

Using the Project-Based Learning Model with Literacy Tree Media to Improve Elementary School Students' Learning Outcomes

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ABSTRACT

This study aims to evaluate the implementation of the Project-Based Learning (PjBL) model using Literacy Tree learning media to improve learning outcomes among elementary school students. This research addresses challenges in traditional instructional approaches that of course lead to low student engagement and optimal academic performance. By integrating the collaborative, hands-on nature of PjBL with the visual and interactive qualities of the Literacy Tree media, students are actively engaged in project creation that strengthens reading comprehension and critical thinking skills. The findings indicate a significant improvement in both student engagement and academic achievement, demonstrating that the combination of PjBL and Literacy Tree media serves as an effective pedagogical strategy to enhance learning outcomes in elementary education.

Article Information

KataKunci:

Project-Based Learning (PjBL), Media Pohon Literasi, Hasil Belajar, Peserta Didik Sekolah Dasar.

ABSTRAK

Penelitian ini bertujuan untuk mengevaluasi penerapan model Project-Based Learning (PjBL) menggunakan media pembelajaran Pohon Literasi untuk meningkatkan hasil belajar peserta didik sekolah dasar. Penelitian ini menjawab tantangan dalam pendekatan pembelajaran tradisional yang sering kali menyebabkan rendahnya keterlibatan siswa dan performa akademik yang kurang optimal. Dengan mengintegrasikan sifat PjBL yang kolaboratif dan berbasis praktik langsung (hands-on) bersama kualitas visual serta interaktif dari media Pohon Literasi, siswa terlibat secara aktif dalam pembuatan proyek yang memperkuat pemahaman membaca dan keterampilan berpikir kritis. Hasil penelitian menunjukkan adanya peningkatan signifikan baik dalam keterlibatan siswa maupun prestasi akademik. Hal ini membuktikan bahwa kombinasi model PjBL dan media Pohon Literasi berfungsi sebagai strategi pedagogis yang efektif untuk meningkatkan hasil belajar pada pendidikan dasar.

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1. Introduction

Education is a crucial aspect of human life, serving to improve the quality of human resources. Through education, students are expected to develop the potential, knowledge, skills, and attitudes necessary for everyday life.

Elementary school, as the initial level of education, plays a crucial role in developing students' basic skills, particularly in reading, writing, critical thinking, and understanding learning materials. Therefore, the learning process in elementary schools must be designed effectively and engagingly to optimally achieve learning objectives.

In the learning process in elementary schools, teachers play a crucial role as facilitators and motivators. Teachers not only deliver material but also must be able to create an active, creative, and enjoyable learning environment. However, in reality, there is still a lot of learning that is carried out conventionally using lecture methods so that students tend to be passive during learning activities.

This condition causes students to easily become bored and less motivated to participate in learning. A common problem that often occurs in elementary school learning is low student learning outcomes. Low learning outcomes can be seen from students' lack of understanding of the learning material, low evaluation scores, and lack of student participation in the learning process.

In addition, some students still experience difficulties in understanding the content of the reading and connecting learning materials with everyday life.

This problem is also influenced by students' low literacy skills. Literacy is a crucial skill for students because it relates to reading, understanding information,

and processing knowledge. Low literacy skills make it difficult for students to fully grasp learning materials. As a result, students lack critical thinking skills and experience obstacles in completing learning tasks.

Besides low literacy skills, the lack of varied learning media is also a contributing factor to low student learning outcomes. In the learning process, teachers often use simple and unengaging media, resulting in less student enthusiasm. Lack of innovative learning media can quickly lead to students becoming bored and less active in learning activities.

Specific problems encountered in elementary school learning include students being less active in asking and answering teacher questions, students being less interested in reading learning materials, and students being less able to work together in group activities. Furthermore, some students still have difficulty understanding the material because the learning process does not involve real and meaningful learning experiences.

Another problem is evident in students' low critical thinking skills. In learning, students tend to simply receive information from teachers without being trained to identify and solve problems independently. Yet, 21st-century learning demands critical, creative, collaborative, and communicative thinking skills.

