psychomotor aspects. Learning outcomes are behavioral changes in a person that can be observed and measured. Following the learning process, students can experience changes in terms of spirituality, knowledge, attitudes, and skills. Learning outcomes are also a product of the learning or learning process, where teachers play the role of active actors. Ridho'i, (2022) stated that learning outcomes are influenced by various factors, both internal and external. Internal factors that affect learning outcomes include biological, psychological, mature, intelligence, training, motivation, and students' attitudes towards learning. On the other hand, external factors include influences from outside the individual, such as the family environment, community, and school. Thus, one of the factors that affects learning outcomes is the emotional intelligence possessed by each student individually.

Relevant to previous research conducted by (Risanjani & Kurniawati, 2023) In a study titled "Effectiveness of PBL Model on Mathematics Learning Outcomes of Grade IV Students on Flat and Solid Numbers," the findings showed that students who were taught the PBL model and those who did not show significant differences in their learning outcomes in mathematics. The average posttest score of the experimental class was 77.20, while the control group is 70.21. These results show that the PBL paradigm is useful for improving the learning outcomes of fourth-grade students in mathematics, especially in terms of flat and solid numbers.

## **2. Research Methods**

This study is a quantitative research with a pre-experimental design of the One-Group Pretest-Posttest type which involves one experimental class without a control class. The research was carried out at SDN 1 Datar, Datar Village, Mayong District, Jepara Regency, Central Java in the odd semester of the 2024/2025 school year with 34 4th grade students, consisting of 18 female students and 16 male students. The research was carried out in five meetings, starting with giving a pretest at the first meeting, followed by three meetings using the Problem Based Learning (PBL) model assisted by Flipbook media as a treatment, and ending with a posttest at the fifth meeting. Data was collected through interviews with teachers and one of the students, observation of the learning process, and pretest and posttest tests. Data analysis was carried out quantitatively using normality test, paired sample t-test, and n-gain score test with the help of the SPSS 21 application to determine the effectiveness of the PBL model assisted by Flipbook media in improving the learning outcomes of Pancasila Education.

## **3. Results and Discussion**

### **3.1 Results**

This research was carried out in grade IV of SDN 1 Datar in the odd semester of the 2024/2025 school year located in Datar Village, Mayong District, Jepara Regency. This research was carried out as many as five meetings that were systematically designed to measure and improve students' critical thinking skills. The first meeting began with the provision of Pretest questions which aimed to be a preliminary test to evaluate students' critical thinking skills before learning began. At the second meeting, students were introduced to material on the meaning of rights and obligations as the first step in understanding basic concepts. The third meeting focused on the rights and obligations as school citizens while the fourth meeting invited students to explore their rights and obligations as family members. The learning materials from the second to the fourth meeting are based on teaching modules that have been carefully prepared by researchers and receive guidance from supervisors. Then in the fifth meeting, students were given Posttest questions. Posttest questions are given to measure students' understanding and knowledge after participating in learning. In doing the Posttest questions, students seem to have understood the material that has been taught during the learning process. Students were able to answer the questions with more confidence and showed significant improvement compared to the results of the Pretest. Students' understanding of the concept of rights and obligations both as school citizens and family members is reflected in the answers delivered appropriately and in a structured manner.

The cognitive learning results of the Pancasila Education subject for grade IV students of SDN 1 Datar showed an increase after the implementation of the Problem Based Learning (PBL) model assisted by Flipbook media. It is known that the lowest score of the Pretest result is 42 while the Posttest result is 75. The highest score of the Pretest result is 82 while the Posttest result is 100. The average cognitive learning outcome of students before being given treatment was only 61.50%, while after being treated using the Problem Based Learning (PBL) model assisted by Flipbook media, the average cognitive learning outcome of students increased to 90.41%. Based on these results, it can be concluded that the average Posttest score is higher than the Pretest score. The following is a table of recapitulation of students' Pretest and Posttest scores.

