

The Influence of Problem Based Learning with Interactive Media on Critical Thinking Skills

Friska Amiliya¹, Yulina Ismiyanti²

¹²Universitas Islam Sultan Agung, Semarang; Indonesia

Correspondence email; yulinaismiyanti@unissula.ac.id

Submitted: 03/01/2025

Revised: 05/02/2025

Accepted: 10/03/2025

Published: 25/04/2025

Abstract

This study focuses on the effect of the Interactive Media-Assisted Problem-Based Learning model on critical thinking skills in Grade 5 Indonesian subjects. The purpose of this study is to determine the influence of the Interactive Media-Assisted Problem Based Learning model on critical thinking skills in Grade 5 Indonesian subjects. This study uses a quantitative method, Pre-Experimental Design with the type of One Group Pretest-Posttest Design. The population and sample used were 22 students in grade 5 of SDI Sultan Agung 1.3 using saturated sampling techniques. Data analysis techniques include prerequisite tests (validity, reliability, differentiation, and difficulty tests) and condition tests (normality tests and paired sample t tests). The results of the study with SPSS showed that the data was normally distributed and from the paired test the t test produced the same calculation between the test and the questionnaire, namely the value of Sig 2-tailed = $0.000 < \alpha = 0.05$, then H_0 was rejected and H_1 was accepted, which means that there is a difference in the Problem Based Learning model. Assisted by interactive media for critical thinking skills in grade 5 Indonesian subjects. This research is only limited to Indonesian subjects in grade 5 of elementary school. Therefore, further research can be conducted to look at the effectiveness of interactive media-assisted PBL models in other subjects to provide a broader picture of the application of PBL in the context of primary education in general.

Keywords

Problem Based Learning, Interactive Media, Critical Thinking



© 2025 by the authors. This is an open-access publication under the terms and conditions of the Creative Commons Attribution-NonCommercial 4.0 International License (CC BY NC) license (<https://creativecommons.org/licenses/by-nc/4.0/>).

INTRODUCTION

At present, one of the main challenges in the world of education is the lack of development of critical thinking skills in students, especially at the elementary school level (Muhamad Afandi et al., 2024; Sandi Budiana et al., 2023; Wahyu Ariyani & Prasetyo, 2021). Based on the results of observations and interviews with teachers at SDI Sultan Agung 1.3, it was found that students' critical thinking skills in Indonesian subjects are still low. Students tend to have difficulty analyzing information, formulating critical questions, and connecting the concepts learned to real-life situations. This is due to the fact that the dominant learning method uses a teacher-centered approach and the lack of variation in the use of learning media that can stimulate students' critical thinking skills (Muhamad Afandi et al., 2024). Education has a very important role in the development of a country. The quality of education is determined by several factors of the curriculum, teachers or teaching staff, facilities, and learning resources.

Teachers have an important role in improving the quality of learning in the classroom (Jauhari et al., 2024) to improve the quality of learning, teachers can conduct innovative learning in the classroom. Innovative learning prioritizes students as the center of learning. Teachers as educators play an important role in providing knowledge to students so that they have mastery of knowledge and life skills needed in facing real life (Montoya et al., 2022) Teachers have an obligation to produce a young generation that is of quality both intellectually and morally. Pedagogic competence is the ability to master the delivery of subject matter and understand the characteristics of students broadly and deeply (Ismiyanti & Afandi, 2022) This can be done by creating effective learning (Sandi Budiana et al., 2023b) Thus, the learning tendency in Indonesian subjects is currently still lacking in attention and student participation in the learning process, students are less active, the learning process is still centered on teachers who are dominated by lecture methods, and make students less active in the learning process. This will have an impact on students' thinking skills. The provision of teaching materials in a monotonous format makes students lazy to read and follow lessons (Cahyaningtyas & Ismiyanti, 2022)