Therefore, a learning model capable of developing these skills is needed. To address these challenges, teachers need to employ innovative, student-centered learning models. One such model is Project-Based Learning (PJBL). PJBL provides students with opportunities to learn through project-based activities, enabling them to actively participate in the learning process.

The PJBL model emphasizes learning through direct experience. In this model, students work in groups to complete a project related to the learning material. Through these activities, students learn to search for information, discuss issues, solve problems, and produce work.

In this way, students not only gain theoretical knowledge but also gain more meaningful learning experiences. To implement the PJBL model more effectively, engaging learning media are needed that can improve students' literacy skills.

One learning medium that can be used is the Literacy Tree. The Literacy Tree is a tree-shaped visual aid used to display reading outcomes, ideas, information, or students' understanding of learning materials. This medium is designed in an engaging manner to increase student interest in learning.

Using the Literacy Tree can help students understand learning materials more easily. Students can write down reading material or important information on the leaves or branches of the tree, making learning more creative and enjoyable.

In addition, this media can also train students' reading, writing, and critical thinking skills in processing the information obtained.

According to Rahmawati (2023), the Literacy Tree media is effective in building a culture of literacy, active engagement, and learning outcomes for elementary school students. This media facilitates the expression of ideas, reading results, and reflection on values through simple displayed works, creating collaborative learning.

The implementation of the PJBL model using the Literacy Tree as a medium has

several advantages in the learning process. The first advantage is that it can increase student engagement because students are directly involved in project activities and group discussions. Students become more confident in expressing opinions, asking questions, and collaborating with their group mates.

The second advantage is that using the Literacy Tree media can increase students' interest in reading and literacy skills. Engaging and creative media makes students more enthusiastic about reading learning materials and writing down important information they learn. This makes it easier for them to understand the material they're learning.

The third advantage is that the PJBL model, using the Literacy Tree as a medium, can enhance students' critical thinking and creativity. During the learning process, students are trained to find solutions to problems, formulate ideas, and produce work in the form of learning projects. This can help students develop 21st-century skills that are essential in life.

Another advantage is that learning becomes more meaningful and enjoyable, which can improve student learning outcomes. Students not only listen to teacher explanations but also participate directly in the learning process through reading, discussions, and project development. With real-life learning experiences, students will more easily understand and retain the material.

Based on this description, the integration of PjBL with literacy media such as the Literacy Tree has high potential to improve Pancasila education learning. However, specific research on its impact on the daily application of Pancasila values in fourth grade elementary school is still limited. Therefore, this research is urgent and original, enriching empirical

studies and making practical contributions to the quality of learning in elementary schools.

2. Method

This research was conducted at SD Negeri 3 Bojong Kulon, with 32 fourth-grade students (20 boys and 12 girls) as subjects. The study focused on Pancasila Education, focusing on the application of Pancasila values in everyday life.

The subject selection was based on the need to improve student learning outcomes and literacy, as well as the previously teacher-centered learning environment. The research was conducted in the even semester of the 2026/2027 academic year, from August 1 to 30, with stages including preparation, implementation, data collection, analysis, and reporting. The study employed Classroom Action Research (CAR) with a design based on the Kemmis and McTaggart model.

The research was conducted in two cycles, each consisting of four stages: planning, implementation, observation, and reflection. The results of the reflection in the first cycle were used as the basis for improvements in subsequent cycles until the established success indicators were achieved.

The action implemented is the Project-Based Learning (PjBL) model with the help of the Literacy Tree media. PjBL syntax includes basic questions, designing product planning, preparing a production schedule, monitoring project activity and development, testing results, and evaluating learning experiences. The Literacy Tree media is used as a visual aid to display work results, material summaries, or new vocabulary learned during the project. In the planning stage, researchers develop learning tools or PjBL-based teaching modules, prepare

the Literacy Tree media, and compile research instruments.

The implementation phase of the action is carried out by applying the PjBL model and utilizing the Literacy Tree media in project activities. Next, the observation phase** is carried out to observe student activities, teacher performance, and learning outcomes. The reflection phase is carried out by analyzing the results of the action and evaluating weaknesses as a basis for improving learning in the next cycle.

