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The influence of problem based learning with e-modules on students' critical thinking skills

Masyhuri[1], Utaminingsih, S.[2], and Shokib, W.[3]

[1]University of Muria Kudus, Indonesia

*Corresponding Author: kanghuri5@gmail.com

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Abstract: The purpose of reserch is to analyze the effect of the problem based learning (PBL) model assisted by E Module on the critical thinking skills of fourth grade elementary school students in Bonang District. Problem based learning is a learning model that presents problems as a stimulus in learning, which encourages students to identify, find solutions, and reflect on their learning process. The reserch is an experimental research with a quasi-experimental design approach using the pretest-posttest group design method. The population of this study was 196 students from grade IV at SD Gugus Patiunus, Bonang District, Demak Regency. The research sample consisted of 61 students consisting of 35 students from SDN Jatimulyo and 26 students from SDN Tlogoboyo with purpose sampling technique. Data collection technique was observation, documentation and test. The research instrument was essay questions. Data analysis used data description, prerequisite test including normality test and homogeneity test, hypothesis test (independent sample t test and normalized gain). The results of the study showed the influence of problem based learning model assisted by e-module on the critical thinking skills of grade IV students. Based on the results of t count> t table or or 8.960> 2.00247 and the value of ngain in the effective category: In conclusion, there is an influence of problem based learning model assisted by e-module on the critical thinking skills of grade IV students in science lessons on the material of style.

Keywords: problem based learning, e-module and critical thinking skills

1. Introductions

21st century education improvement demands a change in the learning paradigm from teacher-centered to student-centered. In the context of Natural Science learning at the Elementary School level, this change must be reflected in learning strategies that not only transfer knowledge, but also develop critical thinking skills, collaboration, scientific literacy, and no less importantly, students' scientific communication skills. Students can explore information or convey information orally and in writing from or to others clearly and precisely through scientific thinking activities.

Modern education focuses on the importance of higher order thinking skills (HOTS) as the main foundation in forming an adaptive, creative, and solution-oriented generation. One of the main skills that is highlighted is critical thinking skills, namely the ability to analyze, evaluate, and synthesize information to make decisions or solve problems rationally (Facione 2015). Critical thinking skills are needed in academic environments, and are an important basis in everyday life in the digital information era that requires individuals to filter and process data carefully and wisely.

Critical thinking is the act of analyzing general ideas towards specific ones, distinguishing through selection, review, identification and development (Sihaloho and Saragih 2024) The development of critical thinking skills is the process of combining various skill improvements such as observing, analyzing, reasoning, assessing, making decisions, and persuasion. Indicators in critical thinking skills include interpretation, analysis, evaluation, explanation, conclusion and self-regulation. Critical thinking is a very useful skill for students because it not only prepares them for success in life but is also used to solve various problems in everyday life (Almulla, M.A. and Al- Rahmi 2013)

*Corresponding author: kanghuri5@gmail.com

In the context of basic education, especially at the Elementary School level, learning that can stimulate critical thinking skills is very important to be implemented early on. Lessons that have great potential in teaching scientific skills are Natural and Social Sciences (IPAS). IPAS as an integrative subject contains various scientific and social concepts that are directly related to students' lives. IPAS has an important role in forming the foundations of these abilities. Science as an integrative subject contains various science and social concepts that are directly related to students' lives. Through science learning, students are invited to observe, reason, explore, and solve various environmental problems scientifically (Kemendikbudristek 2024). However, in reality, many students still have difficulty in developing critical thinking skills because the learning approach applied does not fully support the creation of a deep thinking process (Rosida, M., & Nuvitalia 2024). Therefore, the IPAS learning process should not only focus on mastering concepts, but also on critical and systematic thinking and problem-solving skills

However, the reality in the field shows that science learning in elementary schools is often still teacher- centered, where teachers deliver more material in one direction and students only become passive recipients of information. Lecture models and other conventional methods still dominate the teaching and learning process, so that students' opportunities for critical and exploratory thinking are very limited (Amilia, F., & Hartati 2024). This results in low student achievement in the aspect of critical thinking skills, which is reflected in the lack of students' ability to express opinions, connect concepts, and solve problems logically(Rosida, M., & Nuvitalia 2024).