**Table 1.** Recapitulation of Pretest and Posttest Results

<b>Data Size</b>	<b>Previous tests</b>	<b>Post tests</b>
Amount of Data	34	34
Lowest Rate	42	75
Highest Score	82	100
Average Score	61.50	90.41
Variance	125.773	48.553
Standard Deviation	11.215	6.968

*Source: Researcher Data, 2024*

Before the hypothesis test is carried out, a normality test is carried out. The normality test is a prerequisite test that aims to obtain information on whether the data is distributed normally or abnormally. The following guidelines should be followed when analyzing the normality test results: significance values above 0.05 indicate that the data are distributed normally, while values below 0.05 indicate that they are not. The normality test is carried out using students' Pretest and Posttest scores. The normality test also aims to determine the statistical tests that will be used next, namely the T-Test and the N-Gain score Test. The normality test used in this study is the Shapiro Wilk test because the number of samples used in this study < 50 samples.

**Table 2.** Results of the Normality Test

	<b>Normality Test</b>					
	<b>Kolmogorov-Smirnova</b>			<b>Shapiro-Wilk</b>		
	<b>Statistics</b>	<b>Df</b>	<b>Sig.</b>	<b>Statistics</b>	<b>Df</b>	<b>Sig.</b>
Previous tests	.112	34	200*	.961	34	.261
Post tests	.098	34	200*	.950	34	.119

**\*. This is the lower limit of true significance.**

**a. Lilliefors Significance Correction**

*Source: Researcher Data, 2024*

Based on the table above, it shows that the results of the data normality test using the Shapiro-Wilk test obtained significance values of 0.261 and Posttest 0.119 can be interpreted that the significance value > 0.05. So it can be concluded that the data obtained from the Pretest and Posttest scores are normally distributed because the values obtained are more than 0.05. The normality test calculation data above produces normal data, so the analysis uses a parametric method with normality requirements met and comes from normally distributed data. The results of the normality test calculation show that the data is normally distributed. Therefore, the analysis can be carried out using the parametric method provided that the data meets the normality criteria and comes from a normal distribution.

The first hypothesis test is the paired sample t-test. The first hypothesis test uses a paired sample t-test to analyze the difference in student learning outcomes before and after being given treatment in the form of the application of the Problem Based Learning (PBL) learning model assisted by Flipbook media. The data to be used in the paired sample t-test is the value of the result of the Pretest to Posttest. The effectiveness of the Problem Based Learning (PBL) learning model assisted by Flipbook media on the learning outcomes of grade IV students of SDN 1 Flat in the subject of Pancasila Education, Rights and Obligations material in semester 1, the results of providing student test instruments were obtained before and after being given treatment, namely

the application of the Problem Based Learning (PBL) learning model assisted by Flipbook media. The data analysis technique used in this study is a paired test of T-test samples using the SPSS 21 application. The results of the paired test of the T-test sample using the SPSS 21 application are as follows.

		Paired Differences							
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
					Lower	Upper			
Pair 1	Pretest - Posttest	-28.912	8.736	1.498	-31.960	-25.863	-19.297	33	.000

**Picture 1.** T-Test Sample Paired Test Results

Source: Researcher Data, 2024

The output of the Paired Sample T-Test test results above are known to have a Sig (2-tailed) value of  $0.000 < 0.05$ , then  $H_0$  is rejected and  $H_a$  is accepted. This means that there is an average difference between the Pretest and Posttest scores of students before and after the implementation of the Problem Based Learning (PBL) learning model assisted by Flipbook media on the learning outcomes of grade IV students of SDN 1 Datar. The table shows that the average value (Mean) of Pretest and Posttest results is -28,912. This value shows the difference between the mean of the Pretest results and the mean of the Posttest results or  $61.50$  minus  $90.41$  equal to  $-28,912$  and the difference between the range of  $-31,960$  is equal to  $-25,863$ . Based on the results of the output table of the T-Test Paired Sample that it was stated that  $t$  calculated a negative value of  $-19,297$ , the negative value of  $t$  calculation was due to the fact that the average score of student learning outcomes in the Pretest was lower than the average score of the Posttest. The value of the sig (2-tailed) is  $0.000 < 0.05$  so that  $H_0$  is rejected and  $H_a$  is accepted. It can be concluded that there is a significant average difference between before and after the application of the Problem Based Learning (PBL) model assisted by Flipbook media on the learning outcomes of grade IV students of SDN 1 Flat in the subject of Pancasila Education in the 1st semester of Rights and Obligations material.

