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Implementation of The Project Based Learning Model to Improve the Creativity of Grade V Students at SDN 1 Weru Lor

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A B S T R A C T

This research was motivated by the need for educational innovation under the Merdeka Curriculum to boost 21st-century skills, especially creativity, in Indonesian human resources. Initial observations at UPTD SD Negeri 1 Weru Lor showed that a conventional 5th grade IPAS (Science and Social Studies) teaching method resulted in only 15% of students demonstrating creativity, demanding a change in approach. The study aimed to implement, assess the results of, and analyze the effectiveness of the Project-Based Learning (PjBL) model in improving the creativity of 5 th grade students. The methodology used was Kemmis and McTaggart's Classroom Action Research (CAR), conducted over two cycles, involving planning, action, observation, and reflection. Data was collected via teacher and student activity observations, learning outcome tests, and documentation. The results showed a significant improvement. In Cycle I, average student creativity was 55.58% (Moderately Creative), with only 20.68% learning mastery. Following improvements in Cycle II, student creativity soared to 95.79% (Very Creative), and learning outcome mastery reached 96.55%. Teacher performance also increased from 95.23% to100%. The study concludes that the application of the PjBL model is significantly effective in increasing both creativity and learning outcomes for 5th grade IPAS students at UPTD SD Negeri 1 Weru Lor.

1. Introduction

The advancement of a nation is inherently driven by progress in education, which serves as a crucial key to human resource development (Marsela Yulianti et al., 2022). Consequently, innovation in education and strategic policy changes by the government are vital for maintaining and enhancing the quality of Indonesian education (Hardianti et al., 2022).). High-quality education is reflected in a conducive classroom atmosphere and harmonious teacher-student interactions (Hastuti et al., 2024). This philosophical foundation is rooted in Article 1 of the 2003 National Education System Law, which defines education as a conscious and planned effort to actively develop students' potential, including their spiritual strength, self-control, personality, intelligence, noble character, and necessary

skills. Furthermore, Article 3 of Law Number 20 of 2003 (Indonesia, 2003) specifically mandates that education aims to foster students' potential to become individuals who are faithful, devoted, morally upright, knowledgeable, skilled, demonstrate creativity, are independent, and act as responsible citizens.

The Indonesian government's current strategy to improve education quality is the implementation of the Merdeka Curriculum. This curriculum introduces significant changes, affecting teacher performance, learning models, assessment methods, and actively encouraging new creative ideas in learning activities. A key feature of this curriculum at the elementary school level is the inclusion of IPAS (Integrated Science and Social Studies) content (Nurlaela et al., 2024). This combined subject aims to encourage students to preserve both the natural and social environments in an integrated manner, aligning with the principle that elementary school learning should be experiential and contextual for better long-term retention and meaning (Sadiyyah & Samsudin, 2023).

The current era of the 4.0 revolution emphasizes technological advancements and a learner-centered approach in the curriculum, focusing on problem-solving, collaborative learning, and Project-Based Learning (PjBL) in real-life contexts. This approach provides a unique opportunity to cultivate essential skills known as the 4Cs: *critical thinking, communication, collaboration*, and creativity (Saputra et al., 2019). Given that creativity enables individuals to adapt to an ever-changing environment (Rajagukguk, 2023), the Merdeka Curriculum explicitly emphasizes nurturing student creativity so that their acquired knowledge can be effectively applied in their surroundings.

Based on observations and interviews conducted on May 10, 2025, in Class V of UPTD SD Negeri 1 Weru Lor, the researcher identified a serious challenge concerning student creativity. Learning activities in the IPAS subject were conducted using conventional methods only, not PjBL. Observations indicated that only about 15% of students appeared creative, with 85% showing a lack of creativity and an absence of creativity-fostering activities. This suggests either an inappropriate method or a lack of student enthusiasm. The researcher therefore plans to measure student creativity using the Project-Based Learning (PjBL) model, utilizing observation instruments for teaching modules, teacher activities, student creativity, and learning outcomes.