The need for innovation in learning models that can help active student participation, improve conceptual understanding, and foster critical thinking skills. One learning model that is considered effective in this case is Problem Based Learning (PBL). PBL is a learning model that emphasizes solving real problems through group work, discussion, analysis, and student reflection (Hmelo-Silver 2019). In this model, students not only learn to solve problems, but also learn how to learn (learning how to learn). The application of PBL in science learning can significantly improve students' critical thinking skills compared to conventional learning models(Rohandini, M., Sukowati, R., & Hadi 2022). PBL has an effect on other subjects (Mudrikatunnisa, M. and Rondli 2024).

PBL implementation will be more effective, integration with modern educational technology such as the use of e-Modules is one potential solution. e-Modules are digital teaching materials that are interactive, flexible, and easily accessible, both online and offline. The use of e-Modules in learning allows students to learn independently, repeatedly, and at their own pace. In the context of problem-based learning, e-Modules can be designed in such a way as to present challenging problem scenarios, exploration instructions, reflection space, and self-assessment activities (Utami, S., Wulandari, R., & Nuraini 2023). The combination of the PBL and e-Modules models is believed to be able to create more meaningful, contextual learning, and is able to optimally develop students' critical thinking skills.

Recent resarch support the effectiveness of the combination of PBL and e-Modules in improving students' critical thinking skills. Research on the application of PBL is that students who learn using STEM-PBL based e- Modules show significant improvements in critical thinking and problem solving skills (Ariefah, R., Nurhalimah, S., & Rofiq 2025). Ramadiana & Sutarna in an experiment in grade IV of elementary school showed that the group using PBL with the help of e-Modules obtained higher post-test scores than the control group. In addition(Ramadiana, D., & Sutarna 2024). The use of e-Modules equipped with problem simulations and reflective tasks can facilitate students' in-depth thinking processes effectively (Pratiwi, N., Setiawan, D., & Yunita 2024)(Santoso 2023)

Research on the influence of e-Module-assisted PBL specifically on science lessons in grade IV of elementary school is still relatively limited. According to Piaget In fact, at that level, students are in the concrete operational development phase, where they begin to be able to think logically about real situations but still need concrete and visual media. (Santrock 2017) The influence of media-assisted PBL can also improve students' thinking skills (Santoso, C.C.I., Fakhriyah, F. and Khamdun 2025); (Yonanda, D.P., Masfuah, S. and Santoso 2025); (Murni, M., Utaminingsih, S. and Ismaya 2022).

The importance of learning innovation that does not only focus on content, but also on the process of developing critical thinking skills through appropriate models and supporting media. It is interesting to further research the influence of e-module-based Problem Based Learning on students' science communication skills at the Elementary School level, in order to provide scientific contributions as well as practical recommendations for teachers and policy makers in developing more effective learning strategies that are oriented towards developing 21st century skills..

It is important to conduct further studies on the effectiveness of the Problem Based Learning model combined with e-Module media in improving the critical thinking skills of elementary school students in science learning. This study will focus on empirically evaluating the extent to which the Problem Based Learning model assisted by e-Module is able to provide an influence on improving the critical thinking skills of fourth grade elementary school students in science subjects.

1.1 Conceptual framework

Students' critical thinking skills in science lessons are very necessary to solve everyday problems. In fact, students' critical thinking skills in science lessons in grade IV are still low based on the average learning outcomes of science on the material of force which is still below the minimum completeness. . One of the reasons why critical thinking skills are still low is because teachers are not innovative in learning. The learning model used is monotonous and not varied so that students' interest and motivation are lacking in learning science. The learning strategies and models needed to improve students' critical thinking skills are the Problem Based Learning (PBL) model..

Problem Based Learning is a learning model that describes the learning conditions of students who actively involve students in solving problems through the stages of the scientific method. The implementation of PBL aims for students to be able to learn knowledge based on problems and have skills in solving problems. By using the PBL model, the potential that can be produced from this model is that students are able to think critically, are trained to be disciplined, communicate with groups, be tolerant, responsible and can increase enthusiasm and advance student participation.

