

IMPROVING STUDENT'S LEARNING OUTCOMES OF THE THIRD-GRADE STUDENTS IN SDN 97 PEKANBARU ON LANDFORMS IN PEKANBARU TOPIC THROUGH *PROJECT BASED LEARNING* WITH *CULTURALLY RESPONSIVE TEACHING* APPROACH

PENINGKATAN HASIL BELAJAR KELAS III B SDN 97 PEKANBARU PADA MATERI BENTANG ALAM DI KOTA PEKANBARU MELALUI PROJECT BASED LEARNING DENGAN PENDEKATAN CULTURALLY RESPONSIVE TEACHING

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Abstrak

Penelitian ini merupakan jenis penelitian tindakan kelas yang bertujuan untuk meningkatkan hasil belajar siswa melalui penggunaan Project Based Learning dengan pendekatan Culturally Responsive Teaching pada materi Lanskap di Kota Pekanbaru. Subjek dalam penelitian ini adalah 30 siswa kelas III B SDN 97 Pekanbaru. Hasil observasi menunjukkan bahwa KKTP kurang maksimal disebabkan oleh kurangnya antusiasme siswa dan penyampaian materi tanpa visualisasi yang jelas di dalam kelas. Teknik pengumpulan data dalam penelitian ini adalah teknik observasi, dokumentasi dan tes. Penelitian ini dilaksanakan dalam tiga tahap yaitu pra siklus, siklus I dan siklus II. Hasil penelitian menunjukkan adanya peningkatan pada setiap siklusnya dengan persentase keberhasilan yang besar pada siklus II sebesar 89,83%. Oleh karena itu, dapat disimpulkan bahwa penggunaan Project Based Learning dengan pendekatan Culturally Responsive Teaching dapat meningkatkan hasil belajar mata pelajaran IPA materi lanskap di kelas III B SDN 97 Pekanbaru Kota Pekanbaru.

Abstract

This research is a type of classroom action research that aims to improve student learning outcomes through the use of Project Based Learning with a Culturally Responsive Teaching approach on the subject of Landscape in Pekanbaru City. The subjects in this study were 30 students of class III B SDN 97 Pekanbaru. The results of the observation showed that the students' achievement was below the KKTP, caused by the lack of student enthusiasm and the delivery of material without clear visualization in class. The data collection techniques in this study were observation, documentation, and tests. The study was conducted in three stages, namely pre-cycle, cycle I, and cycle II. The results of the study showed an increase in each cycle with a large percentage of success in cycle II of 89.83%. Therefore, it can be concluded that the use of Project Based Learning with a Culturally Responsive Teaching approach can improve learning outcomes in the subject of science on the subject of landscape in Pekanbaru City class III B SDN 97 Pekanbaru.

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INTRODUCTION

Learning carried out at school must be meaningful in order to maximize students' memory. Meaningful learning is defined by David Ausubel as the process of combining new information or new concepts with concepts that a person already has in his or her cognitive structure (Basyir, et.al., 2022). If this has been experienced by students, the knowledge transfer provided will result in good memory and knowledge retention (Nurhasanah, et.al., 2022). The learning and learning process will be more meaningful if students learn while experiencing what they learn in real life using various five senses (Jamaludin, et. al., 2023).

Social studies subjects can be one of the means of meaningful learning at the elementary school level. Social studies learning at the elementary level is aimed at strengthening the basic literacy possessed by students. Students will be accustomed to learning more complicated natural and social sciences at the junior high school level (Hasanah, et al., 2023). Science subjects are a combination of science and social studies. This change is based on the fact that elementary school students are able to see things as a whole and are able to expand their thinking holistically in relation to the natural and social environment. The merger of these two subjects is also to strengthen the profile of Pancasila students (Astuti, 2022). The understanding of science that students have can be seen from the ability of the student to choose and combine an appropriate science to present and predict an event or fact and apply it in different experiences (Hasanah, et al., 2023).

