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Increasing Student Learning Motivation Using Project Based Learning Learning Model

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Abstract

This study aims to improve student learning motivation through the implementation of the Project-Based Learning (PjBL) model in the IPAS subject for fourth-grade students at SDN 105330 Bangun Sari. The research design used in this study is Classroom Action Research (CAR). In detail, the stages in the action research design begin with planning, implementation of action, observation, and reflection in each cycle, continuing until the desired improvement is achieved. The approach used in this study is a qualitative approach. The subjects involved in the study are fourth-grade students at SDN 105330 Bangun Sari Baru, Tanjung Morawa District. The class consists of 32 students, including 9 boys and 23 girls. Based on the findings, it can be concluded that the application of the Project-Based Learning (PjBL) model can increase students' learning motivation in the IPAS subject. This is evidenced by the increase in student motivation questionnaire scores and learning test results during the learning process. Moreover, the implementation of PjBL also makes learning more meaningful and enjoyable for students, as well as actively engaging them in the learning process.

Keywords: Project Based Learning, Motivation, IPAS

Introduction

Learning is a step towards expanding students' knowledge and understanding (Delsepin et al., 2024) . However, in reality, it is still difficult to implement good and effective learning for students in schools because many students are still less involved in the ongoing learning process (Hanafiah et al., 2022) . The minimal student activity in the teaching and learning process is caused by the delivery of material always being centered on the teacher. Educators provide more information to students, then students have less opportunity to actively participate in the teaching and learning process, causing students to become quieter and not take optimal notes (Hikmah, 2020) . Another factor is the lack of student awareness, where learning is a need that can increase student motivation (Fikriyah et al., 2020).

Learning motivation is the overall driving force within students that gives rise to learning activities that ensure the continuity of learning activities and provide direction for learning activities so that the goals desired by the learning subject can be achieved (Sibagariang et al., 2024) . Learning motivation is very necessary in the learning process so that students are enthusiastic about learning (Roni Hamdani et al., 2022).

The importance of motivation in learning, because its existence is very meaningful for learning activities (Putri, 2017) . In addition, motivation is a guide for learning activities towards clear goals that are expected to be achieved (Emda, 2017) . Motivation plays a very important role in increasing students' enthusiasm for learning by also paying attention to internal and external factors in learning motivation (Puthree et al., 2021) . Creating learning motivation in schools is not easy, as a teacher must be able and

capable of making students enthusiastic about learning by using interesting learning models so that students feel curious and want to follow the learning process by themselves without any coercion (Sukmana & Amalia, 2021) . Thus, strong and ideal learning motivation plays a very important role in achieving student self-development in science learning (Insyasiska et al., 2015) .

Problems that often occur in the process of learning science in grade IV SDN 105330 Bangun Sari, found problems that students often do not understand what is being explained by the teacher that the attitude of students who prefer to show passive responses with their friends when the teacher is giving an explanation, students who prefer to walk around when the teacher is giving an explanation, students who prefer to play alone when the teacher explains the science material, students often fall asleep during the learning process, and students who are not enthusiastic about working on questions. In addition, teachers have not provided guidance in creating interactive, interesting, and relevant learning. This results in low learning motivation of grade IV students of SDN 105335 Tanjung Morawa District. Therefore, it will be able to affect learning achievement in Social Sciences (IPS) material. Low learning motivation of students is reflected in several characteristics, such as lack of interest in the subject matter, passive attitudes during the learning process, and unwillingness to participate actively or try to understand the material in depth (Bariyyah, 2023) . Low learning motivation can also be seen from limited student initiative in completing assignments or exploring the topics being taught. These factors indicate the importance of improving teaching methods and teacher approaches to increase student interest and learning engagement (Delsepin et al., 2024) . With more innovative learning strategies, such as the creative use of media and methods that actively engage students, learning motivation can be increased, resulting in more optimal learning outcomes (Purba & Lestari, 2024) . Therefore, student learning will be more optimal if they have high motivation.

Furthermore, the use of appropriate and interactive methods is believed to be able to encourage student motivation in learning (Prastiwi & Halidjah, 2024) . Therefore, the appropriate learning model is the *Project Based Learning* model, which makes students more active in learning (Handayani, 2020) . In this project-based learning model, students will be required to work on a project in the learning process and there is a certain time for completion and prioritizes teamwork. This will encourage students to be active in learning because they have demands that must be completed to achieve learning objectives (Sitepu & Lestari, 2023) .