The homeroom teacher for Grade V, Citra Wiwit Lestari, S.Pd, confirmed that student creativity is a major challenge. She explained that the IPAS teaching approach has been dominated by conventional methods, such as lectures, note-taking, and practice questions. Demonstrations or hands-on practice were rare due to time constraints, limited facilities, and the pressure to complete the curriculum on schedule. Furthermore, the limited use of learning media and the surrounding environment resulted in suboptimal learning and infrequent creative activities in both the classroom and the school.

Given these challenges, implementing a more appropriate learning strategy is crucial. The recommended approach is to enhance student creativity using the

Project-Based Learning (PjBL) model. PjBL is expected to inspire, motivate, and foster critical thinking, making learning more engaging while ensuring students learn content useful for their daily lives. For this study, the chosen material is the human respiratory system, with the final project being the creation of a pop-up book. PjBL is considered capable of resolving the issues because it requires students to be more creative. (Hurnita, 2019) describes PjBL as an innovative learning model that emphasizes contextual learning, involving students in real-world situations, meaningful tasks, and activities. This model provides opportunities for students to work individually or in groups to construct their own knowledge and produce tangible outcomes. The PjBL application is oriented toward practical skills in creating useful products for students and their environment. The purpose of this study is threefold: to determine the implementation of the PjBL model in fifth-grade students; to identify the creative outcomes achieved; and to analyze the extent to which the PjBL model successfully enhanced the creativity of the fifth-grade students at UPTD SD Negeri 1 Weru Lor.

2. Methodology

The research to be conducted is a study on the application of the project-based learning model to enhance students' creativity in IPAS (Integrated Science and Technology) lessons for Grade V at the UPTD SD Negeri 1 Weru Lor. This research will be carried out during the second semester of the 2024/2025 academic year, in accordance with the educational calendar. The research will be conducted in two cycles. The Kemmis and McTaggart model will be applied in this research. The spiral model, which includes the preparation, activity, observation, and reflection stages, will be used through several cycles. This paradigm follows a repetitive and continuous cycle, where each stage is expected to bring improvements to achieve better results. As shown in Figure 1.

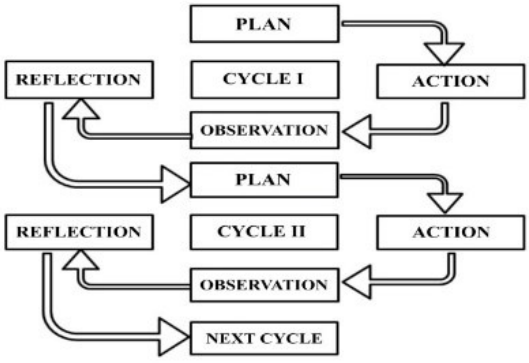

Figure 1. Design of class action research by Kemmis & Mc.Taggart

This study aims to improve the learning process and enhance the quality of education. Two methods were used in this study, namely observation and questionnaires/surveys. The research instruments used were observation, learning outcome tests, documentation, and student worksheets (LKPD). Data collection techniques included photographs, text, numbers, and others. The data collection

methods include observation to obtain qualitative data, Achievement Tests to obtain quantitative data, and Documentation. In this study, a quantitative data analysis technique adapted by (Nasution, 2020).

3. Results and Discussion

Results

Based on an interview with Mrs. Citra Wiwit Lestari, S.Pd, a fifth-grade homeroom teacher, it was found that the creativity of students in her class was a major challenge that needed to be overcome. The fifth grade consisted of 29 students, with 17 boys and 12 girls. Ms. Citra honestly admitted that so far, the teaching approach for IPAS (Natural and Social Sciences) subjects has tended to be dominated by conventional methods. These old methods often do not provide enough space for students to explore new ideas, be creative, or find innovative solutions independently. This has a direct impact on the lack of opportunities for students to develop their creative potential to the fullest. This limitation is an important basis for seeking alternative learning strategies that stimulate students' creativity, given the importance of creativity as a 21st-century skill.The results of the research conducted using the Project-Based Learning (PjBL) model indicate an increase in creativity and learning outcomes in Science and Mathematics for fifth-grade students at UPTD SD Negeri 1 Weru Lor. This study was conducted in two cycles. The implementation phase of Cycle I was carried out on May 14, 2025, at SD Negeri 1 Weru Lor. As shown in Figure 2.

