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Improving fifth- grade students' learning outcomes using problem-based learning model in the integrated thematic learning

Dian Diniyyah[1], Yarisda Ningsih[1*]
[1]Department of Elementary Teacher Education, Padang State University, Padang, Indonesia

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ABSTRACT

The study was motivated by the learning process that has not been student-cantered, students were less active in learning, teachers had not applied innovative group-based models, and student learning outcomes were still low. The approach used by researchers in this study was a combination of qualitative and quantitative approach. the method used in this study was classroom action research (CAR). This study was conducted in the first semester of the 2022/2023 school year. The subjects in this study were 23 students. The data source was the process and results of implementing integrated thematic learning with a problem-based learning model. The techniques used were observation, tests and non-tests. The results of the study showed that students' learning outcomes increased from the learning activities in cycle I to cycle II. This study concluded that the problem-based learning model can improve student learning outcomes in integrated thematic learning.

Corresponding Author:

Yarisda Ningsih
Department of Elementary Teacher Education, Padang State University, Padang, Indonesia
Email: yarisdaningsih@fip.unp.ac.id

INTRODUCTION

Learning outcomes are a very important factor in education. In general, the learning outcomes obtained by students can also be seen from the students' ability to remember the learning that has been delivered by the teacher during the learning process. Learning is a process to get better. Through the learning process carried out, a learning result will be obtained which results in a change in behavior, both in the form of attitudes, knowledge and skills. Learning outcomes are changes that occur in students, which include cognitive aspects or knowledge, affective or attitudes, and psychomotor or skills as a result of learning activities. Dimyati and Mudjiono (in Nurkhotimah, Joharman and Suripto, 2016). The learning process is carried out in accordance with the time that has been determined for students (Jihad, et al, 2013). Then, learning outcomes are the potentials that students have after getting learning experiences (Lestari dkk., 2023; Sudjana in Yasrina, et al, 2015).

Learning outcomes are changes that occur in students, both concerning cognitive, affective, and psychomotor aspects as a result of learning activities (Susanto, 2013). In order for

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learning activities to achieve maximum results, it is necessary to try supporting factors such as good student conditions, supporting facilities and environment, and the right learning process.

Based on observations made by researchers in carrying out the learning process in class v thematic lessons at SDN 01 Situjuah Gadang, Lima Puluh Kota Regency on Wednesday, July 13, 2022, it turns out that the authors found many problems, especially in the aspects of students and teachers. In the aspect of students, it can be seen that integrated thematic learning is still teacher-centered, where teachers dominate learning by explaining and asking questions in the learning process, so that it has an impact on students, namely: (1) learning outcomes of thematic lessons are very low, (2) students are not active in learning, where the reaction of students tends to be passive and lack of interest in learning which can be seen from the few students who ask questions during learning, (3) students get bored quickly with learning (4) students become accustomed to receiving all information from the teacher, so that students become less able to solve their own problems, (5) students lack interaction with friends, (6) students lack creativity in learning and thinking, (6) students are not disciplined in doing assignments.

In thematic learning, teachers are required to be able to develop learning effectively because in the 2013 curriculum teachers must be ready to become facilitators for students in the learning process. Teachers are required to be able to choose a learning model that can help students develop themselves, and spur the enthusiasm of students to actively participate in learning. One of the learning models that can develop students' thinking skills (reasoning, communication, and connection) in solving problems is the Problem Based Learning (PBL) model. Where the teacher plays a role in guiding students to learn problem-based as according to Rusman (2014) that the teacher must be ready to be a guide for students in motivating, encouraging in mastering problem solving skills.

The Problem Based Learning (PBL) model is a model that directs students actively in learning where the delivery is done by presenting a problem, asking questions so that students are able to compile their own knowledge. According to Gunantra (2014) Problem-based learning model is a learning model that involves students in real problems, this model causes motivation and curiosity to increase. According to Trianto, (in Yarisda, et al, 2019) "Problem Based Learning Model (PBL) is a learning model that uses real problems in everyday life in the learning process."