Based on the explanation above, the aim of this study is to increase the learning motivation of students who are taught using the project based learning model on science material in class IV of SDN 105330 Bangun Sari.

Methods

The research design used in this study is Classroom Action Research (CAR) . In detail, the stages in the action research design begin with planning, action implementation, observation, and reflection in each cycle (reflecting) and so on until the expected improvement is achieved. The approach used in this study is a qualitative approach, which describes the actual problems that exist in the field, then reflected and analyzed based on supporting theories and continued with the implementation of actions in the field. The qualitative approach in this study is used to trace and obtain a clear picture of the classroom situation and student behavior during the learning process. Classroom action research is carried out in cycles. This research is conducted in three cycles, each consisting of four stages: planning, implementation, observation, and reflection. This research was conducted at SDN 105330 Bangun Sari Baru, Tanjung Morawa District, Deli Serdang Regency. The subjects who will be exposed to the action are fourth-grade students of SDN 105330 Bangun Sari Baru, Tanjung Morawa District. With a total of 32 students consisting of 9 male students and 23 female students.

Data analysis is an important stage in the research process that serves as a basis for drawing valid and accountable conclusions. In the context of learning research, this analysis is carried out through various calculation methods such as calculating student test results with the formula value = (score obtained / maximum score) × 100, and calculating the class average with the formula $\bar{X} = \sum X /$

N. In addition, the percentage of student learning completion is calculated using the formula KB = N / n × 100%, to determine the extent to which students have achieved the Minimum Completion Criteria (KKM). This completion is then categorized into a certain range, starting from the predicate "Very Poor" to "Very Good". In the evaluation of teacher activities, an observation sheet is used with a scale of 1 to 4, which is then calculated in percentage form through the formula NP = R / SM × 100%. Meanwhile, to see the increase in student learning outcomes between before and after learning, the normalized gain formula g = (Spost - Spre) / (Smax - Spre) is used, the results of which are classified into low, medium, and high. In addition to cognitive aspects, this study also assesses students' attitudes towards learning using a Likert scale, with a score range from 1 to 5. The final score is calculated using the formula value = (score obtained / maximum score) × 100%, and is classified into learning motivation categories from "no" to "very good". All of these approaches aim to provide an objective and comprehensive picture of the effectiveness of the applied learning.

Results and Discussions

1. Results

After conducting research at SDN 105335 Bangun Sari on January 16, 18, and 19, 2025, the researcher obtained some information from the data obtained. The data collected in this study were the learning motivation assessment rubric and learning outcome test, the research was also carried out for three cycles following the project-based learning model activity flow. In the implementation of cycle 1, the results of the student motivation questionnaire analysis are shown in table 1 below:

Table 1.
Results of the Learning Motivation Questionnaire Cycle I

No.	Indicator	Statement	Score
1	There is a drive and need to learn	1.5, 12, 16	340
2	Show attention and interest in the tasks given	4,6,7,14	330
3	Diligent in facing the task	8,10,11,13	302
4	Persistent in the face of adversity	3,9,15,17	308
5	There is a desire and wish to learn	2,18,19,20,4	320
	Amount		1680
	Presentation		60
	Criteria		Enough

Table 1 shows that students' learning motivation in cycle I achieved a score of 2280, meeting the criteria for good learning motivation (60%). This classroom action research identified categories that sufficiently motivated students' learning. The research was considered successful if students demonstrated excellent learning motivation, with a percentage of at least 80%.

At the end of the first cycle of learning, the researcher gave students a test. The summary of student learning outcomes can be seen in the following table.

Table 2.
Recapitulation of Student Learning Test Cycle I

No.	Information	Evaluation
1	Completed	17
2	Not Completed	10
3	The highest score	86
4	Lowest Value	40
5	Average	66
	Classical Completion of Cycle I	

Based on the table above, the recapitulation of student learning achievement in cycle I with an average score of 66 with classical completeness of 63% of the total number of students, so it has not met the success indicator of 80% student learning completeness. Therefore, it can be concluded that student learning completeness in a classical manner for cycle I has not been achieved.