Figure 2. Project-based Learning Process

The dominance of conventional methods in teaching science indirectly hinders the creative development of these 29 fifth-grade students, both male and female. An unstimulating learning environment often causes students to focus only on receiving material without being encouraged to process or apply it in unique ways. Therefore, there is an urgent need to implement a more innovative and student-centered learning model, such as Project Based Learning (PjBL). The application of this new model is expected to change the learning paradigm from merely

transferring knowledge to a process of exploration and creation. The goal is to provide a more authentic and challenging learning experience, so that each student is encouraged to use and develop their creative thinking skills through real projects. This is important for improving the quality of learning outcomes and the active engagement of all students. As shown in Figure 3.

Figure 3. Project-based learning process 2

This Classroom Action Research (CAR) was conducted in two equivalent cycles, with Cycle II focusing on improvements based on the findings of Cycle I. Each cycle followed the standard ACT steps: Planning (developing PjBL learning plans and instruments), Action Implementation (implementing the PjBL model), Observation (collecting data on teacher and student activities), and Reflection (analyzing results for improvement). In particular, the planning for Cycle II was based on the results of reflection and input from Cycle I. Research data was collected through three main methods: Observation of teacher activities and student engagement in Grade V during IPAS learning, Learning Achievement Tests conducted after each learning session to measure improvements in student knowledge, and Documentation in the form of notes, photos, or images as supporting evidence of the research process, all of which will be summarized in the Final Activity to provide recommendations for improvement.

The implementation of Cycle I began with the planning stage, where the researcher consulted with the fifth-grade homeroom teacher to understand the students' initial conditions and any special needs that might exist, analyzed and prepared the curriculum to determine the material to be taught, and developed teaching modules aligned with the Project-Based Learning model, including introductory activities, main content, and concluding activities. Preparing teaching media and materials, such as a human respiratory system model, a human respiratory system PowerPoint presentation, and practical tools (cardboard, manila paper, scissors, glue, origami paper, a cutter, a ruler, and pencils), as well as developing Student Worksheets (LKPD) and learning projects to be used during instruction.

During the implementation phase, the steps of project-based learning were followed, beginning with presenting questions related to the predetermined material, namely the human respiratory system. Throughout the activity, from the introductory phase to the final phase, the researcher and the homeroom teacher conducted observations by filling out observation sheets to assess the quality of the project-based learning model used in the activity and to measure student creativity. The results of the creativity observation of students in Cycle 1 in the IPAS learning material on the respiratory system in Cycle I can be seen in Table 1.

Tabel 1. Results of Observation of Student Creativity Cycle 1

	Student Name	Observed Student Activities										Total Score	Percentage	Category
		1	2	3	4	5	6	7	8	9	10			
1	Student 1	3	5	2	1	1	1	4	3	2	1	23	46%	Not Creative
2	Student 2	3	2	2	1	3	1	5	3	3	4	23	46%	Not Creative
3	Student 3	3	2	1	1	2	1	4	5	1	5	25	50%	Not Creative
4	Student 4	4	3	2	1	1	1	4	5	3	5	29	58%	Quite Creative
5	Student 5	4	1	1	2	1	4	5	3	5	5	27	54%	Quite Creative
6	Student 6	4	2	3	1	1	1	5	4	4	4	29	58%	Quite Creative
7	Student 7	3	3	2	1	3	1	5	3	1	3	33	66%	Quite Creative
8	Student 8	2	2	3	1	3	1	4	3	2	4	34	68%	Quite Creative
9	Student 9	5	2	3	1	2	1	4	5	1	5	29	58%	Quite Creative
10	Student 10	2	2	3	1	2	1	5	1	4	3	32	64%	Quite Creative
11	Student 11	4	1	1	1	3	1	5	5	3	3	27	54%	Quite Creative
12	Student 12	4	2	3	1	3	1	5	4	1	4	28	56%	Quite Creative
13	Student 13	4	3	2	1	3	1	5	4	4	5	32	64%	Quite Creative
14	Student 14	4	3	1	1	1	1	5	5	1	4	26	52%	Quite Creative
15	Student 15	4	2	2	1	3	1	5	5	4	5	29	58%	Quite Creative
16	Student 16	4	2	2	1	2	1	4	5	3	4	28	56%	Quite Creative
17	Student 17	2	1	3	1	1	1	5	5	3	5	25	50%	Quite Creative
18	Student 18	5	4	2	1	3	1	5	5	2	4	32	64%	Quite Creative
19	Student 19	5	2	1	1	3	1	5	5	2	5	30	60%	Quite Creative
20	Student 20	4	3	3	1	2	1	5	4	4	5	32	64%	Quite Creative
21	Student 21	4	2	2	1	3	1	5	5	2	4	29	58%	Quite Creative
22	Student 22	5	1	2	1	1	1	5	5	1	5	22	44%	Lack Creative
23.	Student 23	5	5	2	1	1	1	4	5	2	5	26	52%	Quite Creative
24	Student 24	5	5	5	1	3	1	5	3	1	3	29	58%	Quite Creative
25	Student 25	5	2	2	1	3	1	4	5	1	5	29	58%	Quite Creative
26	Student 26	5	5	5	1	3	1	4	1	2	3	30	60%	Quite Creative
27	Student 27	2	3	2	1	3	1	5	5	2	3	27	54%	Quite Creative
28	Student 28	4	3	2	1	1	1	4	1	2	3	20	40%	Lack Creative
29	Student 29	3	1	2	1	2	1	4	3	3	3	21	42%	Lack Creative
											Total	**806**	**55,58%**	**Quite Creative**