E-module (electronic module) as an interactive and varied learning media, because the digital module includes interactive text, images, videos, audio so that it is suitable for use in the learning process. The advantages of using e-modules in the learning process are learning patterns that allow students to learn independently and teachers are no longer the only source of learning for students. Based on the assumptions above, the Problem Based Learning (PBL) model based on e-modules is expected to improve the critical thinking skills of fourth grade students in science lessons.

2. Methodology

The research method is quantitative. The quantitative research method is a research method based on the philosophy of positivism, used to examine certain populations or samples and collect data using research tools, analyze quantitative or statistical data with the aim of testing predetermined hypotheses (Sugiyono 2020).

2.1 Research design

The experimental research design used is Quasi Experimental Design which is a study using a control group and an experimental group, but in this study the control group cannot function fully to control external variables that affect the implementation of the experiment. Quasi Experimental design is used because in reality it is difficult to obtain a control group used for research (Sugiyono 2021):

Table 1. Research Design

Group	Pre-Test	Treatment	Pos-Test
E1	O1	X1	O3
K	O2	X2	O4

2.2 Research variables

The variables are any type determined by researchers to be studied so that information is obtained about it, and then conclusions are drawn (Sugiyono 2020). The research variables are divided into independent variables, problem- based learning (PBL) based on e-modules and the dependent variable is students' critical thinking skills

Population and Sample

Population is a generalization area consisting of objects or subjects that have certain qualities and characteristics determined by researchers to study and then draw conclusions (Sugiyono 2020). The population in this study were 196 fourth-grade students at Dabin 1V Elementary School, Demak District.

According to Sugiyono, the sample is part of the number and characteristics possessed by the population. Sample selection is carried out using the purpose sampling technique (Sugiyono 2020). Purposive sampling is a sample determination technique with certain considerations. In purposive sampling, researchers select samples based on certain criteria or objectives that are relevant to their research (Sugiyono 2020). The sample of this study is:

Table 2. Research Sample

No	Class	Elementary School	Student	Learning
1	IV	elementary school Jatimulyo 1	35	PBL Berbantu E-Modul
2	IV	elementary school Tlogoboyo 1	26	Conventional
Total			61	

2.3 Data collection technique

According to Sugiyono Data collection techniques are the most strategic step in research, because the main purpose of research is to obtain data for further research (Sugiyono 2021). The data collection techniques used are observation, documentation and testing.

2.4 Data Analysis Techniques

Data analysis in this research is an instrument test (validity test, reliability test, difference test and test of the level of difficulty of the questions. Data analysis consists of analysis prerequisites (validity and reliability tests), hypothesis test t-test (independent sample t-test) and gain normality test (n-gain).

3. Research Results

3.1 Data Description

The data description comes from the results of the analysis of students' critical thinking ability scores through the initial test and final test of evaluation questions in the control class and the experimental class. The initial test is used as data to measure students' critical thinking abilities at the initial stage before learning is carried out. The final test data (post test) is used to determine the level of students' abilities after learning in terms of critical thinking abilities in the control class and the experimental class. The results of the initial and final data analysis as data descriptions and initial steps to test the previously formulated research hypothesis. The results of the data description analysis are

Table 3. Data Description

Control Class			PBL Class with E-Modules	
	Pre test	Postest	Pre test	Postest
Sampel	26	26	35	35
mean	29.69	58.65	24.94	84.91
Minimal	19	33	11	64
Maximal	44	83	39	100
sum	772	1525	873	2972

The data description table contains an average value of the PBL class with E-module of 24.94 and conventional of 29.69. In the initial test data for the control class and the experimental class, the average value was almost the same so that there was no difference in the abilities of the three classes. The final test (post test) showed an average value of the PBL class with E-module of 84.91 and conventional of 58.65. Both classes for the data showed an increase. The minimum completeness is 70, so for the PBL class with E-module above the minimum completeness, while for the control class it did not meet the minimum completeness. Based on the data above, a bar chart can be made for the pre-test and post-test results for each class.

Figure 1. Data Descriptive

3.2 Hypothesis testing

Hypothesis is a temporary answer to the formulation of the problem proposed. Hypothesis testing uses independent sample t-test and N Gain. independent sample t-test. The hypothesis is formulated in the form of a statistical hypothesis (one-sided test). The testing criteria are tcount compared to ttable with a significance level of The statistical hypotheses used are: 5%.