Critical thinking is reasoning about beliefs and actions that make sense and focuses on deciding what to believe or do (Muhamad Afandi et al., 2024; Sari et al., 2024; Wahyu Ariyani & Prasetyo, 2021b). The main goal of critical thinking skills is to direct children to be able to solve problems (Sandi Budiana et al., 2023b) A critical mindset also needs to be applied so that children can train themselves to seek the truth from every piece of information they get. These skills are

indispensable to overcome the negative impact of unlimited access to information in the 21st century (Ismiyanti & Afandi, 2022; Sandi Budiana et al., 2023b; Siregar, 2019)

Based on the results of interviews conducted by the researcher on the 26th to 31st with Mr. Agus Haryanto S.Pd who is one of the 5th grade teachers of SDI Sultan Agung 1.3, the researcher found a problem, namely from the results of the critical thinking ability of the test, only 22 students, this was influenced by several things, namely the students were less enthusiastic during learning. So that when a teacher is explaining one of the learning materials, students chat a lot, not paying attention to the teacher's explanation. Students were seen responding indifferently to the teacher who was giving material and were busy with what they were doing with their classmates. This, of course, can affect the learning outcomes of students in the class. This is also influenced by the lack of a less varied learning model so that students feel bored quickly. In addition, the quality and success of learning is seen through the teacher's ability to determine learning media.

To overcome the above problems in order to achieve maximum educational goals, the role of teachers is very important and it is expected that teachers have a good teaching method/model and are able to choose the right learning model according to the subject concepts to be delivered (Bara & Xhomara, 2020). The researcher focuses on *the problem-based learning* model which has the main goal of being more student-oriented in developing critical thinking and problem-solving skills and at the same time building and developing students' ability to be more active in building their own knowledge. Through the application of this Problem Based Learning learning model, it is hoped that it can improve learning outcomes, students become independent, think critically, and democratically (Adisel et al., 2021).

Learning is also supported through the use of media in conducting student learning. In the current era of digitalization, technology is key in various aspects of life, especially in learning that integrates technology-based learning media (Sari et al., 2024). There are several types of media that support learning, one of which is Canva. Usually a teacher in delivering and explaining material, both in person or online, teachers use Canva-based PowerPoint learning media to present their material in the learning process (Ismiyanti et al., 2019). The Canva app is an easy-to-use online-based graphic design app for beginners. This application can be accessed on smartphones as well as on PCs. There are many features in this Canva application to make it easier for teachers to convey material to students.

The purpose of this study is to determine the effect of the application of the Canva-based Problem Based Learning (PBL) learning model on improving students' critical thinking skills in Indonesian subjects in grade 5 SDI Sultan Agung 1.3 Semarang. This research aims to create more fun and quality learning, as well as to encourage students to develop better critical thinking skills through the application of interactive and technology-based learning models.

METODE

The research method used is quantitative with experimental research. According to (Sugiyono, n.d.) Experimental research methods are methods to find out whether a behavior has an impact on the variables to be observed and researched. Meanwhile, the research scheme used is Pre-Experimental Designs (*nondesigns*). *Pre-Experimental Designs* are experimental designs that have not been really or have not been really researched. This is due to the discovery of external variables that also influence the formation of dependent variables. Due to the lack of research control variables and non-random sample selection, these results were obtained. Meanwhile, expressions that are applied or determined by *One-Group Pretest- Posttest Design*.

Population can be understood as any subject that exhibits a particular character that has been selected and studied and then used for a test (Sugiyono, n.d.). The population in this study is all students of class V SDI Sultan Agung 1.3 with a total of 20 students in class VA as many as 20 students in 5B students and 22 students in VC class. A sample belongs to a population or a small part of the population that is taken from a particular procedure so that it can be representative of the population. This sample uses a *purposive sampling* technique which is a sampling technique with certain considerations. The consideration in question is that the class that is used as a research sample is considered to be able to represent the population that is carried out in the VC SDI Sultan Agung 1.3 class which has a total of 22 students with a total of 13 male students and 9 female students. This data collection technique is a test. Tests are interpreted as a set of questions to measure students' skills and knowledge. Test techniques were selected for research data collection. The analysis of the research data used included validity, reliability, differentiating power, difficulty, normality test and hypothesis test pair sample *t-test*.