Based on the results of observing the creativity of students in cycle 1, it was found that most students were in the moderately creative category, with 22 students (76%). Six students (21%) were categorized as less creative, while only one student (3%) was categorized as creative. The total score obtained was 1,628 with an average of 56.13%, so it can be concluded that the creativity of students in cycle 1 was in the moderately creative category. In addition to assessing the quality of the project-based learning model in measuring student creativity, this study also measured student learning outcomes during the implementation of this learning model. The learning outcomes of fifth-grade students at UPTD SD Negeri 1 Weru Lor in the IPAS subject on the respiratory system in Cycle I are presented in Table 2 as follows:

Table 2. Learning Outcomes of Students in Cycle 1

	Student Name	Score	Learning Completion	
			Completed	Not Completed
1	Student 1	80	√	
2	Student 2	60		√
3	Student 3	80	√	
4	Student 4	60		√
5	Student 5	60		√
6	Student 6	20		√
7	Student 7	60		√
8	Student 8	0		√
9	Student 9	40		√
10	Student 10	0		√
11	Student 11	20		√
12	Student 12	0		√
13	Student 13	0		√
14	Student 14	80	√	
15	Student 15	20		√
16	Student 16	80	√	
17	Student 17	20		√
18	Student 18	60		√
19	Student 19	60		√
20	Student 20	20		√
21	Student 21	40		√
22	Student 22	100	√	
23	Student 23	40		√
24	Student 24	60		√
25	Student 25	80	√	
26	Student 26	20		√
27	Student 27	20		√
28	Student 28	20		√
29	Student 29	40		√
	Total Score	**1.240**		
	Average Score	**42,75**		
	Highest Score	**100**		
	Lowest Score	**20**		
	Number of Students Who Passed	**6 (20,68 %)**		
	Number of Students Who did not Pass	**23 (79,31%)**		
	Criteria for Achievement of Learning Objectives (KTTP)	**75**		

Based on Table 2 above, the learning outcomes of students in cycle 1 obtained a total score of 1,240 with an average score of 42.75 using the Learning Objective Achievement Criteria (KKTP), which is 75%. The number of students who achieved mastery was 6 students (20.68%). This means that the research success target of 75% has not been achieved. Therefore, Cycle II actions need to be implemented. Based on the results of the observation of Student Creativity in Cycle I, student creativity showed a significant increase. This is evident from the increase in the percentage of student creativity, which reached a higher figure compared to the initial condition before the implementation of project-based learning.

This improvement indicates that the project-based learning model successfully encouraged students to be more actively involved in the learning process. However, there is still room for further improvement, particularly in terms of collaboration among students and the utilization of more varied learning resources. Student learning outcomes also showed improvement. The average student scores in the areas of attitude, knowledge, and skills met the criteria of "very poor." Reflections indicated that 23 students still did not meet the average score. Therefore, Cycle II

will be conducted again with the aim of maximizing student understanding, which will impact improved learning outcomes.