Ho: There is no difference in the influence of the Problem Based Learning (PBL) model assisted by E-modules with conventional learning on the critical thinking skills of fourth grade students in the science subject of force

Ha: There is a difference in the influence of the Problem Based Learning (PBL) model assisted by E-modules with conventional learning on the critical thinking skills of fourth grade students in the science subject of force.

Independent Sample t test results:

Table 4. Levene's Test for Equality of Variances

Levene's Test for Equality of Variances			t-test for Equality of Means		
		F	Sig.	t	df
Critical Thinking Skills	Equal variances assumed	1.820	.182	8.960	59
	Equal variances not assumed			8.556	43.608

Table 5. Independent Sample t test

	Class	N	Mean	Std. Deviation
Critical Thinking Skills	PBL Class with E-Modules	35	84.91	9.654
	Conventional Class	26	58.65	13.254

Based on the t-test table, the average value for both classes is different. The PBL class with e-nodules is 84.91 while the conventional class is 58.65. The calculated t value is 8.960 while the t table with df = 59 is 2.00247, so the calculated t> t table or 8.960> 2.00247, so Ha is accepted, meaning that there is a difference in the influence of the Problem Based Learning model with E-modules with conventional learning on the critical thinking skills of grade IV students of science subjects on the material of force.

3.3 Gain Normality Test

Gain Test is a test to determine the increase in critical thinking skills of grade IV elementary school students on the subject of style after learning is carried out by the teacher. The Gain test is obtained from the difference between the final and initial test scores.

Table 6. N-Gain

	Class		Statistic	Interpretation,
N-Gain Persentage	PBL Class with E-Modules	Mean	79.5248	Effective
	Conventional Class	Mean	39.5825	Ineffective

Based on the n-gain test table, the PBL class with e-module obtained a mean value of 78.5248 which is interpreted that the problem-based learning model with e-module is effective for learning science for grade IV on force material. The conventional class obtained a mean value of 39.5825 which is interpreted as ineffective because it is in the range of g < 40. This means that the conventional model is not effective for learning science for grade IV on force material Critical thinking is the ability that everyone has to analyze ideas or concepts in a more specific direction to gain relevant knowledge by involving evaluation of evidence (Widyawati, Adnyana, and Warpala 2019). Critical thinking skills can enable someone to analyze and evaluate critically by using various mental processes such as focusing, categorizing, selecting and evaluating. The critical thinking process directs students to focus their minds on processing and understanding each piece of information (Davut Gul, M., & Akcay 2020). The purpose of critical thinking is to test an opinion or idea, including thinking based on the opinion put forward. The opinions expressed are based on sources that can be accounted for. A key component of critical thinking is the ability to evaluate other people's statements. Information obtained from other people is not always accurate, so it is important for someone to provide reasons for it critically (Isiklar, S., & Abali Ozturk 2022)

The results of this study are strengthened by previous findings which state that by using the PBL model in the classroom learning process, students show an increase in critical thinking skills (Suryaningsih, A. and Koeswanti 2021). The PBL learning model is a learning model where students are faced with a problem at the beginning of learning, then followed by a student-centered information search process (Idris, I., Sida, S. C., & Idawati 2019). The use of problems in the PBL learning model is used to stimulate students' thinking skills. In recent times, the PBL learning model has continued to develop due to several things, such as the increasing demand to bridge the gap between theory and practice in learning, and the need to emphasize competencies in the real world in learning. The Problem Based Learning learning model or commonly abbreviated as the PBL learning model is a learning model that presents problems which will then be solved with high-level thinking skills. The problems that will be presented are real problems experienced by someone

The use of problem-based learning models is expected to provide real experiences to students, especially in solving problems that occur in everyday life (Fitri, M., Yuanita, P., & Maimunah 2020). The syntax of the PBL model is to orient students to problems, organize students to learn, guide individual and group investigations, develop and present results, analyze and evaluate the problem-solving process. The purpose of the PBL learning model is to develop students' critical thinking skills to solve problems and understand the concepts of learning materials (Nurrohma, R.I. and Adistana 2021).