RESULTS AND DISCUSSION

Findings

The research used is quantitative with experimental research. The experimental research method is a method to find out whether a behavior has an impact on the variables to be observed and researched. Meanwhile, the research scheme used is Pre-Experimental *Designs (nondesigns)*. *Pre-Experimental Designs* are experimental designs that have not been really or have not been really researched. This is due to the discovery of external variables that also influence the formation of dependent variables. Due to the lack of research control variables and non-random sample selection, these results were obtained. Meanwhile, expressions that are applied or determined by *One-Group Pretest- Posttest Design*.

The population in this study is all students of class V SDI Sultan Agung 1.3 with a total of 20 students in class VA as many as 20 students in 5B students and 22 students in VC class. The sample used by the researcher was the VC SDI Sultan Agung 1.3 class which had 22 students with 13 male students and 9 female students. The initial data of the study was obtained from pretest questions (description questions) which were distributed to students before being given treatment and for the final data obtained from the posttest (description questions) after being given treatment using the Problem Based Learning learning model assisted by interactive media. The pretest and posttest questions that were given previously have been tested for data including validity tests, reliability tests, differentiating power, and difficulty levels. Pretest data obtained before being given treatment is then processed to find out that the data is normally distributed. The following is a breakdown of the data from the pretest results obtained:

Table 1. Pretest Results of Description Questions

No.	Information	Result
1.	Number of Students	22
2.	Average Score- (<i>Mean</i>)	51.045
3.	Modus	44
4.	Median	54
5.	Varian	121.855
6.	Standard Deviation	11.039

Posttest data obtained after being given treatment is then processed to find out that the data is distributed normally. The following is a breakdown of the data from the posttest results obtained:

Table 2. Posttest Results of Description Questions

No.	Keterangan	Result
1.	Number of Students	22
2.	Average Score- (<i>Mean</i>)	64.909
3.	Modus	58
4.	Median	63.5
5.	Varian	140.372
6.	Standard Deviation	11.848
7.	Minimum Grade	38
8.	Maximum Value	84

The next research data analysis, namely the normality test, obtained data classified as normal or abnormal contributions. This study was measured using SPSS version 24 through Shapiro Wilk because many respondents were less than 50 students. The following is the calculation of the table of the results of the normality test of the pretest data for the description question:

Table 3. Results of the Pre-Test Normality Test for Urine

	Tests of Normality					
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Pretest_Berpikir Kritis	.151	22	.200*	.919	22	.072

Based on the table shown that $Sig. = 0.072 > \alpha = 0.05$ so that the data is normal.

Table 4. Results of the *Posttest Normality* Test for Urine Questions

	Tests of Normality					
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Posttest_Critical Thinking	.105	22	.200*	.946	22	.750

Based on the table shown that $Sig. = 0.750 > \alpha = 0.05$ so that the data is **normal**. The next data analysis was the paired sample t-test hypothesis.

Table 5. Paired *Sample T Test* Test Results Description Questions

		Paired Samples Test							
		Paired Differences							
		95% Confidence							
		Std. Interval of the Difference							
		Mean	Std. Deviation	Std. Error	Lower	Upper	t	df	Sig. (2tailed)
Pair 1	Pretest - Posttest	-13.86364	7.64258	1.62940	-17.25217	-10.47510	-8.50821	21	.000

Based on the results of the SPSS data analysis, *Sig. (2)tailed*) is $0.000 < \alpha = 0.05$, then H_0 is rejected and H_1 is accepted. So it should be concluded that there is a difference in the problem based learning *model* assisted by interactive media on the critical thinking ability of Indonesian subjects in grade 5 SDI Sultan Agung 1.3.