The next hypothesis test is the N-Gain Test, this N-Gain test is used to determine the improvement of learning outcomes after the implementation of the Problem Based Learning (PBL) model assisted by Flipbook media in the subject of Pancasila Education in grade IV of SDN 1 Datar. This test is carried out by calculating the difference between Pretest and Posttest scores. The hypotheses proposed are as follows.

$H_0$ : There was no improvement in learning outcomes after the application of the Problem Based Learning (PBL) model assisted by Flipbook media in the subject of Pancasila Education in grade IV of SDN 1 Datar.

$H_a$ : There is an increase in learning outcomes after the application of the Problem Based Learning (PBL) model assisted by Flipbook media in the subject of Pancasila Education in grade IV of SDN 1 Datar

**Table 4.** N-Gain Test Output Results

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
N-Gain_score	34	.33	1.00	.7661	.16259
N-Gain_persen	34	33.33	100.00	76.6103	16.25900
Valid N (listwise)	34				

Source: Researcher Data, 2024

Based on the table of the output results of the N-Gain test above, it is stated that from the average score of Pretest and Posttest on the improvement of student learning outcomes, the N-Gain Score value is 0.7661 which means that the criteria for improving student learning outcomes after being treated using the Problem Based Learning (PBL) model assisted by Flipbook media get an increase in high criteria. Then for the percentage of N-Gain scores of 76.6103%, it means that the increase in student learning outcomes after the treatment using the Problem Based Learning (PBL) model assisted by Flipbook media gets an increase in effective criteria. It can be concluded that there is an increase in learning outcomes after the implementation of the Problem Based Learning (PBL) model assisted by Flipbook media in the subject of Pancasila Education in grade IV of SDN 1 Datar.

### **3.2 Discussion**

Based on the results of the study, the Problem Based Learning (PBL) model assisted by Flipbook media is effective in improving the learning outcomes of Pancasila Education for grade 4 students at SDN 1 Datar which is proven with a lower average Pretest score compared to the Posttest score. Initial hypothesis testing was carried out using the Paired Sample T-Test. The output of the Paired Sample T-Test test results are known to have a Sig (2-tailed) value of  $0.000 < 0.05$ , then  $H_0$  is rejected and  $H_a$  is accepted. This means that there is an average difference between the Pretest and Posttest scores of students before and after the implementation of the Problem Based Learning (PBL) learning model assisted by Flipbook media on the learning outcomes of grade IV students of SDN 1 Datar. The average score of the Pretest got a lower result of 61.50 because in learning it still uses the lecture model and only refers to books. Learning that uses the lecture model makes students bored faster and less active in learning so that learning is only centered on the teacher. So that it will have an impact on unsatisfactory student learning outcomes. In line with the opinion Zuhri (2023) that learning that is still dominant using the Cermah model without utilizing learning media optimally often has an impact on low student learning outcomes.

In contrast to the average result of the Posttest, which tends to be higher which is obtained 90.41. These results were obtained because in learning the researcher used the Problem Based Learning (PBL) model with the help of Flipbook media. In learning, students are required to be active to be able to solve a problem that has been determined. Students become more enthusiastic in learning because of the use of interesting learning media. The PBL model not only increases student participation in the learning process, but also contributes to the development of cognitive abilities. Flipbook media not only contains material, but there are images that are relevant to the material so that students are not easily bored in learning. Relevant to research conducted by Yayuk et al (2024) that learning that the Problem Based Learning (PBL) model and Flipbook as a learning medium can improve student learning outcomes. The use of models and aviative media makes students not bored and easily sleepy in class.

The significant variation in average cognitive learning outcomes among students is undoubtedly influenced by a variety of factors, which include both internal and external influences. Internal factors refer to the influence that comes from within the student, namely the student's interest in learning and motivation, while external factors involve elements from outside the student or the surrounding environment. One of the external factors that affect this is the learning process using the media-assisted PBL model with Flipbook. While learning in the classroom, students deepen their

understanding of the material through engaging activities such as discussions or groups and practices that make learning meaningful and effective. According to Ulhaq et al (2020) Learning Model Problem Based Learning (PBL) is an approach that provides opportunities for students to build and understand the concept of knowledge independently. This aims to shape students to be independent, creative, and able to apply knowledge in solving daily problems.

