International Journal on Science and Technology (IJSAT)
E-ISSN: 2229-7677 ● Website: www.ijsat.org ● Email: editor@ijsat.org

The Effect of the Problem-Based Learning Model in Social Studies Learning On the Understanding of Concepts and Process Skills of Students of Sd Inpres Borisallo Parangloe District, Gowa Regency

Sri Bulan[1], Nursalam[2], Muhammad Nawir[3]

[1, 2, 3]Master of Elemtary Education Universitas Muhammadiyah Makassar

Abstract

This study aims to analyze the influence of the Problem-Based Learning model in Social Science (IPS) learning on the understanding of concepts and process skills of students at SD InpresBorisallo, Parangloe District, Gowa Regency. This study uses an experimental method with a nonequivalent control group design. The research population is upper-class students at SD InpresBorisallo, with a sample of 40 people selected using a simple random sampling technique. Data was collected through tests and analyzed using validity tests, normality tests, homogeneity tests, and hypothesis tests. The results showed that: (1) there was a significant influence of the problem-based learning model on students' understanding of concepts ($p < 0.05$; $0.000 < 0.05$); (2) there was a significant influence of the problem-based learning model on students' process skills ($p < 0.05$; $0.020 < 0.05$); and (3) there was a significant influence of the problem-based learning model on students' overall understanding of concepts and process skills ($P < 0.05$; $0.000 < 0.05$). These findings show that the problem-based learning model is effective in improving the quality of social studies learning at the elementary school level.

Keywords: Problem-Based Learning Model, Concept Understanding, Process Skills

A. Introduction

Education is a very important basic need in human life. In Law Number 20 of 2003 concerning the National Education System, education is defined as a conscious and planned effort to create a conducive learning atmosphere, so that students can actively develop their potential. Education aims to form individuals who have religious spiritual strength, intelligence, noble morals, and skills that are beneficial to themselves, society, nation, and state. This is in line with Law Number 14 of 2005 Article 10 Paragraph 1, which emphasizes that educators are required to have academic qualifications, professional competence, and the ability to achieve national education goals.

In addition, the Qur'an also emphasizes the importance of education, as stated in Surah Al-Jumu'ah verse 2. This verse illustrates that the Prophet was sent to read the verses of Allah, purify people, and teach books and wisdom. This message emphasizes that education is not only about knowledge transfer,

but also includes the formation of morals and skills. Therefore, the education system must be designed to create learning that is not only cognitive but also holistic.

However, in practice, the learning system in schools is still often dominated by lecture methods. This method tends to be less interactive and ineffective in developing students' critical thinking skills. Teachers are often more active in speaking, while students are only passive listeners. This results in low attention, interest, and motivation for students' learning. In the end, learning outcomes tend to decline because learning is not interesting and monotonous.

Especially in Social Sciences (IPS) learning, students need a concrete and fun approach. At elementary school age, students are still at the concrete operational stage so they need hands-on experience to understand abstract concepts. Teachers have an important role to create interesting learning through the use of innovative media and learning models, so that students can more easily understand the material.

The Problem-Based Learning model is one of the relevant alternatives to improve students' understanding of concepts and process skills. This model is in line with the mission of the 2013 Curriculum, which emphasizes an active, creative, and contextual approach to learning. With this model, learners are encouraged to think critically, work collaboratively, and solve real problems that are relevant to their lives.

Previous research supports the effectiveness of problem-based learning models in improving student learning outcomes. Fachrurazi (2011) showed that this method can increase the mastery of social studies competencies at SDN Gisikdrono 04 Semarang. Similar results were also found by Akas (2016), who reported an increase in students' activities and learning outcomes at SDN Ngembung. Meanwhile, Syaichudin (2010) showed that the use of problem-based learning models can significantly improve social studies learning outcomes.

Although empirical evidence shows the effectiveness of the problem-based learning model, social studies learning at SD InpresBorisallo still uses conventional methods. Based on initial observations, it was found that most students were less enthusiastic and often felt bored during the learning process. This is reflected in the low percentage of students who reach the Minimum Completeness Criteria (KKM). This situation demands innovation in the learning methods used by teachers.

Against this background, this study aims to analyze the influence of the problem-based learning model on students' understanding of concepts and process skills in social studies learning. This research is expected to contribute to improving the quality of learning at SD InpresBorisallo, Parangloe District, Gowa Regency.