Discussion

The research was carried out at SDI Sultan Agung 1.3 in 5th grade students regarding the critical thinking skills of Indonesian subjects against the problem based learning model assisted by interactive media. The research was conducted with the aim of finding out that the problem based learning model assisted by interactive media affects the critical thinking ability of Indonesian subjects in grade 5 SDI Sultan Agung 1.3. On the first day of the research (November 21, 2024), a pretest was given to understand the initial knowledge of grade 5 students. On the second day (November 26, 2024), treatment and posttests were given by applying a problem-based learning model assisted by interactive media. The steps that need to be applied to the problem-based learning model include: 1). Problem-orientation. The first step is for teachers to introduce students to issues relevant to real-world contexts to arouse students' interest and encourage further exploration. 2). Organizing students to learn. This second step is for teachers to form small or large groups so that students can discuss and work together in solving problems. 3). Individual and group investigations. The third step is for students to conduct research/investigation to understand the problem more deeply and find solutions. 4). Develop and present results. The fourth step is for students to develop solutions based on the information they have obtained and present the results to other groups. 5). Analyze and evaluate the problem-solving process. The last step is for teachers and students to jointly analyze the results of group work and the process undertaken, to assess the effectiveness of solutions and reflections on learning.

Based on the steps above, it shows that the problem-based learning model is very important to be applied in learning because the model can encourage students to actively engage in the learning process by solving real problems given by teachers. In the context of Indonesian subjects, the problem-based learning model can have the potential to have a significant impact. Students will not only hone their reading and writing skills, but will also be trained to formulate critical questions and analyze texts in depth (Mukhlisin et al., 2023). In this case, the application of the problem-based learning model has been proven to improve students' critical thinking skills. Therefore, teachers are expected to be able to apply the model to develop their skills through professional training and development in order to provide a more effective and meaningful learning experience for students (Hafriani et al., 2024).

In the learning process, there are several theories that can improve students' critical thinking skills, namely constructivism theory and Piaget theory. Constructivism theory is a learning theory in education where teachers can consider the knowledge possessed by students and provide opportunities for students to apply their abilities based on ideas and experiences (Adrillian & Noriza, 2024). In addition, the theory of constructivism also views students as active knowledge builders, learning designs that involve student participation through self-centered learning experiences (Rahayu, 2024).

In addition to the theory of constructivism above, Piaget's theory is a theory of cognitive development that states that children's intelligence changes as they grow (Witasari, 2024). Piaget also argued that children's knowledge is formed by itself through active exploration of the environment. The relationship between Piaget's theory and this research is that there is an encouragement for students to be able to play an active role in constructing their knowledge through learning with the application of the problem-based learning model (Lestari & Ardiansyah, 2023).



Figure 1. Learning Process in the Classroom

In addition to teachers applying *the problem-based learning* model, teachers also use interactive media assistance in the form of Canva. Teachers introduce and practice canva to students. From this learning process, students are interested in learning Indonesian so that students feel excited to work on the questions seriously. After the student received *treatment*, a *posttest* was given with the aim of being able to find out the critical thinking skills after being treated in the form of a *problem-based learning model* assisted by interactive media.