According to Fathurrohman (2015) the main purpose of Problem Based Learning is not the delivery of a large amount of knowledge to students, but is oriented towards developing the willingness to think critically and problem solving skills and at the same time developing the ability of students to actively build their own knowledge. The Problem Based Learning (PBL) model is very suitable for improving student learning outcomes because this model involves students directly in linking the surrounding environment with learning materials. So that students gain direct experience from the process of discovering the concepts they learn. The Problem Based Learning model is a solution to the problem of integrated thematic learning that can be applied in schools.

Based on the background of the problem above, the general problem formulation is: how is the improvement of student learning outcomes in integrated thematic learning using the Problem Based Learning (PBL) learning model in class V SDN 01 Situjuah Gadang?

Based on the formulation of the problems that have been formulated above, in general, this study aims to describe the improvement of student learning outcomes in integrated thematic learning using the Problem Based Learning (PBL) model in class V SDN 01 Situjuah Gadang.

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THEORETICAL FRAMEWORK

The use of problem-based learning model is able to make students become independent, diligent in reading, critical thinking and democratic. Eggen and Kauchak (2012) say learners involved in problem-based learning need one problem to solve, and for inexperienced learners, problems will be most effective if they are clear, concrete, and close to personal daily life. This simple problem will stimulate learners to react to the problem at hand. Problem-based learning can work well if the theme is able to encourage students to participate. Student participation can arise due to curiosity.

According to Rutiah (in Dania 2020) Problem Based Learning Model is a learning model that makes students more active in thinking and understanding a material in groups by exploring real problems around them, so that students get a deep and more meaningful impression of what they are learning. According to Wulandari (2016: 33) PBL characteristics include lessons focused on problem solving, responsibility for solving problems rests with students, teachers support the process when students work on problems.

The Problem Based Learning model has several advantages, namely students better understand the concepts taught because students find these concepts, actively involve students in solving problems and demand higher thinking skills of students, students' knowledge is embedded based on their experiences, so that learning is more meaningful, students can feel the benefits of learning, because the problems solved are directly related to real life.

The steps of Problem Based Learning according to Hosnan (2014: 301) are as follows:

1) The first step, orienting students to the problem. The teacher explains the learning objectives and the tools needed. The teacher motivates learners to engage in real problem-solving activities that are selected or determined. The problem can come from the teacher or be determined jointly by the learners.
2) Step two, organizing learners to learn. The teacher helps learners define and organize learning tasks related to the problem that has been oriented in the previous stage.
3) Step three, guiding individual and group investigations. The teacher encourages learners to gather appropriate information and carry out experiments to obtain explanations and solve problems.
4) Step four, developing and presenting work. The teacher helps learners to share tasks and plan or prepare appropriate works with the results of problem solving in the form of reports, videos or models.
5) Step five, analyze and evaluate the problem-solving process. The teacher helps learners to reflect or evaluate the problem-solving process.

The stages of problem-based learning (PBL) that are implemented systematically have the potential to develop students' ability to solve problems and at the same time master knowledge that is in accordance with certain basic competencies.

METHOD

This research is a classroom action research that uses a qualitative approach and a quantitative approach. The qualitative approach is used because the research procedure produces descriptive data in the form of written or oral words and observed behavior of students. The quantitative approach is used to present numerical data or numbers of student learning outcomes both in tabular and graphical form (Rahmatina, 2017; Putra dkk., 2022).

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Action research in the field of education is carried out in the classroom area with the aim of improving and improving the quality of learning (Komara dkk., 2020). According to Arikunto (2015) that PTK or class action research is a type of research that describes both the process and the results in general PTK is used to improve the quality of learning. According to Arikunto (2015), classroom action research is research that describes the cause and effect of treatment, as well as describing what happens when treatment is given and describing the entire process from the beginning of the treatment to the impact of the treatment. The research procedure consists of 2 cycles.