The first meeting in Cycle I was held on May 27, 2025, and the second meeting on May 28, 2025. Planning for Cycle II will involve enhancing group interaction and collaboration, using more varied learning resources, and providing more structured and constructive feedback. With these adjustments, it is hoped that Cycle II will further enhance students' creativity and learning outcomes, as well as create a more enjoyable and meaningful learning experience for students. Learning in Cycle II successfully created a more dynamic and interactive learning environment, where students were given equal opportunities to understand the material and explore it through the projects they worked on. In the group project of creating pop-up books in Cycle II, students became more active in collaborating with their group members in designing the project, using available tools and materials to their fullest potential, taking responsibility for tasks assigned to each group member, and addressing existing issues. Furthermore, in Cycle II, each student demonstrated greater flexibility in describing the material and presenting it in the form of project outcomes that met the criteria for functionality and aesthetics. Observation Results of Student Creativity in Cycle 2.

Table 3. Results of Student Creativity Observations Cycle 2

	Student Name	Observed Student Activities										Total Score	Percentage	Category
		1	2	3	4	5	6	7	8	9	10			
1	Student 1	5	5	5	5	5	5	5	5	5	5	50	100%	Highly Creative
2	Student 2	5	5	5	5	4	5	4	5	5	5	48	96%	Highly Creative
3	Student 3	5	5	5	5	5	4	5	5	5	5	49	98%	Highly Creative
4	Student 4	5	5	5	4	5	5	5	5	5	5	49	98%	Highly Creative
5	Student 5	5	5	5	4	5	4	5	5	5	5	48	96%	Highly Creative
6	Student 6	5	5	5	4	5	4	5	5	5	5	48	96%	Highly Creative
7	Student 7	5	5	5	4	5	5	5	5	5	5	49	98%	Highly Creative
8	Student 8	5	5	5	4	5	4	5	5	5	5	48	96%	Highly Creative
9	Student 9	5	5	5	4	5	4	5	5	5	5	48	96%	Highly Creative
10	Student 10	5	5	5	4	5	4	5	5	5	5	48	96%	Highly Creative
11	Student 11	5	5	5	5	5	4	5	5	5	5	49	98%	Highly Creative
12	Student 12	5	5	5	4	5	4	5	5	5	5	48	96%	Highly Creative
13	Student 13	5	5	5	5	5	4	5	5	5	5	49	98%	Highly Creative
14	Student 14	5	1	2	4	1	5	4	5	4	5	36	72%	Creative
15	Student 15	5	5	5	4	5	4	5	5	5	5	48	96%	Highly Creative
16	Student 16	5	5	5	4	5	4	5	5	5	5	48	96%	Highly Creative
17	Student 17	5	5	5	4	5	4	5	5	5	5	48	96%	Highly Creative
18	Student 18	5	5	5	5	5	4	5	5	5	5	49	98%	Highly Creative
19	Student 19	5	5	5	4	5	4	5	5	5	5	48	96%	Highly Creative
20	Student 20	5	5	5	4	5	4	5	5	5	5	48	96%	Highly Creative
21	Student 21	5	5	5	4	5	5	5	5	5	5	49	98%	Highly Creative
22	Student 22	5	5	5	4	5	4	5	5	5	5	48	96%	Highly Creative
23.	Student 23	5	5	5	4	5	4	5	5	5	5	48	96%	Highly Creative
24	Student 24	5	5	5	4	5	4	5	5	5	5	48	96%	Highly Creative
25	Student 25	5	5	5	4	5	4	5	5	5	5	48	96%	Highly Creative
26	Student 26	5	5	5	4	5	4	5	5	5	5	48	96%	Highly Creative
27	Student 27	5	5	5	4	5	4	5	5	5	5	48	96%	Highly Creative
28	Student 28	5	5	5	4	5	4	5	5	5	5	48	96%	Highly Creative
29	Student 29	5	5	5	4	5	4	5	5	5	5	48	96%	Highly Creative
											Total	**1.389**	**95,79%**	**Highly Creative**