The PBL model in learning is considered to be very helpful for students to improve learning outcomes where students can learn to solve problems according to real life. During the learning process using the PBL model, students are more enthusiastic and enthusiastic than just using the lecture model. Students also seemed to be more active during learning in using the PBL model. The application of the Problem Based Learning (PBL) model also provides benefits for students, namely students can analyze problems, collaborate with their friends. In line with Hasanah (2023) The advantage of the Problem-Based Learning (PBL) model is found in its capacity to motivate students to be more involved, think critically, and collaborate in overcoming problems related to learning materials. The learning process using the PBL model helps students in improving their analytical skills while fostering teamwork skills.

Other elements besides the implementation of the PBL model can also have an impact on cognitive learning outcomes, namely by using Flipbooks that help students to understand learning materials easily. The use of Flipbook media In learning, students are not easily bored and make students interested in being able to understand the material in it. Innovative learning makes learning meaningful for students. Flipbook media can also be used in various locations both indoors and outdoors and is easy to carry around because of its portable nature. More than Flipbook It also plays a role in increasing student engagement in learning and encouraging their interest in learning so that it can support improved learning activities and outcomes. According to Kristiana & Radia (2021) One of the best ways to improve student learning outcomes is through PBL. This method Starting by presenting problems at the beginning of learning, so that students are encouraged to actively connect and integrate new knowledge.

The learning media used also plays a very important role in learning, as evidenced by the average results of the Pretest score which only uses package books is lower than the average results of the Posttest which uses Flipbook media in learning. The use of Flipbook media as a teaching material, is able to simplify the learning process while increasing students' interest and learning outcomes. Learning materials also affect student learning outcomes. If students like what they are learning, they tend to understand the material faster and easier. Flipbook media contains material about rights and obligations. The material can be studied so that students can apply it well both in the school environment and in the family environment.

The next hypothesis, the N-Gain test, shows an improvement in learning outcomes after the use of the Problem-Based Learning (PBL) model with Flipbook media. The results of the N-Gain test show an average N-Gain score of 0.7661, which is greater than 0.7, indicating a high category. These results show that the application of the PBL model supported by Flipbook media effectively improves the cognitive learning outcomes of grade IV students at SDN 1 Datar. The increase in student learning outcomes is evident from the difference in N-Gain percentages before and after applying the PBL model with Flipbook media.



This study has six (6) indicators in students' cognitive learning outcomes. The first indicator (remembering) can be seen the difference in the percentage of Pretest results of 92.27% and Posttest of 95.22%. The results of the N-Gain score test were obtained at 0.3810 so that it shows a moderate improvement category. The second indicator (understanding) can be seen the difference in the percentage of Pretest results of 57.35% and Posttest of 95.58%. The results of the N-Gain test obtained a result of 0.8966 which indicates that the category of increase is high. Furthermore, the third indicator (applicable) can be seen the difference in the percentage of Pretest results of 69.85% and Posttest results of 92.27%. The N-Gain Test The score obtained is 0.7439, so it states that there is an increase with a high category. This is because students carry out activities where they concretely apply activities to prove the truth of their theories. Then the fourth indicator (analysis) can be seen the difference in the percentage of Pretest results of 58.08% and Posttest of 96.32%. The N-Gain value was obtained as 0.9123 which can be interpreted that the category of increase is high. Through the provision of treatment, the level of students in analyzing the percentage is higher than others. According to Asrifah (2019) Problem Based Learning (PBL) type with the help of Flipbook media can help students find their own knowledge and potential. The fifth indicator (evaluation) can be seen in the percentage of Pretest results of 36.02% and Posttest of 84.19%. The N-Gain score obtained is 0.7529 so it shows a high category of improvement. Furthermore, the sixth indicator (making) can be seen the difference in the percentage of Pretest results of 48.52% and Posttest 75.00. The test results of the N-Gain score obtained were 0.5143 which indicates a moderate improvement category. According to Suswati (2021) stated that the Problem Based Learning (PBL) model is a learning model in which students are faced with real problems.

It can be concluded from the examination of each of the indicators mentioned above that the application of the Problem Based Learning (PBL) paradigm with the help of Flipbook media can improve student learning outcomes. In line with previous research conducted by (Mudiana et al., 2021) that by implementing Problem Based Learning (PBL) with media assistance, Flipbook can improve the mathematics learning outcomes of grade IV students of SDN Kranjingan 03 Jember.