Classroom action research carried out using a cyclical model, namely carrying out several stages developed by Kemmis et al (in Hamzah, 2011) "Broadly speaking, there are four stages that are passed, namely 1) planning, 2) implementation, 3) observation, and 4) reflection". The subjects of this study were fifth grade students of SDN 01 Situjuah Gadang, Lima Puluh Kota Regency, with a total of 23 people, consisting of 9 male students and 14 female students. In addition, those involved in this study were researchers as practitioners and class teachers as observers. This research was conducted in two cycles, where cycle I consisted of 2 meetings and cycle II consisted of 1 meeting.

The method used to collect data in this study uses test and non-test methods. The test technique with the item instrument, in line with Ariani, (2018) the tool used in the test is to use items or question instruments to measure student learning outcomes. Non-test technique is a procedure that is passed to obtain an overview of the characteristics of interests, traits, and personality (Asep, 2012). Non-test techniques are in the form of observation sheets equipped with observation rubrics. Data comes from primary data and secondary data. Primary data sources are obtained from test results. While secondary data sources are obtained from the results of observations of learning implementation by applying the Problem Based Learning (PBL) model.

The data collection instrument in this study was in the form of multiple choice questions totaling 10 questions. The questions are answered by students on the answer sheet that has been provided with the aim of knowing student learning outcomes in thematic subjects (Indonesian language, science). As a guide to writing the instrument, a lattice of instruments must be determined. The data analysis technique used to measure student learning outcomes in this study uses descriptive data, namely by finding the average student score and student learning completeness. The results of the analysis of the level of student learning outcomes can be determined by the average student score which is converted into the success criteria. The success criteria can be seen in Table 1.

The formula for calculating the value of KD per subject content according to the Ministry of Education and Culture (2014: 108) quantitative value can be seen from the test results of students, to calculate the percentage of observations of learning practices with the following formula:

$$Value = \frac{score\ obtained}{score\ maximal} \text{x } 100$$

Table 1. Assessment criteria for student learning outcomes

Rating	Value
Very good (SB)	90 < SB < 100
Good (B)	75< B < 90
Enough (C)	60 < C < 75
Less (K)	≤ 60

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Students are said to be complete if the level of mastery of the average score and the completeness of learning each at least reaches a score of 75. Meanwhile, this research is said to be successful if the class average, absorption and class completeness reach a score between 75-90 with good criteria.

RESULTS

The implementation of pre-cycle activities in this study was carried out by collecting data related to strategies, models, and learning media used in the implementation of thematic learning (Indonesian and science content) in class V of SD Negeri 01 Situjuah Gadang. The learning methods used in the pre-cycle were lectures, questions and answers, and assignments. The obstacles in the thematic learning process (Indonesian and science content) are that students are less enthusiastic and less active in participating in the learning process so that there are several students whose learning outcomes have not yet reached the KKM determined by the school. From the number of students who completed less than students who have not completed. So the student learning outcomes in the pre-cycle are still classified as very low. The data on student learning outcomes in thematic learning (Indonesian language and science content) before being given action can be seen in table 2.

Based on this, the alternative problem solving is to carry out improvements in learning through the Problem Based Learning (PBL) learning model which is carried out in cycle I activities. In cycle I, the average student score was 73.7. Of the 23 students, many students were not complete because the scores obtained had not reached the specified KKM of 75 while the percentage of student learning completeness obtained was only 69.56%. The results of the analysis in cycle I show that the success of the research has not achieved the expected learning objectives. This is due to the lack of systematics in the implementation with the planning that has been made. Therefore, learning is continued with cycle II.

In cycle II, the average student score was 86.08. It can be stated that there was an increase in learning in cycle II. Then the level of student learning outcomes in cycle II is high. Based on student learning outcomes have increased compared to the data in cycle I. Thus in cycle II the percentage criterion for student learning completeness was obtained at 91.3% which was in the good category. The data on student learning outcomes in cycle II can be seen in table 2.