Based on the data in the table above, out of a total of 29 students, the majority (28 students) achieved very good scores, with creativity percentages ranging from 96% to 100%, thus falling into the Highly Creative category. Only one student was in

the Creative category, with a percentage of 72%. Overall, when considering the total score and average, the total score is 1,389 with an average percentage of 95.79%, demonstrating that the observed activities successfully stimulated exceptional creativity among the majority of students. The increase in students' creativity is accompanied by an improvement in their academic performance. The following is the data on student learning outcomes for Grade 5 students at UPTD SD Negeri 1 Weru Lor in the IPAS lesson on the respiratory system in Cycle II, as shown in Table 4:

Table 4. Student Learning Outcomes Cycle 2

	Student Name	Score	Learning Completion	
			Completed	Not Completed
1	Student 1	80	√	
2	Student 2	100	√	
3	Student 3	100	√	
4	Student 4	80	√	
5	Student 5	100	√	
6	Student 6	80	√	
7	Student 7	80	√	
8	Student 8	60	√	
9	Student 9	80	√	
10	Student 10	80	√	
11	Student 11	100	√	
12	Student 12	100	√	
13	Student 13	100	√	
14	Student 14	100	√	
15	Student 15	80	√	
16	Student 16	100	√	
17	Student 17	80	√	
18	Student 18	100	√	
19	Student 19	100	√	
20	Student 20	80	√	
21	Student 21	100	√	
22	Student 22	100	√	
23	Student 23	100	√	
24	Student 24	100	√	
25	Student 25	100	√	
26	Student 26	100	√	
27	Student 27	100	√	
28	Student 28	100	√	
29	Student 29	100	√	
	Total Score	**2.680**		
	Average Score	**92,41**		
	Highest Score	**100**		
	Lowest Score	**60**		
	Number of Students Who Have Completed Their Studies	**28 (96,55 %)**		
	Number of Students Who Have Not Completed Their Education	**1 (3,44%)**		
	Criteria for Learning Objective Achievement (KTTP)	**75**		

Based on Table 4 above, the learning outcomes of students in cycle 2 obtained a total score of 2,680 with an average score of 92.41 using the Learning Objective Achievement Criteria (KKTP), which is 75%. The number of students who achieved mastery was 28 students (20.68%). This means that the research success target of 75% has been achieved. Based on the "Observation Results of Module Cycle II," "Observation Results of Teacher Activities Cycle II," "Observation Results of Creativity Cycle II," and "Student Learning Outcomes," it is evident that the implementation of the project-based learning model in Cycle II has successfully improved the quality of learning, student creativity, and teacher performance in the learning process.

The "Cycle II Creativity Observation Results" show that all students achieved the "highly creative" category with a creativity percentage of 87.24%. This indicates that project-based learning has successfully created a conducive learning environment for the development of students' creativity. The "Cycle II Learning Outcomes" show that 28 students achieved the mastery category, but 1 student has not yet achieved mastery. This indicates that project-based learning has successfully created a conducive learning environment for the development of students' learning abilities. Overall, Cycle II shows that the implementation of project-based learning has successfully achieved the research objectives in enhancing students' creativity and understanding of the human respiratory system. Project-based learning has proven effective in improving the quality of learning, student creativity, and teacher performance.

Discussion

Lesson planning is a systematic process carried out by teachers to prepare teaching and learning activities. The aim is to achieve effective and efficient results by considering various aspects such as teaching materials, media, methods, and evaluation. This is in line with the opinions of experts, as stated by (Alansor et al., 2024) which defines lesson planning as a series of activities that teachers need to prepare before starting teaching activities. Not only that, evaluations are also conducted periodically to achieve targets that have been set within a certain period of time. Margareth, 2017 quote in (Rahmalia & Sabila, 2024) The implementation of the Project-Based Learning (PjBL) model in grade V at UPTD SD Negeri 1 Weru Lor shows that careful planning plays an important role in enhancing student creativity. Improvements from Cycle 1 to Cycle 2 demonstrate a significant increase in the quality of planning. As shown in Table 5.