The research instruments consisted of test and non-test instruments. The instruments were used to measure the effectiveness of the PjBL model implementation using the Literacy Tree as a medium on student learning outcomes. Non-test instruments included teacher interviews, observation sheets of teacher and student activities, and student self-assessment questionnaires. Meanwhile, the test instruments consisted of multiple-choice questions and essays to determine student learning outcomes.

Data collection techniques were conducted through observation and testing. Observations used observation sheets for teacher and student activities, while tests used multiple-choice or descriptive questions to evaluate learning outcomes. Additionally, questionnaires were used to determine student responses to learning, while documentation in the form of activity photos, grade lists, and learning notes served as supporting data.

Data analysis techniques consisted of qualitative and quantitative analysis. Qualitative data were obtained from observations of teacher and student activities during learning, then analyzed descriptively to describe student engagement, group collaboration, and

ability to use the Literacy Tree media.

Quantitative data were obtained from learning test results and analyzed based on class average scores and learning completion percentages. Student questionnaire response data was analyzed using percentage analysis, while documentation was used to strengthen the research findings.

Indicators of research success include the success of the learning process and learning outcomes. Process success is demonstrated through student engagement in each stage of the PjBL, their ability to collaborate, discuss, and take responsibility, and their ability to express ideas and understanding through the Literacy Tree.

Observations of student activity and teacher performance are targeted to achieve a good grade, at least 75%. Successful learning outcomes are characterized by an increase in grades from baseline to Cycle I and from Cycle I to Cycle II, with at least 80% of students achieving the Minimum Completion Criteria (KKM) and an increase in the class average in each cycle.

3. Results and Discussion

A. Initial Research Data

Initial research data were obtained before the implementation of the actions in Cycle I. The data were used as a basis to determine the initial conditions of students before the implementation of the Project Based Learning (PjBL) model using the Literacy Tree learning media. Initial data collection was carried out through observations of the learning process and student learning outcomes in the material on the Application of Pancasila Values in Daily Life.

Based on the initial evaluation results,

there were still students who scored below the Minimum Completion Criteria (KKM) of 75. This indicates that students' understanding of the application of Pancasila values in everyday life still needs to be improved. This initial data served as a consideration for researchers to take corrective action through the implementation of the Project Based Learning (PjBL) model using the Literacy Tree media.

The Literacy Tree media is used to help students understand the material in a more concrete, engaging, and interactive way. Through project activities, students are expected to actively participate in the learning process, collaborate, express ideas, and connect Pancasila values to everyday life.

Initial Data Table of Student Learning Outcomes

No.	Information	Results
1	Number of students	32 people
2	Minimum Competency (KKM)	75
3	Students complete	20 people
4	Students have not completed	12 people
5	Average value	75.75
6	Percentage of completion	62.5%

Based on the data, 20 of the 32 students, or 62.5%, achieved the Minimum Competency (KKM) score of 75, while 12 students, or 37.5%, did not. The average learning outcome score at baseline was 75.75.

Although the class average score has reached the Minimum Competency Minimum (KKM), student learning outcomes are still not optimal, with the completion rate only reaching 62.5%.

Some students still experience difficulties understanding the material and applying Pancasila values in their daily lives. Therefore, improvements to the learning process are needed to enhance student engagement and learning outcomes.

B. Research Results

1. Description of Pre-Cycle Conditions

Classroom action research was conducted in fourth grade at SDN 3 Bojongkulon using the Project Based Learning (PjBL) model and the Literacy Tree learning media. The research aimed to improve student learning outcomes in the topic of Applying Pancasila Values in Daily Life.

Before administering the action, the researcher conducted observations at the pre-cycle stage to determine the basic conditions of student learning outcomes.

Learning outcomes in the pre-cycle stage showed that mastery was still relatively low. Of the 32 students, the average class score was 65.31. Twelve students, or 40.63%, achieved mastery, while 19 students, or 59.37%, did not achieve the Minimum Competency (KKM). This condition indicates that the students' learning mastery has not been achieved as a class, so improvement efforts are needed through appropriate learning activities.

The pre-cycle implementation section of the script also states that out of a total of 33 students, 20 students have not met the Minimum Competency (KKM), with 13 students, or 39%, declared to have completed the course and 61% not yet. This condition indicates that student understanding is still relatively low, so action is needed through the Project Based Learning model with the assistance of the Literacy Tree media.