B. Research Methods

a) Type of Research

This study uses a quasi-experiment method with a quantitative approach. Sugiyono (2010) explained that experimental research is a systematic, logical, and controlled research model to test the influence of certain treatments on a variable under controlled conditions. Quasi-experimental research has a control group, but does not fully control external variables that can affect the outcome of the experiment. The design used is *a nonequivalent control group design*, which involves two groups, namely the experimental class and the control class.

b) Location and Time of Research

This research was carried out at SD InpresBorisallo, Parangloe District, Gowa Regency, with a research period from April 28 to June 10, 2022.

c) Population and Sample

1) Population
   The population in this study is all students in grades IV to VI of SD InpresBorisallo for the 2021/2022 school year, consisting of 80 students (34 males and 46 females).
2) Samle
   The sample of this study consisted of 40 students who were selected using *a simple random sampling* technique. The sample was divided into two groups, namely 20 students as an experimental class and 20 students as a control class.

No	Class	Man	Woman	Sum
1	V A (Experiment)	8	12	20
2	V B (Control)	9	11	20
	Total	**17**	**23**	**40**

d) Data Collection Techniques

1) Data Type
   The data collected was in the form of quantitative data measured through a test of concept understanding and process skills.
2) Data Source
   The source of data comes from the results of the pretest and posttest tests for grade V students of SD InpresBorisallo.
3) Data Collection Instruments
   - Concept Comprehension Test: In the form of multiple choice with 15 questions. Scores are given based on correct (1) and incorrect (0) answers.
   - Process Skills Test: The test consists of 6 questions in the pretest and 3 questions in the posttest. The maximum score for each question is 4, while the minimum score is 1.

e) Research Procedure

1) PretestBoth groups (experimental and control) were given a preliminary test to measure conceptual understanding and process skills before the treatment was administered.
2) Learning Implementation
   - Experimental Group: Given treatment in the form of applying a problem-based learning model involving stages such as problem orientation, student organization, investigation, presentation of results, and evaluation of problem solving.
   - Control Group: Using conventional methods in the form of lectures and assignments without the application of a problem-based learning model.

3) Posttest
After the learning was completed, the two groups were again given a test to measure the difference in concept understanding and process skills after treatment.

f) Variable Operational Definition

1) Problem-Based Learning Model: A learning strategy that uses contextual problems to encourage students to think critically and solve problems.
2) Concept Comprehension: Learners' ability to understand and interpret the material being taught, measured through a multiple-choice test.
3) Process Skills: The ability of students to apply the material learned, measured through tests in the form of open-ended questions.

) Data Analysis Techniques

1) **Descriptive Statistics**
The data was analyzed using descriptive statistics to describe the distribution of the data, including averages, standard deviations, and value ranges.
2) **Inferential Statistics**
Hypothesis testing is carried out using:
- Normality Test: Using the Kolmogorov-Smirnov and Shapiro-Wilk tests to ensure the data is normally distributed.
- Homogeneity Test: Using the Levene test to test the similarity of variance between the experimental and control groups.
- Hypothesis Test: Uses a t-test to measure the difference between the experimental and control groups. The test was carried out with a significance level of 0.05.

C. Research Results and Discussion

1. The Effect of Problem-Based Learning Model in Social Studies Learning on Students' Understanding of Concepts

Descriptively, the results of the study that are pleasing to the improvement of students' understanding of concepts taught using the problem-based learning model with students who are not taught using the problem-based learning model can be seen in tables 4.1 and 4.4. Based on the table, the average *post-test* score obtained by students in the experimental class was 81.30, while the average score obtained by students in the control class was 68.33. This shows that the average *posttest* score in the experimental class is higher than the average score in the control class.

Furthermore, a hypothesis test was carried out using *an independent sample t test.* Based on the tests that have been carried out, a significant value of 0.000 was obtained, the value is less than 0.05, so it can be concluded that there is a problem-based influence on the understanding of the concept. From the results of the SPSS analysis, there was a *Mean Difference* in concept understanding between the experimental class and the control class of 13.00.