Table 5. Summary of Results (Teaching Module)

No.	Cycle	Total Score	Precentage
1	**Cycle** 1	26	96,29%
2	**Cycle** 2	27	100%

Based on the table above, there is a significant increase from Cycle 1 to Cycle 2. In Cycle 1, the number of planning scores was 26 with a percentage of 96.29%, while in Cycle 2, the number of scores increased to 27 with a perfect percentage of 100%. This increase indicates that the teaching module in Cycle 2 has been improved and

has a higher quality compared to Cycle 1. Teacher performance is a combination of skills, motivation, and external support that is reflected in the performance of their main duties. This is in line with the statement Husin et al. (2021) as quoted in (Marliani et al., 2025), where teachers' performance can be seen from the way they carry out their duties and demonstrate their competence in fulfilling their educational responsibilities. Teachers' performance reflects their ability to carry out tasks in accordance with predetermined objectives (Pratiwi et al., 2021 in (Arnauli Tamba et al., 2023) The implementation of the Project-Based Learning (PjBL) model in grade V of UPTD SD Negeri 1 Weru Lor showed a significant improvement in teacher performance from Cycle 1 to Cycle 2. As shown in Figure 1. Summary of teacher performance results.

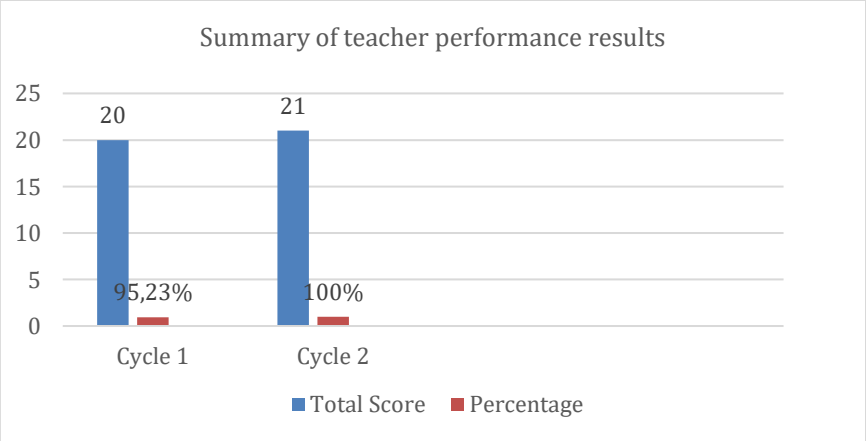

Figure 4. Summary of teacher performance results

Based on the data above, it can be seen that teacher performance has improved. In Cycle 1, the teacher performance score reached 95.23%. This score then increased to 100% in Cycle 2, indicating maximum improvement. This improvement proves that teachers have made effective improvements in the aspects of planning, implementation, and evaluation of learning, thereby optimizing the application of the PjBL model. Creativity is defined as an individual's cognitive ability to create something new or to transform existing ideas into innovative and useful innovations. As stated by (Tandibua et al., 2025) Creativity is a cognitive process of producing something new or a new work from something that already exists. Creativity is not limited to art or design, but can also emerge in problem solving, self-expression, and new approaches to concepts or learning materials. (Firmansyah et al., 2023)

According to (Harris, 2018: 112 in (GINTING et al., 2013), creativity is a person's ability to create something new, whether in the form of ideas or actual works in the form of aptitude or non-aptitude characteristics, in new works or conditions with existing things, and all of which are relatively different from what existed before. The implementation of PjBL has successfully encouraged a significant increase in creativity, as seen in the creativity results of the students.