2. Implementation and Results of Cycle I Actions

The actions in Cycle I were designed to address the problems identified in the pre-cycle phase. The actions were carried out by the fourth-grade teacher with the assistance of a colleague as an observer, observing teacher and student activities during the learning process. Cycle I was conducted in two meetings, encompassing the stages of planning, action implementation, observation, and reflection.

The implementation of the PjBL model assisted by the Literacy Tree media in Cycle I began to show improvements in learning outcomes. The average class score increased from 65.31 to 74.06. The number of students who achieved mastery increased to 21 students, or 65.63%, while the number of students who did not complete the program was 11 students, or 34.37%.

Despite the improvement, the classical completion rate of 65.63% did not meet the research success indicators. Reflection revealed several shortcomings, including insufficiently detailed instructions on the PjBL stages, need for improved group guidance, suboptimal time management, and need for optimization of the use of the Literacy Tree media. Therefore, the research was continued to Cycle II.

3. Implementation and Results of Cycle II Actions

The implementation of Cycle II was designed based on the results of the reflection on Cycle I. Improvements were directed at providing more structured PjBL stage instructions, increasing guidance to students, better time management, and optimizing the Literacy Tree media so that students could compile information on Pancasila values

in a concrete and systematic manner.

Student learning outcomes in Cycle II improved. The average class score reached 84.68. Classical completion reached 90.63%, with 29 students completing the course, while 3 students, or 9.37%, remained incomplete.

Recapitulation of Student Learning Outcomes

Research Stage	Average value	Students Complete	Classical Completion	Not yet finished
Pre-cycle	65.31	12	40.63%	19 (59.37%)
Cycle I	74.06	21	65.63%	11 (34.37%)
Cycle II	84.68	29	90.63%	3 (9.37%)

Based on the table, student learning outcomes improved at each stage of the study. In the pre-cycle, the average score was 65.31, with a classical completion rate of 40.63%. After implementing the PjBL model with the Literacy Tree media in Cycle I, the average score increased to 74.06, and the classical completion rate to 65.63%.

In Cycle II, the average score increased again to 84.68, with 29 students, or 90.63%, achieving completion, while 3 students, or 9.37%, had not. This classical completion rate has reached the research success indicator.

Compared to pre-cycle conditions, the average learning outcome score increased from 65.31 to 84.68, a 19.37-point increase. The learning completion percentage increased from 40.63% to 90.63%, a 50-point increase.

C. Implementation of Learning

The implementation of learning using the

Project Based Learning model assisted by the Literacy Tree media is carried out through initial activities, core activities, and final activities.

In the opening activity, the teacher greets students, invites them to pray, checks their attendance and readiness, and conducts an apperception session on the application of Pancasila values in daily life. The teacher introduces the Literacy Tree media, conveys the learning objectives and the rules during the lesson, and motivates students to be active, confident, cooperative, and confident in expressing their opinions.

In the core activity, the teacher conducts a question-and-answer session on the application of Pancasila values, poses prompting questions, and provides stimuli in the form of images or videos depicting the application of Pancasila values in the family, school, and community. Students observe the stimuli, record important information, and are given the opportunity to ask questions about any material they don't understand.

The teacher explains the meaning of each Pancasila principle along with examples of its application. Next, students are given individual worksheets to identify examples of behavior that reflect Pancasila values. Students then create a Literacy Tree using cardboard or other provided materials.

On the Literacy Tree, students write examples of the application of the first to fifth principles of Pancasila on the leaves or fruit of the tree. Students are given the opportunity to decorate their work according to their creativity, while maintaining accuracy and neatness.

During the project, the teacher observes student activity and provides guidance to those experiencing difficulties.

Assessments are conducted on students' activeness, responsibility, creativity, accuracy in identifying Pancasila values, and ability to complete tasks.

After the project was completed, several students presented their work to the class. Other students listened attentively and were given the opportunity to provide feedback, questions, or opinions. The teacher provided reinforcement and corrected any examples of inappropriate application of Pancasila values.