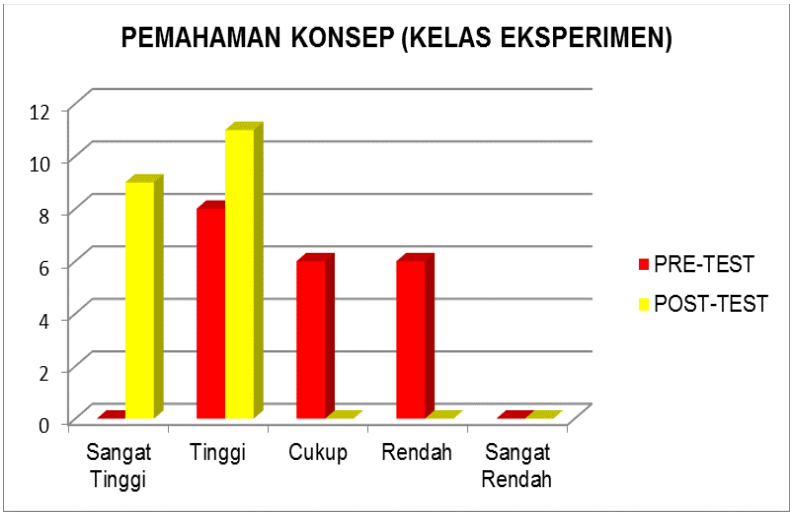
Problem-based learning is the interaction between stimulus and response, which is a relationship between the two directions of learning and the environment (Sanjaya, 2011: 215). This learning helps learners to process the pre-made information in their minds and compile their

own knowledge about the social world and its surroundings. This learning is suitable for developing basic and complex knowledge (Ibrahim and Nur, 2010).

Problem-based learning is oriented to students' ability to process information referring to the ways people handle stimuli from the environment, organize data, see problems, develop concepts and solve problems and use verbal and non-verbal symbols (Suprijono, 2011).

Conceptual understanding is a person's ability to interpret, interpret, translate or express something in his own way about the knowledge he has received (Mohamad, 2015). The ability to understand a concept is the ability to reexpress the meaning of the material obtained during learning, whether spoken, written, or drawn by the teacher. Students are said to be able to understand the material if they can relate new knowledge with the old knowledge they have.

Problem-based learning can improve students' understanding of concepts because problem-based learning can help students to process the information that has been obtained so that students can improve their understanding and can re-express the information they have obtained. This is in line with research that has been conducted by Eka Yulianti (2019) with the results of the study stating that problem-based learning (PBL) is more effective in improving students' understanding of concepts and critical thinking.



Similar research was also conducted by TutikRusmawati (2018) with the results of the study stating that there is an influence of the application of the Problem *Based Learning model* on students' understanding of concepts. Based on the results of the research and discussion above, it can be said that there is an influence of the problem-based learning model on students' understanding of concepts.

2. The Effect of Problem-Based Learning Models on Process Skills

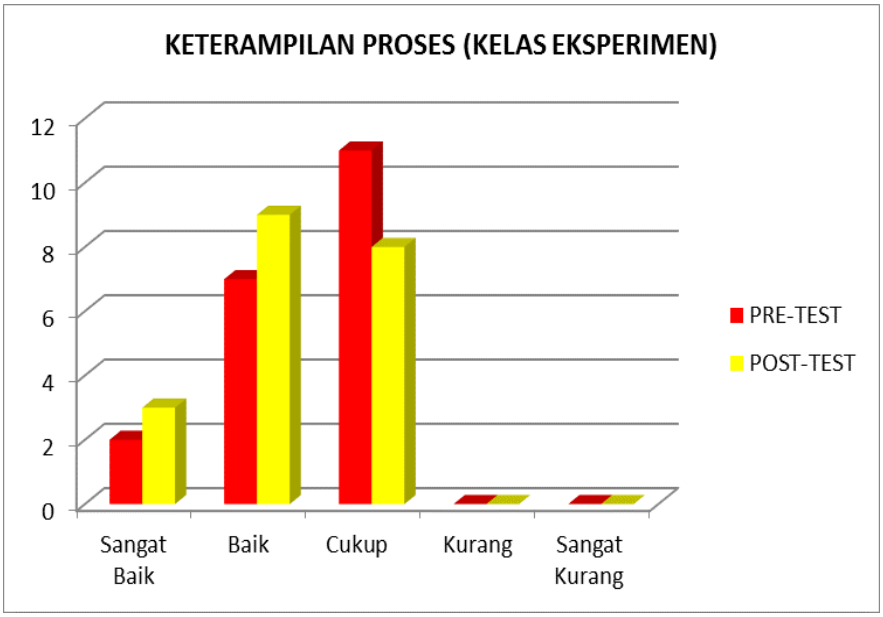
Descriptively, the results of the research that are pleasing to the improvement of the process skills of students who are taught using the problem-based learning model with students who are not taught with the problem-based learning model can be seen in Table 4.7 and Table 4.10 Based on the table, the average *post-test* score The average score obtained by students in the experimental class was 66.25, while the average score obtained by students in the control class

was 56.88. This shows that the average *posttest* score in the experimental class is higher than the average score in the control class.