Science learning at this level has an important role in shaping students' initial understanding of nature and society in the surrounding environment (Estiono et al., 2025). This is in accordance with the theory of cognitive development put forward by Jean Piaget, that the age of elementary school/MI is a critical age for developing children's scientific thinking skills or inquiry skills. Activities carried out by students in observing or researching the surrounding environment and activities that encourage other inquiry skills are important provisions for the next level (Hasanah, et al., 2023). Contexts related to the natural conditions and the environment around students need to be included in the student learning process (Rohman et al., 2023). Thus, the content and context of science subjects can be understood, strengthen the mastery of literacy and numeracy and become a provision of skills in life

Social studies subjects that are carried out with environmental insights have a very large possibility to maximize the quality of learning. Learning for primary school students should be contextualized by conducting activities to investigate their surroundings, including the home environment, schools, playgrounds, neighborhood communities, and cultures. Ethnoscience learning is also based on Vygotsky's hypothesis that learning will be successful if it is free from the sociocultural environment, and the sociocultural environment plays an important role in cognitive development (Cahyani and Djudin, 2024). In addition, based on a constructivist approach, this learning as a new method in education and student-centered pedagogy is taking center stage, due to its contribution to increasing the value of education centered on the development of abilities and experiences (Kong, 2021).

One of the IPAS materials that needs to be integrated into students' daily lives is landscape material for grade III elementary school. In this landscape material, students learn about various forms of the earth, such as beaches, rice fields, mountains, rivers, lakes, lowlands and highlands, lowlands, hills, and swamps. These types of landscapes are very close to students' lives and can be encountered in everyday life. The learning activities in this material can be designed contextually and meaningfully, because the concepts contained in this material are closely related to student life.

The results of observations conducted in class III B SDN 97 Pekanbaru show that student learning outcomes in landscape materials have a fairly low score. Learning outcomes are defined as the abilities that teachers or educators give to students after participating in learning (Agusti, 2022). Education is said to be successful if the learning outcomes obtained by students are good. The achievement of learning outcomes is an aspect or benchmark that students succeed in learning the material that has been delivered (Wibowo et al., 2021).

Learning outcomes are influenced by intrinsic factors and extrinsic factors. Intrinsic factors that have an impact on learning outcomes are factors that come from within a person's personality which includes intellect, behavior, routine, talent, interest, and motivation from within. Factors that come from outside a person's personality are called extrinsic factors which consist of the triceneters of education, namely family, community, and school (Astiti, 2021).

Based on the observation results, the low learning outcomes of students in grade III B SDN 97 Pekanbaru in the science subject are influenced by several things, such as the lack of enthusiasm of students in learning due to learning approaches that are not in accordance with the needs, backgrounds, and culture of students. In addition, the cause of low learning outcomes is because the learning material is delivered in a general and non-contextual manner so that students do not understand the true meaning of the material. Thus, students have not had a meaningful learning experience. A learning approach that is in accordance with the characteristics of the material and students is indispensable to improve student learning success in landscape materials.

The success of students' learning is in line with their learning interests based on their learning experiences in processing learning. This interest in learning is influenced by the life experiences and cultural backgrounds that each student in the class has. When viewed from the problems experienced by students, the criteria of the material studied and the cultural background that students have, the *Culturally Responsive Teaching* (CRT) approach can be the right solution to be implemented. *Culturally Responsive Teaching* is an approach that integrates students' cultural backgrounds. The CRT approach can develop critical thinking skills, improve soft skills, increase self-awareness, social and cultural awareness (empathy, communication, responsibility, discipline and social care) (Khalisa 2024). *Culturally Responsive Teaching* (CRT) is also a learning approach in which teachers play the role of facilitators responsible for creating a fair learning environment by addressing inequalities that may arise due to differences in background, culture, ethnicity, and other individual characteristics of each student (Salma 2023). The *Culturally Responsive Teaching* (CRT) approach can be a solution to improve learning outcomes by integrating local culture and the context of students' lives. Students can be directly involved in the process of discovering understanding the material taught, so that students better understand the material taught by the teacher (Putri et al., 2024).

The blending of local potential into learning is one of the discussions in the independent curriculum. This discussion is related to students' freedom to acquire knowledge, including learning from the surrounding environment (Najwa and Suciptaningsih, 2023). Learning with a regional approach is very effective for the interpretation of the process and the personality of students, because students obtain a contextual learning process and an introduction to exploring the concept of science in the culture studied. Culture that is blended as a learning medium aims to motivate students to apply knowledge, work together, and respond to the relationship between various subjects (Yulia et al., 2024).