Table 2. Learning Outcomes Pre Cycle, Cycle I Cycle II

No	Aspects	Pre Cycle	Cycle I	Cycle II
1.	Total Value	1500	1695	1980
2.	Average Value	65,21	73,7	86,08
3.	Absorbency	65,21%	73,7%	86,08%
4.	Number of Students Who Completed	9	16	21
5.	Number of Students who Did Not Complete	14	7	2
6.	Percentage of Learning Completeness	39,13%	69,56%	91,3%
7.	Value Category	Enough	Enough	Good

DISCUSSION

Based on research that has been conducted on grade V students at SD Negeri 01 Situjuah Gadang in the pre-cycle, cycle I, cycle II, this research was carried out until cycle II because it has

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reached the criteria for student learning completeness in lessons (Indonesian and science content). In class action research conducted on grade V students at SD Negeri 01 Situjuah Gadang. The stages of activities carried out in this study consist of planning, implementation, observation, reflection. The results of observations in the pre-cycle obtained several problems seen from the results of the Daily Assessment (PH) of grade V students in the content of Indonesian language and science with an average score of Indonesian language students, namely 61.73 and science with an average score of 68.69. Of the 23 students, only 9 students managed to reach the KKM. From these problems, it becomes the basis for carrying out class action research to improve learning outcomes in fifth grade students of SD Negeri 01 Situjuah Gadang. In this study, the Problem Based Learning (PBL) learning model was applied to help fifth grade students of SD Negeri 01 Situjuah Gadang understand the lesson and improve learning outcomes. Classroom action research in cycle I obtained the average value of students, namely in Indonesian language content obtained a value of 71.73 and science content obtained a value of 75.65.

Judging from the assessment criteria, the level of student learning outcomes in cycle I is still considered insufficient. From this data, there are obstacles faced during the learning implementation process of cycle I, namely some students are still hesitant in expressing their opinions. So that guidance and motivation are still needed during the learning process. In cycle II, the average score of students in Indonesian language content was 86.08 and in science content was 86.08. Judging from the assessment criteria, the level of student learning outcomes in cycle II is classified as good. In student learning outcomes have increased compared to cycle I data.

Based on the results of the study, it proves that the use of PBL in learning can improve student learning outcomes. The improvement obtained in this study is because this model can change passive learning conditions to active and requires students to be able to solve the problems given. With the Problem Based Learning (PBL) model can improve teacher teaching activities, student learning activities and student learning outcomes. This means that PBL can be used by teachers as a good learning model to be applied in the learning process so that it can achieve the desired goals and can create a pleasant learning atmosphere for students.

CONCLUSION

Based on the results of research and discussion, it can be concluded that the application of the Problem Based Lerning model in integrated thematic learning in class V at SD Negeri 01 Situjuah Gadang, Lima Puluh Kota Regency can improve student learning outcomes. It is recommended that teachers to apply this learning approach in teaching students in the elementary school.

REFERENCES

Ariani, Y., & Kenedi, A. K. (2018). Model Polya dalam peningkatan hasil belajar matematika pada pembelajaran soal cerita volume di sekolah dasar. *Jurnal Inspirasi Pendidikan*, *8*(2), 25-36. https://doi.org/10.21067/jip.v8i2.2520

Arikunto, S., et al. (2015). *Penelitian Tindakan Kelas*. Jakarta: Bumi Aksara.

Dania, R., & Sukma, E. (2020).Peningkatan Proses Pembelajaran Tematik Terpadu Menggunakan Model Cooperative Learning Tipe Think Pair Share di Sekolah Dasar. Jurnal Pendidikan Tambusai, 4(3), 2624-2636. https://doi.org/10.31004/jptam.v4i3.750

Eggen, P.,& Kauchak, (2012). *Strategi dan Model Pembelajaran: Mengajarkan Konten dan Keterampilan Berpikir*. Jakarta: Index

Fathurrohman,M. (2015). *Paradigma Pembelajaran Kurikulum 2013*. Yogyakarta : Kalimedia

Vol. 6, No.2, August 2023, pp. 122 – 128.
DOI: http://dx.doi.org/10.33578/jtlee.v6i2.7986
ISSN : 2615-4528 (Print) 2622-3023 (Online)

Hamzah. B. U., & Nurdin (2011). *Belajar dengan Pendekatan PAILKEM*. Jakarta: PT Bumi Aksara.