In the final activity, the teacher and students discuss and draw conclusions through a question-and-answer session. Students then work on individual evaluation questions. The teacher provides reinforcement and motivation so that students can practice applying Pancasila values in their daily lives at home, school, and in the community.

D. Results of Observations of Teacher and Student Activities

Observations of teacher activities in Cycle I showed that planning, PjBL model implementation, and follow-up activities had been carried out. Based on the observation instrument, there were 11 activities carried out in the first meeting and 11 activities in the second meeting, with a percentage of 100% for each.

The teacher has carried out opening activities, conveyed learning objectives, provided apperception and motivation, explained the material, implemented the PjBL stages, provided guidance, carried out assessments, and carried out reflection and follow-up.

However, several challenges remain. Teachers need to provide more detailed instructions regarding project stages, improve time management, increase supervision of all students, provide more effective motivation, and optimize the use

of the Literacy Tree media.

Observations of student activity in Cycle I showed that the average score in the first meeting was 65, categorized as sufficient, while in the second meeting it increased to 76, categorized as good. This improvement indicates that students are beginning to adapt to the implementation of the PjBL model assisted by the Literacy Tree media.

In other observations, student performance and activity levels increased from 32% in the first meeting to 65% in the second. This 33% increase is still considered adequate, requiring further improvement in subsequent activities.

At the first meeting, some students were still passive, not yet accustomed to project-based learning, lacked confidence in expressing their opinions, and still needed teacher guidance in understanding the material and determining examples of the application of Pancasila values.

In the second meeting, students began to show improvement. They better understood the project's stages, were more active in answering questions, were able to identify examples of the application of Pancasila values, and began to confidently present their work results.

The use of the Literacy Tree media helps students organize information regarding examples of the application of Pancasila values.

E. Cycle I Reflection

The results of the Cycle I reflection showed that the implementation of PjBL with the Literacy Tree media had a positive impact on student learning processes and outcomes. Students had the opportunity to observe, discuss,

identify examples of the application of Pancasila values, work on projects, and present project results.

At the first meeting, students were still adapting to the PjBL model and the Literacy Tree media. Some students struggled to identify examples of the application of Pancasila values, lacked confidence in presenting their work, and still needed teacher guidance.

Some students also don't fully understand all the stages of PjBL, from understanding the problem, designing the project, implementing the project, to presenting the results. Collaboration within some groups is suboptimal because some students still rely on friends who are considered more capable.

Based on these conditions, improvements were made by providing simpler explanations of the PjBL stages, providing more concrete examples, increasing mentoring, optimizing the Literacy Tree media, and providing provocative questions related to students' experiences in everyday life.

In the second meeting, students began to better understand the project stages and were able to complete assignments more independently. Students were more active in answering questions, identifying examples of the application of Pancasila values, connecting the material to everyday experiences, and presenting the results of their work.

Improvements were also seen in students' ability to communicate project results. Most began to confidently explain their work and provide reasons for the behavioral examples written in the Literacy Tree media.

F. Discussion

The application of six stages of Project-Based Learning, from fundamental questions to experience evaluation, combined with the Literacy Tree media, creates active learning. Students are not merely passive recipients of material but are engaged in constructing knowledge through project activities.

The use of the Literacy Tree as a project outcome stimulates students' literacy activities and visual memory. This concrete medium facilitates the integration of reading literacy and visual creativity, allowing students to develop cognitive and psychomotor skills throughout the project.

Improved learning outcomes from the pre-cycle, Cycle I, to Cycle II demonstrate that the collaboration between PjBL and the Literacy Tree media can improve student learning outcomes. The Literacy Tree media visualizes information on the application of Pancasila values, making it easier for students to understand and remember the material.

From a methodological perspective, improving learning outcomes is related to improving the quality of actions in each cycle. Reflections on Cycle I serve as the basis for improving instruction, guidance, time management, and media use in Cycle II. These improvements make the implementation of PjBL more effective.

The Literacy Tree media also plays a role in facilitating meaningful project-based learning. It serves as a showcase of student work and serves as a means to assess students' ability to identify and categorize examples of the application of Pancasila values.

The implementation of PjBL also provides space for students to interact, collaborate, express opinions, take responsibility for assignments, and present their work. Students become more active in learning

activities and are less teacher-centered.