The application of the *Culturally Responsive Teaching approach* in social studies subjects has been proven to increase students' interest in learning (Hardiana, 2023). Based on existing learning outcomes, learning is designed to be tailored to the conditions of students' regions. This is expected

so that students feel connected to the material so as to increase their enthusiasm for learning. To effectively implement *the Culturally Responsive Teaching* approach, it is necessary to have a learning model that is relevant in students' lives and able to increase student participation. One of the learning models that can be combined with *the Culturally Responsive Teaching* approach is the *Project Based Learning* model. *The Project Based Learning* learning model is a learning model that involves the activeness of students in solving problems and is carried out in groups or individuals with a certain amount of time that is produced in a product to be later presented to others (Sari, 2022).

This learning model is a learning activity based on the philosophy of constructivism put forward by Jean Piaget. Activities carried out by students will provide knowledge that they themselves generate through direct experience and become meaningful learning (Luma, 2022). Project-based learning is a learning model that uses problems as the first step in collecting and integrating new knowledge based on their experience in real activities. Through *Project Based Learning*, the inquiry process begins by raising a guiding question and guiding students in a collaborative project that integrates various subjects (materials) in the curriculum. (Ministry of Education and Culture, 2014). According to Fahrezi (2020), the advantages of the *Project Based Learning* model are as follows: 1) Able to increase student learning motivation. 2) Skills increase students' motivation to learn. 3) It can improve students' skills in managing various resources. 4) Students are more active in learning. 5) There is a natural collaboration between students. 5). Indirectly improve students' communication skills. 6) Train students in organizing a project. 7) Improve skills in time management. 8) Learning becomes fun.

Learning that uses *the Project Based Learning* model can develop the skills that students must have in the 21st century. These abilities are known as the 4Cs, which consist of creative thinking, communication, critical thinking and problem solving, and collaboration. The resulting work will be presented in front of the class, so that the public speaking skills and confidence of students are further honed. The creation of the works produced in this learning will encourage students to think creatively to make and display their works as best as possible (Dewi, 2022). The learning process involving creative thinking skills is carried out using direct experience or simulated activities so that students can become autonomous and independent (Luma, 2023).

The Project Based Learning stage was developed by two experts, The George Lucas Education Foundation and Dopplet. Syntax of *Project Based Learning* in the Ministry of Education and Culture, 2014, namely: Phase 1: Determining the basic question (start with essential question). Learning begins with essential questions, which are questions that can give students assignments in carrying out an activity. Phase 2: Preparation of the project design. Planning is carried out jointly between teachers and students. Thus students can feel involved in the project to be made. Phase 3: Create schedule. Teachers and students jointly prepare a schedule of activities in the project work. Phase 4: Monitoring the students and progress of project. Phase 5: Assess the outcome. The assessment is carried out by the teacher to measure the achievement of learning objectives, and also as a guide to find out the progress of each student, as well as as feedback to find out the level of understanding that has been achieved by students, and assist teachers in developing the next learning strategy. 6) Phase 6: Evaluation of the Experience. At the end of the learning process, teachers and students reflect on the activities and results of the projects that have been carried out (Septyana, 2021).

This research was conducted to improve the learning outcomes of science science class III B SDN 97 Pekanbaru on Landscape material through the *Project Based Learning* model with a *Culturally Responsive Teaching* approach. The application of *the Project Based Learning* model with the *Culturally Responsive Teaching approach* is expected to be able to deepen the mastery of concepts owned by students and actively involve students in the learning process. This research is

expected to be a consideration for teachers to be applied to social studies subjects and others to improve student learning outcomes.

METHOD

This research is a Class Action Research (PTK). Researchers contribute directly to the research process to develop and handle learning problems experienced by the class. The proper and effective implementation of PTK carried out by teachers can maximize the quality of learning and evaluate student learning processes and outcomes. In other words, teachers apply learning by doing when carrying out PTK, which is learning activities, deepening and refreshing knowledge by directly taking action (Machali, 2022).

The research process at PTK is an orderly process and is carried out continuously. This research was carried out in three stages, namely pre-cycle, cycle I and cycle II. At each stage of the research, an orderly and continuous process is carried out consisting of planning, action, observation and reflection activities (Suciani., et al., 2023).