Furthermore, a hypothesis test was carried out using *an independent sample t test.* Based on the tests that have been carried out, a significant value of 0.020 was obtained, the value is less than 0.05, so it can be concluded that there is an effect of the application of the problem-based learning model on students' understanding of concepts and process skills. From the results of the SPSS analysis, there was a *Mean Difference* (mean difference) of problem-solving ability between the experimental class and the control class of 9.37.

Students' process skills can be trained through the learning process in the classroom. One of the learning models that can be used in the learning process to improve students' process skills is the problem-based learning model. The problem-based learning model is an instructional method that challenges students to learn and to learn, work with groups to find solutions to real problems. This problem is used to relate the curiosity and skills that students have in solving the problems they face. The problem-based learning model prepares learners to think and analytically as well as their skills in finding and finding solutions using appropriate lesson sources.

Problem-based learning begins with student orientation where students are faced with problems that will make students think and use their skills in solving these problems. Then students are guided or directed in solving these problems. Problem-based learning as a process that involves mental operations such as reasoning and provides encouragement to students not only to think concretely, but also to think about abstract and complex ideas using their skills.



The problem-based learning model has a positive influence on students' process skills. Students will use their skills in solving a given problem. Every student is faced with a complex problem that is associated with learning materials that they often encounter in their daily lives. This is in line with research conducted by Handika (2013) with the results of the study that learning has a significant and better effect than conventional learning on students' process skills. This is also in line with research conducted by Indris (2019) with the results of research that learning by applying *a problem-based learning* model can improve process skills.

3. The Effect of the Problem-Based Learning Model on Students' Concept Understanding and Process Skills

The effect of the application of the problem-based learning model on the understanding of concepts and process skills simultaneously can be seen from the results *of the pillai's trace statistical test* on the multivariate test table with a significant value of 0.000, where 0.000 < 0.05 according to the criteria that H0 is rejected and H1 is accepted. Therefore, there is a significant influence of the application of the problem-based learning model on the understanding of concepts and process skills of grade V students of InpresBorisallo Elementary School, Gowa Regency.

Problem-based learning is a learning strategy by exposing society and students to practical problems as a foothold in learning or in other words students learn through problems. In problem-based learning, students will be faced with real problems related to the material studied. These problems will make students think according to their understanding and skills to solve or solve the problems they are facing.

Problem-based learning has implications for training students in solving the problems they face, encouraging cooperation in completing tasks, training students in conducting investigations independently or in groups so that they can interpret and explain real-world phenomena and build an understanding of these phenomena independently.

Understanding concepts is an important part of the learning process and solving problems, both in the learning process itself and in the daily environment. The understanding of the concept in question is the ability of students to process the confirmation that has been obtained and classify the information so that they can convey the information that has been processed properly. Understanding of a material will be supported if the delivery or method in learning used is appropriate. One of the right learning methods or models to be applied in the learning process that is able to improve the ability to understand concepts is the problem-based learning model. This is in line with research conducted by Handika (2013) Problem-based learning has a significant and better effect than conventional learning on the mastery of science concepts of elementary school students.

The problem-based learning model is not only able to improve concept understanding, but also able to improve students' process skills. In the learning process, students will be faced with a problem for them to solve. Of course, to solve these problems, you must have a good understanding and good skills. Students' process skills will be seen from how each student is able to solve these problems. This is in line with research that has been conducted by Idris (2019) with the results of research that learning using *a problem-based learning* model can improve students' process skills.

D. Conclusion

Based on the results of research conducted in grade V of SD InpresBorisallo, Parangloe District, Gowa Regency, it can be concluded that the application of the problem-based learning model has a significant influence on social studies learning. This model has proven to be effective in improving students' understanding of concepts. The test results showed that students who took part in problem-based learning experienced an increase in concept understanding better than conventional learning methods.