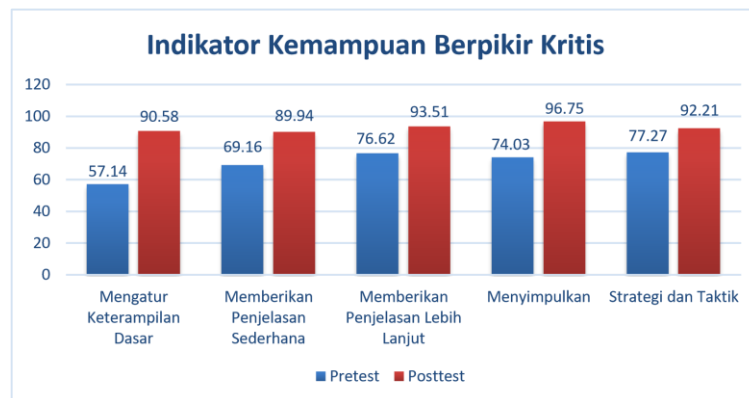


Figure 2. Results of Critical Thinking Ability Indicators

According to the graph above, the students' critical thinking skills from each indicator during *the pretest* and *posttest* have increased. The graph on the blue line shows the percentage of students' *pretest* results. During *the pretest*, students have not been able to master the indicators of critical thinking ability well. After receiving *treatment* and *posttest*, students' critical thinking skills increased, as evidenced by the red graph, that students' critical thinking skills increased compared to *the pretest*. As each indicator of critical thinking ability shown in the percentage above in indicator 1, namely "managing basic skills" reached 57.14% (*pretest*) and 90.58% (*posttest*). As with the research of Fitriani et al. (2020), this indicator has the potential to increase students' knowledge and reflective thinking in solving problems so that they can develop high-level questioning and thinking skills. Indicator 2, namely "providing a simple explanation", reached 69.16% (*pretest*) and 89.94% (*posttest*). As an indicator from research conducted by Minarti et al. (2023) that students are able to provide problems from various perspectives clearly. Indicator 3, namely "providing more explanations", reached 76.62% (*pretest*) and 93.51% (*posttest*). As with the research conducted (Sumarni & Kadarwati, 2020) that these indicators show that students can improve their critical thinking skills high in expressing their opinions, producing deeper and logical ideas. Indicator 4, namely "concluding", reached 74.03% (*pretest*) and 96.75% (*posttest*). As with the research conducted (Sumarni & Kadarwati, 2020) that these indicators show that students can make precise and

complete conclusions according to the context of the given problem. Indicator 5, namely "strategy and tactics", reached 77.27% (*pretest*) and 92.21% (*posttest*).

As with the research conducted (Susilo et al., 2020) that these indicators can be used to measure the achievement of indicators by carrying out strategies and tactics in solving problems. This is shown by the calculation of SPSS 24, namely in the *Paired Sample T Test* obtained, namely the significance (*Sig* 2-tailed) of 0.000 where the probability is < 0.05 , then H_0 is rejected or there is a difference in the problem based learning model assisted by interactive media on the critical thinking ability of Indonesian Grade 5 subjects SDI Sultan Agung 1.3 Semarang.

This is in line with research conducted by (Siregar, 2019) that learning that encourages students to think critically is a strategy in improving the quality of learning centered on achieving standardized results. In this study, it can be seen that *the problem-based learning* model can improve students' critical thinking skills by analyzing various information related to problems. In addition, according to the research carried out (Wahyu Ariyani & Prasetyo, 2021), the ability to think critically can affect the use of *the problem-based learning* model compared to using *the problem solving* model in thematic learning in grade IV elementary school. The results of the study showed that the average score difference in the *Problem Based Learning* learning model was 23.64 while the difference in the problem solving learning model was 11.89. Therefore, it can be concluded that the problem-based learning model can have an influence on students' critical thinking skills.

In addition to some of the studies above, research presented by (Utami & Giarti, 2020) that *the problem-based learning* model also affects students' critical thinking skills so that it can be effectively used. This is because there are advantages that support applying the problem-based learning model, namely students can play an active role in the learning process, students can have the opportunity to convey their ideas so that students' critical thinking skills can improve in facing problems or in answering questions.

CONCLUSION

Based on the research conducted at SDI Sultan Agung 1.3 using a problem-based learning model assisted by interactive media on the critical thinking skills of Indonesian Language Class 5 SDI Sultan Agung 1.3 Semarang, the researcher concluded that the problem-based learning model with the help of interactive media affects the critical thinking ability of Indonesian Language Grade 5 SDI Sultan Agung 1.3 Semarang. This is shown by the *Paired Sample T Test* obtained which is

significant (Sig2-tailed) as much as 0.000 where the probability is < 0.05 indicating that H_0 is rejected and H_1 is accepted. So that there are differences in the problem-based learning model assisted by interactive media that affects the critical thinking ability of Indonesian Language Grade 5 SDI Sultan Agung 1.3 Semarang. This research is only limited to Indonesian subjects in grade 5 of elementary school. Therefore, further research can be conducted to look at the effectiveness of interactive media-assisted PBL models in other subjects to provide a broader picture of the application of PBL in the context of primary education in general.