The subject of the study is grade III B SDN 97 Pekanbaru students for the 2024/2025 school year with a total of 30 students. This research was carried out in the even semester of February-March 2025. The approach used in this PTK method is a mixed approach, where the research process combines qualitative and quantitative approaches (Panjaitan, 2020). Quantitative data analysis consists of several stages, namely the data processing stage, the data organizing stage and the conclusion drawing stage. The data collection techniques in this study are observation, documentation and test techniques. The data collection instruments used were the researcher's observation sheet and a test sheet containing five multiple-choice questions given to the subjects at the end of each cycle.

This research focuses on student learning outcomes expressed in the form of numbers and descriptions. Learning outcomes are changes in skills, attitudes, understanding, and knowledge that are categorized in three domains, namely cognitive, affective, and psychomotor through the learning process (Fitri et al. 2022). According to Enjelina et al. (2024), learning outcomes need to be measured and assessed thoroughly to ensure that learning objectives are achieved effectively or not. So that learning outcomes can be a benchmark and reference for teachers to find out the success of the teaching and learning process, provide feedback, and improve the learning process to be more effective and efficient.

To get the numerical values and descriptions of the test sheets given at the end of the learning activity. Aqib (2016) in Panjaitan (2020) explained that the average score obtained by the class was obtained using the formula:

$$x = \frac{\sum xi}{\sum N} x 100\%$$

Information:

x = average value

$\sum xi$ = sum of all student grades

$\sum N$ = number of students

Furthermore, to calculate the percentage of learning completeness, the formula is used:

$$P = \frac{\sum \text{siswa yang tuntas belajar}}{\sum \text{siswa}} \times 100\%$$

Information:

P = Percentage of learning completeness
 $\sum$ students who are fully educated = number of students who complete their studies
 $\sum$ students = total number of students

RESULTS AND DISCUSSION

Result

The research focused on the learning outcomes of grade III B students on landscape materials showed an increase from each stage of activities, namely pre-cycle, cycle I and cycle II. An illustration of improving student learning outcomes can be seen in figure 1. The graph in the image shows how *the Project Based Learning model* integrated with *the Culturally Responsive Teaching* approach affects learning outcomes. In this study, students were divided into several groups so that they could more easily solve problems and design a project in the Student Worksheet (LKPD). Students in each group are assigned to create a project and produce a product in the form of a landscape image that will be displayed or presented in front of the class.

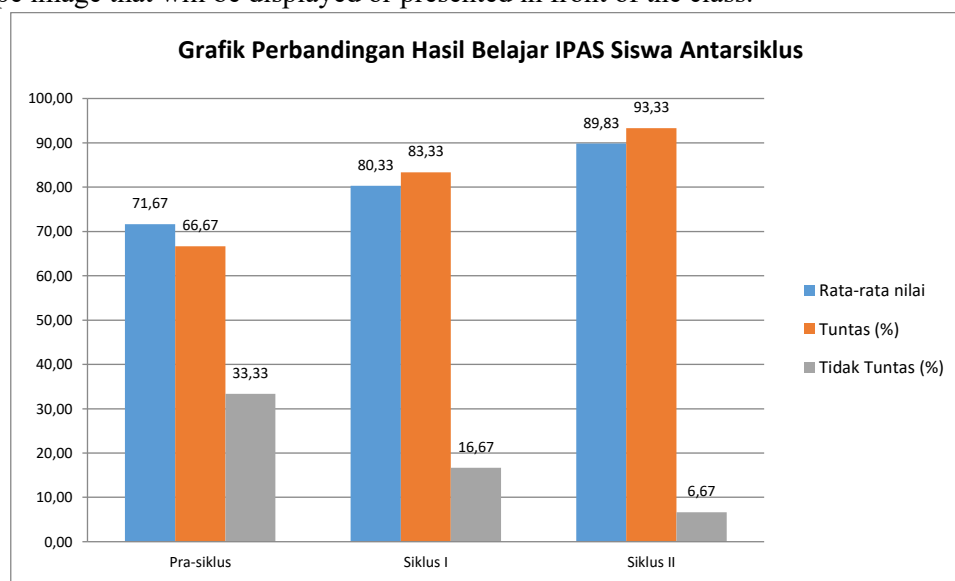


Figure 1. Graph of comparison of social studies learning outcomes of students between cycles on landscape materials in Pekanbaru City

The average student score in the pre-cycle stage was 71.67, of which 20 students or 66.67% of the total number of students in the class reached learning completion, while 10 students or 33.33% of the rest were still incomplete. Completeness of learning classically or in a classroom is achieved if $\geq 75\%$ of students who have completed their learning from the KKTP score that has been set at school (Panjaitan, et al., 2020). Corrective actions still need to be taken to be able to improve student learning outcomes. After learning landscape material with *the Project Based Learning model* integrated with the CRT approach in cycle I, student learning outcomes showed an improvement from the pre-cycle stage. The average score of student learning outcomes in the first cycle was 80.33.