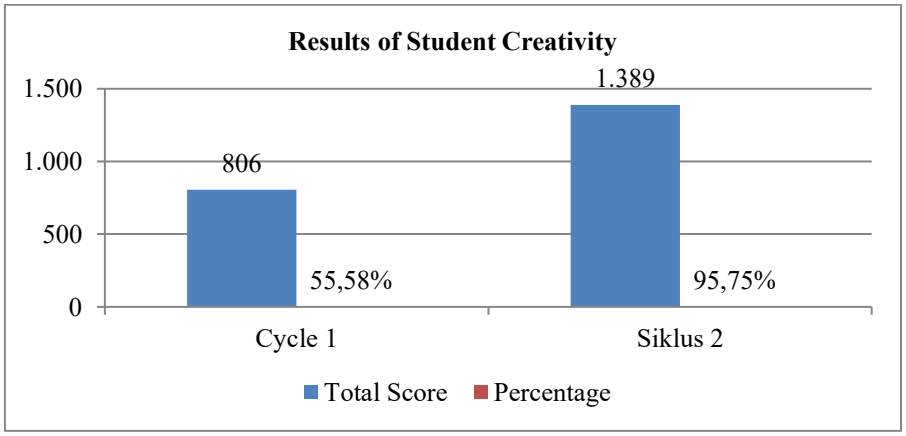

Figure 5. Results of Student Creativity

The 40.17% increase from Cycle 1 to Cycle 2 indicates that the PjBL model is effective in encouraging students to think critically and creatively. These results align with research (Permayanti Resmana et al., 2024), which also showed an increase in students' creativity from the "good" category (81.25%) to "very good" in Cycle II (above 90%) after implementing this model. Learning outcomes are the achievements obtained by students after undergoing the learning process, encompassing aspects of knowledge, attitude, and skills. According to Serimbing (Serimbing, 2025) Learning is an effort to "achieve behavioral change, whether in the form of knowledge, skills, attitudes, or positive values. Learning outcomes are the achievements attained by students after participating in learning activities. These achievements include abilities related to aspects of knowledge, attitude, and skills possessed by students after gaining experience through learning activities in their environment (Agrifina et al., 2024) According to Susanto (Mawarni, 2025) learning outcomes are the abilities acquired by students during learning activities. These abilities relate to the knowledge, understanding, and tasks that students can perform. The implementation of PjBL also has a positive impact on learning outcomes, with very significant improvements:

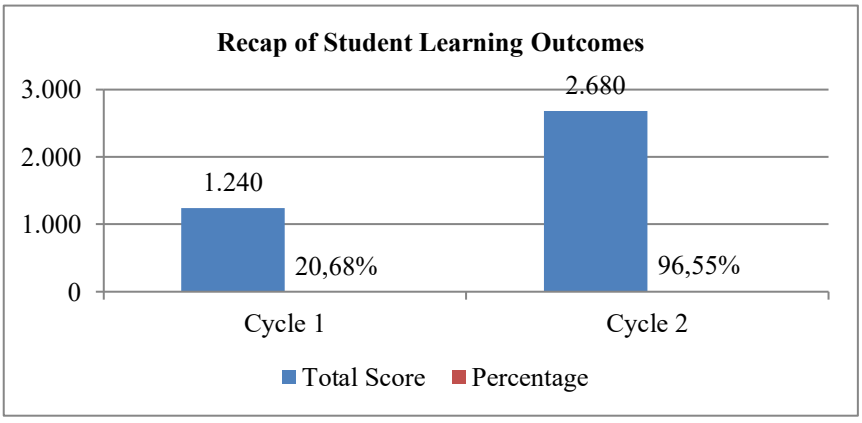

Figure 6. Recap of Student Learning Outcomes

The 75.87% increase in learning outcomes from Cycle 1 to Cycle 2 proves that PjBL is capable of providing meaningful and contextual learning experiences. This

increase shows that students not only understand the material more deeply but also master skills and attitudes. This is also in line with research (Sari & Angreni, 2018) who found an increase in learning outcomes from 41.37% in Cycle 1 to 82.73% in Cycle 2.

4. Conclusion

Based on the two-cycle action research conducted in Grade V at UPTD SD Negeri 1 Weru Lor, it can be concluded that the study was highly successful in achieving its objectives. The implementation of the Project-Based Learning (PjBL) model significantly enhanced both student creativity and learning outcomes. The planning of the PjBL model was carried out thoughtfully, with continuous refinement between cycles; the strategic revision implemented in Cycle II, guided by reflections from Cycle I, successfully led to maximum improvement in teacher performance and instructional quality. Regarding the implementation of the PjBL model, although initial challenges were evident in Cycle I, the method proved effective in creating a dynamic, interactive, and conducive learning environment. This approach successfully shifted the classroom focus to critical thinking and collaboration through project work. Finally, concerning the results of applying the PjBL model, the intervention led to a drastic and positive change. Student creativity moved from the Moderately Creative category to the Very Creative category, while student learning outcomes saw a sharp surge, confirming that PjBL is an effective method for fulfilling learning objectives and boosting overall educational quality. The successful outcome demonstrates that PjBL is a viable strategy for fostering 21st-century skills.

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