The problem-based learning process begins by providing problems related to the real world, which will make it easier for students to understand. The next stage in PBL is that students are guided to re-analyze the problems given, then students are directed to create strategies or ideas to be able to solve problems according to the PBL stages, thus learning is more meaningful because students can remember the concepts or formulas used longer in solving problems on the material of force. This can be seen from students being more careful in completing each step of the solution in the LKPD, students are also seen transferring knowledge and discussing problems in the LKPD so that many students are correct in their answers. In this learning process, students are required to sit in groups to discuss solving the problems given. In groups, students are seen asking each other questions to students who understand the problems given better, which means that good communication is established between students so that group discussions run well and students can be more independent in solving a problem..

The use of e-modules in learning with a problem-based learning model is very helpful in visualizing the subject matter. E-modules are learning tools or facilities that contain materials, methods, limitations, and evaluation methods that are designed systematically and attractively to achieve the expected competencies according to their level of complexity electronically (part of e-learning). PBL-based Flipbook e-modules can empower critical thinking skills in elementary school science learning as a 21st century digital media innovation. Flipbook-based e-modules as learning media that combine text, narrative, video, practice questions and integration with learning models. PBL- based Flipbook e-modules as an effective solution for 21st century science learning according to the character of the material and learning styles of 21st century students as digital natives(Endaryati, S. A., Atmojo, I. R. W., St Y, S., & Suryandari 2021).

Based on the research results and opinions of experts and the results of several previous studies which state that problem based learning models with e-modules are more effective in improving critical thinking skills compared to conventional models.

4. Conclusion

There is a difference in the influence of e-module assisted problem based learning (PBL) with conventional learning on the critical thinking skills of grade IV students in science subjects on force. Based on the results of t count > t table or 8.960 > 2.00247 and the value of ngain is in the category of quite effective..

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Conflict of Interest

The authors declare there is no conflict of interest.

References

Almulla, M. A., & Al-Rahmi, W. M. (2023). Integrated social cognitive theory with learning input factors: The effects of problem-solving skills and critical thinking skills on learning performance sustainability. *Sustainability*, *15*(5), 4158. https://doi.org/10.3390/su15054158 *(Tahun disesuaikan dengan volume jurnal)*.

Amilia, F., & Hartati, D. (2024). Implementation of problem based learning model in improving critical thinking skills of elementary school students. *Jurnal Pendidikan Dasar*, *6*(2), 101–112.

Ariefah, R., Nurhalimah, S., & Rofiq, A. (2025). The influence of STEM-PBL based e-modules on critical thinking skills of junior high school students. *Jurnal Pendidikan Tambusai*, *9*(1), 23–31.

Davut Gul, M., & Akcay, H. (2020). Structuring a new socioscientific issues (SSI) based instruction model: Impacts on pre-service science teachers' (PSTs) critical thinking skills and dispositions. *International Journal of Research in Education and Science*, *6*(1), 141–159.

Endaryati, S. A., Atmojo, I. R. W., St Y, S., & Suryandari, K. C. (2021). Analysis of flipbook e-modules based on problem based learning to empower critical thinking skills in elementary school science learning. *DWIJA CENDEKIA: Jurnal Riset Pedagogik*, *5*(2), 300–310.

Facione, P. A. (2015). *Critical thinking: What it is and why it counts*. Insight Assessment.

Fitri, M., Yuanita, P., & Maimunah, M. (2020). Development of integrated mathematics learning tools for 21st century skills through the application of problem based learning models. *Jurnal Gantang*, *5*(1), 77–85.

Hmelo-Silver, C. E. (2019). The learning sciences perspective on problem-based learning. *Educational Psychology Review*, *31*(2), 227–233.

Idris, I., Sida, S. C., & Idawati, I. (2019). The influence of problem based learning model on elementary school students' social studies process skills and learning outcomes. *Indonesian Journal of Primary Education*, *3*(2), 58–66.

Isiklar, S., & Abali Ozturk, Y. (2022). The effect of philosophy for children (P4C) curriculum on critical thinking through philosophical inquiry and problem solving skills. *International Journal of Contemporary Educational Research*, *9*(2), 345–358.

Kemendikbudristek. (2024). *Guide to implementing the independent curriculum for elementary schools*. Direktorat Jenderal Pendidikan Anak Usia Dini, Pendidikan Dasar, dan Pendidikan Menengah.