The number of students who completed this material was 25 students or 83.33%, while 5 students or 16.67% of the number of students in the class had not been completed. The improvement of social studies learning outcomes in landscape materials in cycle II was categorized as very good or successful, because it achieved an average score of 89.83. The success percentage of 93.33% was obtained by 28 students, while 2 students or 6.67% still had incomplete scores.

Discussion

The learning process carried out in this study was carried out by students in groups in a collaborative environment. A collaborative environment is an educational approach to teaching and learning activities. This environment consists of collaboration between teachers and students in solving problems, completing assignments or creating a product. The collaborative environment experienced by students in the learning process is as part of social interaction, where students can communicate with each other in an atmosphere of cooperation, mutual understanding and having the same goals.

The Project Based Learning *learning model* carried out as a group will have an impact on the development of each student in a group. Collaboration in the project created creates a friendly environment to find solutions to problems, motivates each group member to create a healthy learning environment, encourages flexibility and thus enables students to respond to faster changes in learning, improves problem-solving by developing a combination of solutions and abilities in teams, and supports each other to solve problems (Syzykbayeva, Et. al., 2020).

The results of observations at the pre-cycle stage in the science subject of landscape material in the city of Pekanbaru class III B SDN 97 Pekanbaru show that student learning outcomes are below the Learning Goal Achievement Criteria (KKTP). The average score of students at this stage is 71.67, where 20 students or 66.67% of the class show complete learning, while 10 students or 33.33% are still incomplete. The low percentage of learning outcomes at this pre-cycle stage shows that most students are still not able to master landscape materials in the city of Pekanbaru. Students are not able to distinguish the types of landscapes correctly. This is because the visualization in this material cannot be interpreted in real terms by students. Learning needs to be varied so that the completeness of student learning outcomes increases in the next cycle.

Student learning outcomes on landscape materials in the city of Pekanbaru can be improved through Classroom Action Research (PTK) using *the Project Based Learning (PjBL)* learning model. The application of *the Project Based Learning (PjBL)* model and *the Culturally Responsive Teaching (CRT)* approach are aligned in an effort to maximize student learning outcomes. *The Project Based Learning* learning model presents a work scheme for learning that involves active, cooperative, and student-centered participation. In addition, the *Culturally Responsive Teaching approach* ensures that the material delivered and the learning experience are in accordance with the student's cultural background. This mixture can maximize participation, insight, and the quality of learning outcomes as a whole. The application of *the Project Based Learning* learning model with the Culturally Responsive Teaching approach has been proven to provide maximum learning outcomes in science subjects based on the success indicators achieved (Estiono, 2025).

In the implementation stage of cycle I, learning is carried out using *the Project Based Learning (PjBL)* model combined with *the Culturally Responsive Teaching (CRT)* approach. *This Project Based Learning model* is designed to increase students' active engagement through project activities, where students are not only passively receiving information, but also challenged to explore and collaborate to build their own knowledge. Dewi & Endang (2021) stated that the real experiences

and interactions carried out by these students are in line with the theory of constructivism put forward by Piaget and Vygotsky. The use of *the Culturally Responsive Teaching* approach used in learning is aimed at weighing differences in students' cultural heritage, experiences, and characters so that student participation in the learning process and learning achievement in students is maximized.

The learning objectives at this stage are specifically to look at the landscapes found in Riau Province, especially in the city of Pekanbaru. The city of Pekanbaru has a main river called the Siak River. This river has a length of 370 km and a width of 100-150. In addition to the main river, there are other tributaries in the city of Pekanbaru. These rivers have an important function in the lives of the people of Pekanbaru City, such as as a means of transportation, a source of clean water, a place for fish cultivation and an irrigation source. In addition to rivers, the city of Pekanbaru, which is located in a lowland area, has swampland, alluvial rivers, and floodplains (Setiawan, 2024).