Hosnan. (2014). *Pendekatan Saintifik Dan Kontekstual Dalam Pembelajaran Abad 21*. Bogor: Ghalia Indonesia.

Jihad, A & Abdul. (2012). *Evaluasi Pembelajaran*. Yogyakarta: Multi Pressindo.

Kemendikbud. (2014). *Panduan Teknis Pembelajaran dan Penilaian*. Jakarta: Kementrian Pendidikan dan Kebudayaan.

Komara, F. H. T., Putra, Z. H., & Hermita, N. (2020). Penerapan model pembelajaran kooperatif tipe picture and picture untuk meningkatkan hasil belajar matematika siswa kelas IVB SDN 136 Pekanbaru. *Tunjuk Ajar: Jurnal Penelitian Ilmu Pendidikan, 3*(2), 146 – 162. http://dx.doi.org/10.31258/jta.v3i2.146-162

Lestari, A., Nazri, N., Alim, J. A., & Putra, Z. H. (2023). Kemampuan Kompetensi Guru dan Motivasi Belajar Siswa Terhadap Peningkatan Hasil Belajar Siswa SDN 012 Lalang Kabung Kabupaten Pelalawan. *Indonesian Journal of Science, Technology, Engineering, Art, and Mathematics Education, 2*(1). 8 – 13. Retrieved from https://ijsteame.ejournal.unri.ac.id/index.php/ijsteame/article/view/11

Ningsih, Y., Ahmad, S., & Amini, R. (2019, November). Implementation of Step Polya in the Problem based Learning Model to Improve Learning Outcomes in Elementary School. In *Journal of Physics: Conference Series* (Vol.1387,No.1,p.012080). IOP Publishing. http://dx.doi.org/10.1088/1742-6596/1387/1/012080

Nurkhotimah, S., Joharman, J., & Suripto, S. (2017). Penerapan Model Problem Based Learning (PBL) Dengan Media Konkret untuk Meningkatkan Hasil Belajar Matematika Tentang Operasi Hitung Pecahan Pada Siswa Kelas V SDN 1 Kuwayuhan Tahun Ajaran 2016/2017. *KALAM CENDEKIA PGSD KEBUMEN*, *5*(3.1).

Putra, Z. H., Hermita, N., Yuliani, S., & Fatmawilda, F. (2022). The effects of gender, study major, and year of study on prospective teachers' mathematical, didactic, and technological knowledge. *Journal of Teaching and Learning in Elementary Education, 5*(2), 243- 253.

Rahmatina, R., Eliyasni, R., & M Habibi, M. H. (2017). Peningkatan Keterampilan Membaca Pemahaman Menggunakan Strategi Porpe di Kelas IV SD.

Rusman. 2014. *Model-Model Pembelajaran (Mengembangkan Profesionalisme Guru).* Jakarta: Raja grafindo Persada.

Susanto, A. (2013). *Teori Belajar dan Pembelajaran di Sekolah Dasar*. Jakarta: Kencana Prenada media Group

Wulandari, E. E., & Hartati, S. (2016). Peningkatan Kualitas Pembelajaran IPA melalui Model Problem Based Learning (PBL) menggunakan Audiovisual. *Phenomenon: Jurnal Pendidikan MIPA, 6*(2), 32-41. https://doi.org/10.21580/phen.2016.6.2.1059

Yasrina, D. J., Sujana, I. W., & Suniasih, N. W. (2015). Pengaruh Pendekatan Saintifik Ditinjau dari Karakteristik Pertanyaan Guru Terhadap Hasil Belajar Keterampilan IPS Tema Cita-Citaku Siswa Kelas IV SD Gugus 8 I Gusti Ngurai Rai. *MIMBAR PGSD Undiksha*, *3*(1). https://doi.org/10.23887/jjpgsd.v3i1.4947