In addition, the application of the problem-based learning model also has a positive influence on students' process skills. Through this learning, students are more active in critical thinking, problem-solving, and working collaboratively. This can be seen from the increase in the results of the process skills test in the experimental class, which shows that this learning approach helps students in developing skills relevant to social studies learning.

Overall, the application of the problem-based learning model in social studies learning contributes to improving students' understanding of concepts and process skills. Thus, this model can be an effective alternative in creating active, fun, and meaningful learning for students at the elementary school level.

DAFTAR PUSTAKA

1. Ahmad, Susanto. 2013. *Learning Theory and Learning in Elementary Schools*, Jakarta: KencanaPrenada Media Group.
2. Anderson, L. W. & Krathwohl, D. R. 2010. *Foundational Framework for Learning, Teaching, and Assessment.* Translator: Agung Prihantoro. Yogyakarta: Student Library.
3. Arikunto, Suharsimi. 2010. *Fundamentals of Educational Evaluation*. Jakarta: PT Bina Aksara.
4. Aunurrahman. 2011. *Learning and Learning*, Bandung: Alfabeta
5. Dimyati and Mudjiono. 2016. *Learning and Learning*. Jakarta: PT RinekeCipta
6. Djahiri, Kosasih. 2016. *Social Science Teacher's Guide*, Jakarta: Ministry of Education and Culture.
7. Ghozali. 2011. *Introduction to Educational Statistics*, Jakarta: PT. Raja GrafindoPersada, Cet.X.
8. Hamalik, Oemar. 2014. *System-Based Teaching Planning*. Jakarta: BumiAksara.
9. Handika, I., & Wangid, M. N. 2013. The Effect of Problem-Based Learning on the Acquisition of Science Process Concepts and Skills of Grade V Students. *Journal of Prima Edukasia*, 86 - 93.
10. Hasminawira. 2017. *Improving Student Learning Outcomes on Continental Materials in the World of Social Sciences Subjects Through a Jigsaw-Type Cooperative Learning Model in Grade VI Batuganda Students, North Kolaka Regency*. Kendari: PGSD FKIP UHO (Thesis, unpublished).
11. Huda, M. 2011. *Teaching and Learning Models.* Yogyakarta: Student Library.
12. Hujodo, Herman. 2010. *Development of Mathematics Teaching and Learning Strategy Curriculum.* Malang: IKIP Malang.
13. Ibrahim M. and Nur M. 2010. *Problem-Based Teaching.* Surabaya: University Press.
14. Idris, I., Sida, S., & Idawati. 2019. *The Effect of Problem Based Learning Model on Social Science Process Skills and Learning Outcomes of Elementary School Students*. IJPE, 2597 - 4866.
15. Isjoni. 2010. *Cooperative Learning Effectiveness of Group Learning.* Bandung, Alfabeta.
16. Nur, Mohamad. 2011. *Problem-Based Learning Model*. Surabaya: Unesa School Science and Mathematics Center.
17. Ridwan. 2014. *Easy Learning Research for Teachers, Employees and Beginner Researchers*, Bandung: Alfabeta, cet.II.
18. Susanto, Ahmad. 2014. *Development of Social Studies Learning in Elementary Schools.* Jakarta: Pranemedia Group.
19. Susanto, Ahmad. 2016. *Learning Theory and Learning in Elementary Schools.* Jakarta: Prenamedia Group.

20. Trianto. 2012. *Designing an Innovative-Progressive Learning Model.* Jakarta: KencanaPrenada Media Group.
21. Trianto. 2017. *Constructively Oriented Innovative Learning Models*. Jakarta: Achievement of Library Learning.
22. Uno, H. B. & Mohamad, N. 2015. *Learning with an Innovative Active Learning Approach Creative Environment Effective Attractive.* Jakarta: BumiAksara.
23. Usman, Moh.Uzer and Setiawati, Lilis. 2013. *Efforts to Optimize Teaching and Learning Activities*. Bandung: PT. RemajaRosdaKarya.
24. Wena, Made. 2011. *Innovative Learning Strategies of Kontenporer*. Jakarta: BumiAksara.
25. Vienna, Sanjaya. 2012. *Curriculum and Learning*. Jakarta: KencanaPrenada Media.
26. Yulianti, E., & Gunawan, I. 2019. *Problem Based Learning (PBL) Learning Model: Its Effect on Concept Understanding and Critical Thinking*. Indonesian Journal of Science and Mathematics Education, 399 - 408.