Through the conditions of the landscape, students are invited to observe the environment around the school and remember the environment around the house and the environment of Pekanbaru City in general. Students are given the opportunity to create works in the form of their favorite landscapes, both in the form of writings, drawings and other works. In the presentation activity, students took turns displaying the works they made. Learning that involves cultural backgrounds and experiences in their daily lives has been proven to increase participation in learning with an increase in the percentage of learning completeness which was originally 66.67%, increasing at the end of cycle II to 93.33%.

After conducting an intervention in the form of using *the Project Based Learning* model with a Culturally Responsive Teaching *approach*, the next step is to evaluate and reflect on the results that have been achieved. Reflection on PTK aims to find weaknesses, improve learning activities and prepare an agenda that will be implemented in the next cycle. After the research activities have been carried out, an evaluation is carried out to measure the success and improvement for the next cycle (Suciani., et al., 2023). This assessment is not just a score in the form of numbers, but also a change in the behavior of students' activeness in the learning process. This is useful for teachers to evaluate whether the actions that have been taken have obtained good results, as well as to know what things should be improved or developed in the next cycle. Reflection actions that are carried out in a sustainable manner are important in PTK because they help teachers in knowing periodic changes in students (Siregar et al., 2024)

After reflection and evaluation in the first cycle, there are several aspects that need to be improved in the implementation of the second cycle of learning. Activities carried out as improvements in cycle I include: 1) Strengthening understanding of landscape concepts; 2) Guiding students who have not completed intensively; 3) Turn individual presentation activities into group presentations. Students are divided into groups to display their work in front of the class. Other groups took turns looking at the works displayed by the presenting group. Students who serve as a group of presenters must be able to explain each of their works to the group of visitors.

In the implementation stage of the second cycle, the PjBL learning model and *the Culturally Responsive Teaching* approach are still used because they have proven to be effective in increasing student activity and participation. This has a wider impact, not only in the cognitive aspect, but also in strengthening character and love for regional culture. The project made in the form of landscapes based on local culture makes the learning process more contextual, meaningful, and relevant to students' lives. The learning objectives in the second cycle were expanded to look at the landscapes in Riau Province. Students can consider their experiences while traveling or visiting relatives outside the city to be reflected in their work. The process of making and presenting works in groups is a momentum for students to pour their creativity and communication skills. Learning becomes more

fun and meaningful because students share and provide information related to the work they make. Therefore, learning that integrates the *Project Based Learning model with the Culturally Responsive Teaching approach* to landscape materials is considered successful in improving learning outcomes and student participation in the classroom.

Figure 1 shows a graph of the increase in the completeness of student learning outcomes from pre-cycle to cycle 1 to cycle 2. Improving student learning outcomes through the *Project Based Learning learning model with the Culturally Responsive Teaching approach* applied shows that students are able to connect subject matter with the context of life so as to trigger curiosity about the subject matter. Supported by the explanation of Arista et al. (2024), the integration of local culture in learning is related to the real experiences that students have experienced, so that it is easier for students to understand.

Previous research by Nisah, et al. (2021) proves that the application of the *Project Based Learning model* is able to improve the learning process and outcomes of IPAS students in grade IV of SD N 2 Year. In addition, research by Sulastris, et al. (2024) produced a percentage of cycle I 57% and cycle II of 82% which proves that the application of the *Culturally Responsive Teaching (CRT)* approach can improve the learning outcomes of social studies in grade IV. This is in line with the researcher's research that applies the *Project Based Learning model with the Culturally Responsive Teaching approach* in IPAS subjects, one of which discusses Landscape material. The application of the *Project Based Learning learning model* also provides learning that takes place more fun and not boring so that students can easily focus their attention during learning (Hamidah & Sinta, 2021). The combination of using the *Project Based Learning model with the Culturally Responsive Teaching approach* has a great effect on student learning outcomes. This is evidenced by the results of research by Ummroh (2025), Estiono., et al (2024) and Muhtadinn., et al. (2024) which show that the application of the *Project Based Learning model through the Culturally Responsive Teaching approach* is able to increase student learning completeness, especially in science lessons. Maulana and Mediatati (2023) also stated that this combination can improve collaboration and student learning outcomes.