#### 4. Conclusion

Based on the results of the study, it can be concluded that (1) there is a difference in the average learning outcomes of grade IV students of SDN 1 Datar before and after the implementation of the Problem-Based Learning (PBL) model assisted by Flipbook media in Pancasila Education. This is evidenced by the results of the paired sample t-test which showed a significance value of  $0.000 < 0.05$  so that  $H_0$  was rejected and  $H_a$  was accepted. Before the paired sample t-test, a normality test was carried out with the results of the significance value of the Pretest of 0.261 and the Posttest of 0.199 which showed that the data on student learning outcomes was distributed normally and supported the validity of the data analysis in this study. (2) There was an increase in student learning outcomes after the implementation of the Problem Based Learning (PBL) model assisted by Flipbook media which was proven by the results of the N-Gain test of 0.7661 which was included in the high category. Therefore, the Problem Based Learning (PBL) model assisted by Flipbook media is very effective in improving the learning outcomes of Pancasila Education grade 4 SDN 1 Datar.

## Reference

- Aliyyah, R. R., Amini, A., Subasman, I., Sri, E., Herawati, B., & Febiantina, S. (2021). Efforts to improve the science learning results through the use of learning video media. *Journal of Social Humanities*, 12(1), 54–71.
- Amalia, N., Riswari, L. A., & Pratiwi, I. A. (2024). *Application of Mathematics Learning Based on Local Wisdom of Pottery with the PjBL Model on Student Learning Outcomes*. 7(1).
- Ana, A. N. F., Safrizal, & Sunarti. (2023). Analysis of Teachers' Difficulties in Implementing the Independent Curriculum. *MUBTADI: Ibtidaiyah Education Journal*, 4(2), 96–110. <https://doi.org/10.19105/mubtadi.v4i2.8043>
- Aprilutfi, D. N. (2022). Thematic Flipbook: Alternative fliphtml5-based PKN learning media in elementary school. *Educenter : Scientific Journal of Education*, 1(9), 650–655. <https://doi.org/10.55904/educenter.v1i9.111>
- Asrifah, S. (2019). The Effect of the Problem Based Learning Model on the Learning Outcomes of PKN Class V Students of SDN Pondok Pinang. *Primary: Journal of Elementary School Teacher Education*, 2(1), 158–165. <http://repository.um.ac.id/id/eprint/67765>
- Handayani, H. R., & Muhammadi. (2020). Application of Problem Based Learning Model to Train Higher Order Thinking Skills of Elementary School Students. *Journal of Tambusai Education*, 4(2), 1494–1499. <https://doi.org/10.31004/jptam.v4i2.615>
- Hasanah, N. (2023). Application of Problem Based Learning Model to Improve Electrolysis Chemistry Learning Outcomes. *Journal of Education and Teacher Training*, 2(2), 218. <https://doi.org/10.59562/progresif.v2i2.30313>
- Ikromah, E., Santoso, & Ari Pratiwi, I. (2022). The role of parents in accompanying children's learning during the pandemic in hamlet. *Janacitta*, 5(024), 10–19.
- Islami, A. N., Pratiwi, I. A., & Ismaya, E. A. (2022). The Relationship between Study Habits and Social Studies Learning Outcomes of Grade IV Students in Tunjungharjo Village, Tegowanu Grobogan District. *JISIP (Journal of Social Sciences and Education)*, 6(2), 3915–3925. <https://doi.org/10.58258/jisip.v6i2.3031>
- Kristiana, T. F., & Radia, E. H. (2021). Meta Analysis of the Application of Problem Based Learning Model in Improving Science Learning Outcomes of Elementary School Students. *Journal of Basicedu*, 5(2), 818–826. <https://doi.org/10.31004/basicedu.v5i2.828>
- Mayasari, A., Arifudin, O., & Juliawati, E. (2022). Implementation of the Problem Based Learning (PBL) Model in Increasing Learning Activeness. *Journal of Tahsinia*, 3(2), 167–175. <https://doi.org/10.57171/jt.v3i2.335>
- Mudiana, I. G., Bayu, I. G. W., & Aspini, N. N. A. (2021). Problem Based Learning Model Assisted by Powerpoint Media to Improve Mathematics Learning Outcomes of Elementary School Students. *Scientific Journal of Teacher Professional Education*, 4(3), 383–392. <https://doi.org/10.23887/jippg.v4i3.36096>
- Noerdiansyah, I., Sudiana, I. N., Studies, P., Basic, P., & Ganesha, U. P. (2023). *Ganesha University of Education Basic Education Study Program*. 7(1), 59–70.