REFERENCE

- Adisel, Fadilah, A. N., Syafri, F. S., & Suryati. (2021). Pengaruh Model Problem Based Learning Terhadap Hasil Belajar Matematika Siswa SD. 4, 152–159.
- Adrillian, H., & Noriza, D. (2024). Studi Literatur : Pengaruh Model Pembelajaran Problem Based Learning dengan Pendekatan Konstruktivisme Terhadap Kemampuan Berpikir Kritis Matematis Peserta Didik. 57–65.
- Afandi, M., Ismiyanti, Y., Yustiana, S., & Apriliya, B. F. (2024). The Influence of The Monopoly-Assisted PAKEM Model on Students' Critical Thinking Skill in Elementary School. 10(1), 37–50.
- Bara, G., & Xhomara, N. (2020). The Effect of Student-Centered Teaching and Problem-Based Learning on Academic Achievement in Science The Effect of Student-Centered Teaching and Problem-Based Learning on Academic Achievement in Science. June. <https://doi.org/10.36681/tused.2020.20>
- Cahyaningtyas, A. P., & Ismiyanti, Y. (2022). Pelatihan Pembuatan Flipbook Interaktif Bagi Guru-Guru SD Negeri Desa Gentansari dan Twelagiri Universitas Islam Sultan Agung, Semarang, Indonesia. 3(4), 1112–1119.
- Hafriani, Juwanda, R., Dewi, C. R., & Hady, M. (2024). Pengembangan Keterampilan Berpikir Kritis Dan Pemecahan Masalah : Mengapa Hal Ini Penting Dan Bagaimana Cara Melakukannya. 1–9. <https://doi.org/10.26811/qxw5yg10>
- Ismiyanti, Y., & Afandi, M. (2022). Pendampingan Guru Sekolah Dasar Dalam Pembuatan Media Pembelajaran Berbasis Kearifan Lokal. JMM (Jurnal Masyarakat Mandiri), 6(1), 533. <https://doi.org/10.31764/jmm.v6i1.6462>
- Ismiyanti, Y., Cahyaningtyas, A. P., Guru, P., Dasar, S., Islam, U., Agung, S., Test, P., & Control, O. (2019). Pengembangan Bahan Ajar Mata Kuliah. V(1), 1–10.
- Jauhari, S. F., Purnamasari, V., & Purwaningrum, M. R. (2024). Pengaruh Model Problem Based Learning berbantuan Media Audio Visual terhadap Hasil Belajar IPAS. 4(April), 36–43.
- Lestari, E. P., & Ardiansyah, A. S. (2023). Peran Bahan Ajar Matematika Terintegrasi Challenge Based Learning Bernuansa STEM Berbantuan Quiziz terhadap Kemampuan Berpikir Kritis. 52–61.
- Montoya, M. S. R., Martínez, I. M. C., Z, J. S., & Miranda, J. (2022). Complex Thinking in the Framework of Education 4.0 and Open Innovation — A Systematic Literature Review.
- Muhamad Afandi, Yulina Ismiyanti, Sari Yustiana, & Bela Fina Apriliya. (2024). The Influence of The Monopoly-Assisted PAKEM Model on Students' Critical Thinking Skill in Elementary School. JIP Jurnal Ilmiah PGMI, 10(1), 37–50. <https://doi.org/10.19109/jip.v10i1.22626>
- Mukhlisin, L., Hayyi, A., Zuhdiniati, & Murcahyanto, H. (2023). Pengaruh Model Pembelajaran