After an action was carried out in cycle I, motivation and test results increased. This can be seen from the results of the questionnaire given by the researcher. The learning process in cycle I, students' motivation in learning has begun to stand out and enthusiasm in participating in lessons, students also began to appear active in discussions to produce the product to be made. However, in this first cycle there were several obstacles, this was because some students did not yet have a picture of the product to be made, so the teacher needed to explain the product to be made. Therefore, the teacher needed to provide a more in-depth explanation regarding the design and objectives of the project (Sibagariang et al., 2024) .

The project-based learning process requires students to be fully prepared to understand the assignment from the outset. This is in line with the opinion of Sari et al., (2022) , who stated that in the implementation of the Project Based Learning model, student success is greatly influenced by their initial understanding of the project and active involvement in the process. To address the shortcomings in cycle I, researchers made improvements to the learning implementation process in cycle II, hoping to significantly improve both student motivation and learning outcomes. Therefore, it can be said that there are still shortcomings in the learning implementation process. To address these shortcomings, researchers attempted to improve the learning process in cycle II.

Cycle II showed an increase in student learning motivation. The following table shows the results of the motivation questionnaire analysis and student learning test results in Cycle II:

Table 3.
Results of the Learning Motivation Questionnaire Cycle II

No.	Indicator	Statement	Score
1	There is a drive and need to learn	1.5, 12, 16	442
2	Show attention and interest in the tasks given	4,6,7,14	457
3	Diligent in facing the task	8,10,11,13	452
4	Persistent in the face of adversity	3,9,15,17	474
5	There is a desire and wish to learn	2,18,19,20,4	455
	Amount		2280
	Presentation		76%
	Criteria		Good

Based on Table 3, it can be seen that the results of student learning motivation in cycle II reached a total score of 2280 and is included in the criteria for good learning motivation with a percentage of 76%. In this classroom action research, the study is said to be successful if students have a very good learning motivation attitude, with a percentage of at least 80%. At the end of the learning process in cycle II, the researcher gave the students a test. The results of the recapitulation of student learning outcomes can be seen in the following table:

Table 4.
Recapitulation of Student Learning Test Cycle II

No.	Information	Evaluation
1	Completed	25
2	Not Completed	7
3	The highest score	85
4	Lowest Value	60
5	Average	73.50
	Classical Completion Cycle II	74%

Based on the table above, the recapitulation of the Cycle II student learning test shows an average score of 73.50, with a classical completion rate of 74% of all students. This means that the classical learning completion rate in this cycle still falls short of the 80% success indicator. This indicates that despite improvements compared to Cycle I, a number of students still have not achieved the Minimum Completion Criteria (KKM), both in terms of learning outcomes and motivation levels.

Based on learning motivation data and test results from Cycle II, it was discovered that several students did not fully understand the objectives of the assigned project, and several students still needed intensive guidance in developing ideas and compiling their project products. Therefore, the researchers decided to continue the learning process to Cycle III to address the weaknesses identified in the previous cycle. Improvement efforts included simplifying project instructions, more intensive mentoring during the process, and providing ongoing feedback.

Research by Bahagia (2017) corroborates this finding, stating that the continuous and reflective implementation of Project-Based Learning enables teachers to refine learning strategies and increase the effectiveness of project implementation in the classroom. Furthermore, research by Sekti et al. (2021) also shows that improving the quality of project implementation through learning cycles can significantly improve learning outcomes and increase overall student engagement. Cycle III showed an increase in student motivation and learning test scores. The following table presents the results of the analysis of the motivation questionnaire and student learning test scores in Cycle III:

Table 5.
Results of the Learning Motivation Questionnaire Cycle III

No.	Indicator	Statement	Score
1	There is a drive and need to learn	1.5, 12, 16	512
2	Show attention and interest in the tasks given	4,6,7,14	525
3	Diligent in facing the task	8,10,11,13	473
4	Persistent in the face of adversity	3,9,15,17	470
5	There is a desire and wish to learn	2,18,19,20,4	510
	Amount		2490
	Presentation		83%
	Criteria		Very good