G. Comparison of Results of Each Cycle

The improvement in learning outcomes of grade IV students at SDN 3 Bojongkulon from pre-action to Cycle II can be seen as follows:

No.	Assessment Indicators	Pre-Action	Cycle I	Cycle II
1	Number of Students	32	32	32
2	The highest score	85	88	95
3	Lowest Value	45	55	70
4	Class Average Grade	65.31	74.06	84.68
5	Number of Students Completed (≤ 75)	13	21	29
6	Classical Completion Percentage	40.63%	65.63%	90.63%
7	The Number of Students is Not Yet Complete	19	11	3
8	Percentage Not Completed	59.37%	34.37%	9.37%

From pre-action to Cycle I, classical learning completion increased by 25.00%, from 40.63% to 65.63%. The class average score also increased from 65.31 to 74.06. This increase occurred after the implementation of the PjBL model with the assistance of the Literacy Tree media.

From Cycle I to Cycle II, classical learning completion increased again by 25.00%, from 65.63% to 90.63%. The class average score increased from 74.06 to 84.68. In Cycle II, the classical completion achievement of 90.63% exceeded the research success indicator set at 75%.

The classroom action research was not

continued to Cycle III because there had been an increase in student learning outcomes in Cycle II and the research success indicators had been achieved. The manuscript stated that the average learning outcome score in Cycle II reached 76, although this figure had not yet reached 83.

However, the success of the research is not solely determined by achieving a certain number such as 83, but based on established success indicators, such as the percentage of students who achieve the KKTP and an increase in learning outcomes from the initial conditions to Cycle II.

Furthermore, the implementation of Cycle II demonstrated that the use of the PjBL model supported by the Literacy Tree media increased student engagement and learning outcomes compared to the previous period. Students also demonstrated progress in understanding and applying Pancasila values in their daily lives.

Thus, the research action was stopped in Cycle II because the action success indicators had been met, not because they had to obtain a score of 83. Based on the learning outcome data in the cycle comparison section, classical completeness in Cycle II reached 90.63% and had exceeded the success indicator of 75%.

4. Conclusion

Based on the results of classroom action research that has been carried out regarding the use of the Project Based Learning (PjBL) model using the Literacy Tree learning media to improve the learning outcomes of elementary school students, it can be concluded that the use of the PjBL model with the help of the Literacy Tree media can

improve student learning outcomes.

This improvement can be seen from the changes in learning outcomes and student activities from the pre-cycle stage, cycle I, to cycle II.

In the pre-cycle stage, student learning outcomes were still relatively low. Some students had not yet achieved the established completion criteria. This situation indicates that the learning process prior to the intervention still faced several obstacles, such as low student engagement, a lack of courage in expressing opinions, and the suboptimal use of learning media that could attract students' attention.

In cycle I, after implementing the PJBL model using the Literacy Tree media, improvements in learning outcomes and student engagement in the learning process began to be seen. Students began to engage in group activities, discussions, express opinions, and complete project assignments assigned by the teacher.

However, several obstacles were encountered during the implementation of Cycle I, including students who were still passive, lacked confidence in expressing their opinions, and did not fully understand the project's stages. Therefore, improvements were made in Cycle II.

In cycle II, the implementation of the PJBL model with the Literacy Tree media was carried out with improvements based on the results of the reflection on cycle I. The teacher provided clearer directions regarding the project stages, increased student involvement in discussions, provided prompting questions that were appropriate to student experiences, and optimized the use of the Literacy Tree media.

The results show that students become more active, enthusiastic, confident, and able to work together in groups.

Students also find it easier to understand the material because learning activities give them the opportunity to read, discuss, express opinions, and relate the material to everyday life.

Thus, it can be concluded that the use of the Project Based Learning (PJBL) model using the Literacy Tree learning media can improve the learning outcomes of elementary school students.

Improvement is not only seen from the results of learning evaluations, but also from the increase in activity, involvement, cooperation, courage to express opinions, and enthusiasm of students during the learning process.

The PJBL model combined with the Literacy Tree media is able to create more active, interesting, and meaningful learning for students.

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