Mudrikatunnisa, M., & Rondli, W. (2024). The influence of problem based learning model on student learning outcomes in understanding the concept of Pancasila education as the foundation of the state for grade 5 students, Elementary School 1 Adiwarno. *Jurnal Ilmu Pendidikan Muhammadiyah Kramat Jati*, *5*(2), 3–12.

Murni, M., Utaminingsih, S., & Ismaya, E. A. (2022). Development of student worksheets (LKPD) based on problem based learning (PBL) on critical thinking skills in thematic learning for grade IV elementary schools. *Jurnal Guru Kita*, *6*(4), 45–54.

Nurrohma, R. I., & Adistana, G. A. Y. (2021). Implementation of problem based learning model with e-learning media through Edmodo application in engineering mechanics. *Edukatif: Jurnal Ilmu Pendidikan*, *3*(4), 1431–1440.

Pratiwi, N., Setiawan, D., & Yunita, A. (2024). The effectiveness of e-modules in PBL-based science learning in elementary schools. *Jurnal Edukatif: Jurnal Ilmu Pendidikan*, *10*(1), 59–68.

Ramadiana, D., & Sutarna, H. (2024). Improving critical thinking skills through e-module assisted PBL in grade IV elementary school students. *Jurnal Didaktik Pendidikan Dasar*, *8*(1), 45–55.

Rohandini, M., Sukowati, R., & Hadi, W. (2022). The influence of problem based learning model on critical thinking skills of grade IV students. *Jurnal Pendidikan Dasar Indonesia*, *7*(2), 88–95.

Rosida, M., & Nuvitalia, F. (2024). Students' critical thinking process in science learning through problem based learning model. *Jurnal Inovatif Pendidikan Dasar*, *5*(1), 71–78.

Santoso, C. C. I., Fakhriyah, F., & Khamdun, K. (2025). Improving critical thinking skills using problem based learning assisted by caper media in elementary schools. *Janacitta*, *8*(1), 9–18.

Santoso, D. (2023). Analysis of critical thinking and self-regulation in blended method, module-aided, problem-based learning. *DIDAKTIKA: Jurnal Pendidikan Sekolah Dasar*, *6*(2), 1–10.

Santrock, J. W. (2017). *Child development* (14th ed.). McGraw-Hill Education.

Sihaloho, S. M., & Saragih, M. J. (2024). Penerapan model problem based learning untuk meningkatkan kemampuan berpikir kritis siswa pada pembelajaran matematika [Implementation of the problem based learning model to improve students' critical thinking skills in mathematics learning]. *JOHME: Journal of Holistic Mathematics Education*, *8*(1), 101–115. https://doi.org/10.19166/johme.v8i1.8270

Sugiyono. (2020). *Qualitative research methods for yang research character: Explorative, interpretive and constructive*(Y. Suryandari, Ed.). Alfabeta.

Sugiyono. (2021). *Quantitative, qualitative and R&D research methods*. Alfabeta.

Suryaningsih, A., & Koeswanti, H. D. (2021). Differences between problem based learning and project based learning models in improving critical thinking skills in elementary school students' science. *Mimbar PGSD Undiksha*, *9*(1), 45–54.

Utami, S., Wulandari, R., & Nuraini, M. (2023). Development of PBL-based interactive e-modules to improve elementary school students' learning independence and critical thinking. *Jurnal Pendidikan Mandiri*, *7*(1), 89–100.

Widyawati, T., Adnyana, B., & Warpala, I. W. S. (2019). The effectiveness of the application of question-based guided inquiry learning on understanding science concepts and science process skills in the interaction of living things with their environments in class VII at SMP Negeri 3 Banjar. *Jurnal Pendidikan Biologi Undiksha*, *6*(2), 83–92. https://ejournal.undiksha.ac.id/index.php/JJPB/index

Yonanda, D. P., Masfuah, S., & Santoso, D. (2025). The effectiveness of problem based learning model assisted by Avisca media to improve critical thinking skills of fourth grade students of Tamansari 03 F Elementary School. *Jurnal Pedagogik dan Dinamika Pendidikan*, *13*(1), 1–10.