Based on Table 5, it can be seen that the results of the student learning motivation questionnaire in Cycle III achieved a total score of 2490, which is included in the assessment criteria for very good learning motivation with a percentage of 83%. During the learning process, students responded well to what the teacher conveyed. They were active in learning and worked on the questions given by the teacher by reading the material provided. The following is a summary of the results of student learning achievement in Cycle III, which can be seen in Table 6:

Table 6.
Recapitulation of Student Learning Test Cycle III

No.	Information	Evaluation
1	Completed	30
2	Not Completed	2
3	The highest score	100
4	Lowest Value	60
5	Average	80.40
	Classical Completion Cycle II	85%

Based on Table 6 above, it can be explained that the results of the evaluation of cycle III can be said that student learning achievement increased from cycle I to cycle II with an average value of 80.40 and classical completeness of 85%. This can be seen from the average achievement score of cycle I of 66 with classical completeness of 63% increasing to an average achievement score of cycle II of 73.50 with classical completeness of 74%. The value obtained from cycle II is much better than the value in cycle I. This shows a very good improvement and has been completed classically with very good criteria.

2. Discussions

In conducting research using the Project Based Learning model on student learning motivation in the material My Indonesia is Rich in Culture, from cycle I to the next cycle there was a change in the learning process towards the better. The results of observations of teacher activities, students in managing the learning process that had been implemented from cycle I were still very lacking, while from cycle II to cycle III there was an increase. This increase was measured based on the data values obtained from each cycle.

Based on the explanation above, the implementation of the Project Based Learning model can increase student motivation towards learning success, because student creativity is an important basic element for achieving success. In research using this Project Based Learning model, researchers found students who were active in learning activities, as seen from the students' busyness and the interaction between students during the ongoing learning process.

A similar study was conducted by Iswara et al. (2022), who applied the Project-Based Learning model to the topic "My Indonesia is Rich in Culture." The study found that positive changes occurred in the learning process from cycle I to subsequent cycles. Teacher and student activity in managing learning in cycle I was still very low. However, from cycles II to III, significant improvements occurred. This was evident from observation results and grade data, which showed improvements in each cycle. This improvement indicates that the implementation of Project-Based Learning can increase student learning motivation, which ultimately contributes to learning success. Student creativity in participating in learning is also an important indicator supporting this success. Researchers found that students became more active, as evidenced by their busyness in completing project assignments and the strong interactions between students during the learning process. These findings reinforce the notion that Project-Based Learning not only improves learning outcomes but also effectively builds students' social and collaborative skills.

This is also similar to another study by Setiawan et al. (2022) , which also supports these findings. In their study of science learning in elementary schools, the implementation of the Project-Based Learning model not only improved conceptual understanding but also encouraged students to think critically and collaborate actively. Students showed greater interest in the material being studied because they were directly involved in the process of exploring and creating solutions to real-life problems presented in the form of projects.

Furthermore, research by Suari (2018) shows that PjBL is effective in building student confidence and independence. They stated that when students are given the freedom to design and complete projects, they become more motivated to complete tasks thoroughly and take responsibility for the final results. In line with this, research by Wijayanti (2018) also stated that the application of PjBL in thematic learning in fourth grade elementary school can create a fun learning atmosphere and increase students' curiosity. Student involvement in real-life projects has been shown to stimulate learning enthusiasm and strengthen understanding of lesson concepts.

These findings support the findings of this study, which found that the Project-Based Learning model can be an effective strategy for increasing student motivation, particularly in science lessons, which require active participation and emotional involvement. In other words, Project-Based Learning provides students with the opportunity to explore topics more deeply, work collaboratively in groups, and apply the knowledge they acquire directly. This can foster curiosity and make learning more meaningful, ultimately contributing to increased motivation.

Conclusion

Based on the results of this study, it can be concluded that the implementation of the Project Based Learning (PjBL) learning model can improve students' learning motivation in science learning. This can be seen from the increase in the scores of the learning motivation questionnaire and student tests in the learning process. In addition, the implementation of PjBL also makes learning more meaningful and enjoyable for students and activates them in the learning process. With this increase, it is expected to have a positive impact on student learning outcomes. Therefore, the PjBL model can be used as an alternative learning model that is effective in improving student learning motivation and learning outcomes.

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