- Nofriyadi, R., Pratiwi, I. A., & Setiawan, D. (2022). Improving student learning outcomes through a problem-based learning model assisted by audio visual media. *P2M STKIP Siliwangi*, 9(2), 161–167. <https://doi.org/10.22460/p2m.v9i2.2980>
- Noor, H., Roshayanti, F., & Wakhyudin, H. (2023). The Use of the PBL Model to Improve Student Learning Outcomes on Pancasila Symbols and Values at SDN Sendangmulyo 02 Semarang. *Journal on Education*, 06(01), 4120–4127.
- Puji Lestari, Ika Ari Pratiwi, & Imaniar Purbasari. (2023). The Application of the Teams Games Tournament (Tgt) Model Assisted by Crossword Puzzle Media to Improve the Learning Outcomes of Theme 9 Students in Class V Sdn 1 Dorang. *Didactic : Scientific Journal of PGSD STKIP Subang*, 9(04), 2161–2175. <https://doi.org/10.36989/didaktik.v9i04.1559>
- Ridho'i, M. (2022). Analysis of Factors Affecting Mathematics Learning Outcomes of MTs Miftahul Ulum Pandanwangi Students. *E-DuMath JOURNAL*, 8(2), 118–128. <https://doi.org/10.52657/je.v8i2.1809>
- Risanjani, A., & Kurniawati, R. P. (2023). The Effectiveness of the PBL Model on the Mathematics Learning Outcomes of Grade IV Students on the Traveling Materials and Flat Building Area. *National Seminar on Social, Science, Education, Humanities (Senassdra)*, 2(2), 678–684. <http://prosiding.unipma.ac.id/index.php/SENASSDRA>
- Santoso, Suyahmo, Maman, R., & Utomo, C. B. (2020). The Urgency of Character Education During the Covid 19 Pandemic. *National Seminar on Postgraduate Studies of Semarang State University*, 558–563.
- SUSWATI, U. (2021). The application of PBL improves chemistry learning outcomes. *TEACHING: Journal of Teacher Training and Education Innovation*, 1(3), 127–136. <https://doi.org/10.51878/teaching.v1i3.444>
- Ulhaq\*, R., Huda, I., & Rahmatan, H. (2020). The Effect of Problem Based Learning Model with Radical Constructivism Module on Student Learning Outcomes. *Journal of Science & Science Learning*, 4(2), 244–252. <https://doi.org/10.24815/jipi.v4i2.17874>
- W. Yayuk Tri, W. Heny Kusuma, K. S. (2024). *Improving student learning outcomes in grade 4 science subjects using a model*. 09 (September).
- Wanda Hardianti Sukma, O., Yuliana, L., Language and Science, F., & Wijaya Kusuma Surabaya, U. (2022). Application of Flipbook Learning Media on Thematic Materials about Togetherness in Schools for Learning Motivation of Grade II Students of UPT SD Negeri 62 Gresik. *Online) Journal of Educational and Language Research*, 1(12), 2807–2937. <http://bajangjournal.com/index.php/JOEL>
- Zahara, N. N., Murtono, M., & Pratiwi, I. A. (2021). The Effectiveness of Edmodo-Based E-Learning Media on the Learning Outcomes of Class V Students of Sdn 02 Ngabul Jepara. *Journal of Inscriptions of Science*, 1(1), 0–5. <https://doi.org/10.24176/jpi.v1i1.6063>
- Zuhri, S. (2023). Improvement of PPKN Learning Achievement through the Problem Based Learning Method Assisted by Kahoot Media in Grade V of Elementary School. *INOPENDAS: Scientific Journal of Education*, 6(1), 18–26. <https://doi.org/10.24176/jino.v6i1.7739>