- Berbasis Masalah Terhadap Kemampuan Literasi, Berfikir Kritis Pada Mata Pelajaran Bahasa Indonesia. 4, 22–36.
- Rahayu, T. T. (2024). Optimalisasi Hasil Belajar Bahasa Indonesia Melalui Penerapan Model Pembelajaran Problem-Based Learning Berbantuan Media Gambar pada Tema 1 Kelas III Sekolah Dasar Pendahuluan. 12(2), 83–94.
- Sandi Budiana, Yuli Mulyawati, & Feby Melaniawati. (2023a). Pengaruh Penerapan Model Problem Based Learning Bermedia Video Pembelajaran Terhadap Hasil Belajar Subtema Bersyukur Atas Keberagaman. In *Didaktik : Jurnal Ilmiah PGSD STKIP Subang* (Vol. 9, Issue 3, pp. 1695–1704). <https://doi.org/10.36989/didaktik.v9i3.1619>
- Sandi Budiana, Yuli Mulyawati, & Feby Melaniawati. (2023b). Pengaruh Penerapan Model Problem Based Learning Bermedia Video Pembelajaran Terhadap Hasil Belajar Subtema Bersyukur Atas Keberagaman. *Didaktik: Jurnal Ilmiah PGSD STKIP Subang*, 9(3), 1695–1704. <https://doi.org/10.36989/didaktik.v9i3.1619>
- Sari, Y., Abidin, Z., Kusumadewi, R. F., Ismiyanti, Y., & Ulia, N. (2024). The Effectiveness of Virtual Augmented Reality-Based Media to Improve Students' Critical Thinking Skill: An Experimental Study in Elementary School. 10(2), 76–23.
- Siregar, S. (2019). Penerapan Model Pembelajaran Open Ended Terhadap Peningkatan Kemampuan Berpikir Kritis Dan Motivasi Belajar Siswa Ditinjau Dari Pola Asuh Orang Tua. *Pasundan Journal of Mathematics Education : Jurnal Pendidikan Matematika*, 9(Vol 9 No.1), 31–43. <https://doi.org/10.23969/pjme.v9i.2709>
- Sugiyono. (n.d.). *Metode Penelitian Kuantitatif, Kualitatif dan R&D*. Alfabeta.
- Sumarni, W., & Kadarwati, S. (2020). Ethno-Stem Project-Based Learning : Its Impact To Critical. 9(1), 11–21. <https://doi.org/10.15294/jpii.v9i1.21754>
- Susilo, B. E., Darhim, D., & Prabawanto, S. (2020). Critical thinking skills based on mathematical dispositions in problem-based learning Critical thinking skills based on mathematical dispositions in problem-based learning. <https://doi.org/10.1088/1742-6596/1567/2/022101>
- Utami, R. A., & Giarti, S. (2020). Efektivitas Model Pembelajaran Problem Based Learning (Pbl) Dan Discovery Learning Ditinjau dari Keterampilan Berpikir Kritis Siswa Kelas 5 SD Pendidikan di Indonesia sudah Elementary Clasification (memberikan Advance Clarification (memberikan penjela. 1–8.
- Wahyu Ariyani, O., & Prasetyo, T. (2021a). Efektivitas Model Pembelajaran Problem Based Learning dan Problem Solving terhadap Kemampuan Berpikir Kritis Siswa Sekolah Dasar. In *Jurnal Basicedu* (Vol. 5, Issue 3, pp. 1149–1160). <https://doi.org/10.31004/basicedu.v5i3.892>
- Wahyu Ariyani, O., & Prasetyo, T. (2021b). Efektivitas Model Pembelajaran Problem Based Learning dan Problem Solving terhadap Kemampuan Berpikir Kritis Siswa Sekolah Dasar. *Jurnal Basicedu*, 5(3), 1149–1160. <https://doi.org/10.31004/basicedu.v5i3.892>
- Witasari, R. (2024). Belajar dan Pembelajaran dari Perspektif Teori Kognitif , Behaviorisme Konstruktivisme dan Sosiokultural. *Basica*, 3(2), 257–268. <https://doi.org/10.37680/basic.v3i2.5764>