The combination of *Project Based Learning* and *Culturally Responsive Teaching* not only maximizes student learning outcomes that can be seen clearly, but also produces a learning experience that is close to students' daily lives, comprehensive and adaptive (Sukma & Fajriyah, 2025). This method helps learners think beyond just memorizing to evaluate and apply knowledge, reflecting on how learning can be applied well to real-world situations. Through this learning model, students will find challenging and time-consuming activities that require working in groups, working on assignments outside of the classroom, studying and blending subject content to make decisions, adapting procedures, comparing, and contrasting various sources of information to detect difficulties on the one hand and apply that information on the other to form products that aim to solve problems (Kong, 2021).

In addition, research conducted by Khalisah (2024) proves that the use of the *Project Based Learning model with a Culturally Responsive Teaching approach* can lead students to understand and relate lesson concepts to their daily lives, so that they can make students' memories of a material last long in memory. This combination is also able to increase students' understanding of the subject matter, increase student involvement in the learning process, and enrich the development of students' social skills and 21st century skills (Yuliani, 2024). By strengthening the integration between the *Project Based Learning model and the Culturally Responsive Teaching approach*, we can create a learning environment that is inclusive, student-centered, and relevant to cultural diversity in society

(Wahyunita et al., 2024). The implementation of *Project Based Learning* tailored to individual learning levels and cultural relevance has been proven effective in improving student learning outcomes, motivation, and participation. The study recommends the use of culturally adaptive and responsive approaches to strengthen student learning and character development (Annida, 2024).

CONCLUSIONS AND RECOMMENDATIONS

Based on the research that has been conducted, the use of the *Project Based Learning* learning model with the *Culturally Responsive Teaching approach* can improve student learning outcomes in the science subject of landscape material in the city of Pekanbaru class III B SDN 97 Pekanbaru. This can be seen by the increase in the number of students who achieve the completeness of learning outcomes at each stage of the cycle. This research makes the learning process more meaningful by using learning activities that involve the active participation of students and are relevant to their daily lives. Although in the pre-cycle most of the students were still not able to master the landscape material in the city of Pekanbaru, but when the research was carried out, the learning outcomes of students in cycles I and II increased significantly. The researcher concluded that the application of the *Project Based Learning* model with the *Culturally Responsive Teaching approach* can be used by other teachers to improve the learning outcomes of elementary school students. The researcher recommends for teachers and other researchers to learn more about the factors that influence students' learning motivation in the implementation of *Project Based Learning* integrated with *Culturally Responsive Teaching*.

BIBLIOGRAPHY

- Agusti, N. M., & Aslam, A. (2022). The Effectiveness of Wordwall Application Learning Media on Science Learning Outcomes of Elementary School Students. *Journal of Basicedu*, 6(4), 5794-5800.
- Annida, A., Zahra, A., Nurlatifa, H., Fahrina, H., Yusniarti, Y., & Rachman, A. (2024). Analysis of Learning Outcomes with TARL and CRT Approaches Through PBL and PJBL Models at SDN-SN Kebun Bunga 4 Banjarmasin. *Buds: Journal of Elementary School Teacher Education*, 10(1), 38-43.
- Arista, T.V., Ningsih, K., & Rahmawati. (2024). Improving Student Learning Activities in Cell Learning Based on *Culturally Responsive Teaching*. *Bioed: Journal of Biology Education* 12(1):49-56.
- Astiti, N. D., Mahadewi, L. P. P., & Suarjana, I. M. (2021). Factors Affecting Science Learning Outcomes. *Pulpit of Science*, 26(2), 193-203.
- Basyir, M. S., Dinana, A., & Devi, A. D. (2022). The contribution of the learning theory of cognitivism by David P. Ausubel and Robert M. Gagne in the learning process. *Journal of Madrasah Education*, 7(1), 89-100.
- Cahyani, C. W., & Djudin, T. (2024). Environment-Based Science Learning for Elementary School Students: A Literature Review. *JOURNAL OF BASIC EDUCATION PERKHASA: Journal of Basic Education Research*, 10(2), 1102-1116.
- Dewi, M. R. (2022). Advantages and Disadvantages of Project-Based Learning for Strengthening the Student Profile of Pancasila Independent Curriculum. *Curriculum Innovation*, 19(2), 213-226.
- Enjelina, R.F., Damayanti, R., Dwiyanto, M., (2024) The Use of the *Culturally Responsive Teaching* (CRT) Approach to Improve Mathematics Learning Outcomes of Grade V Elementary School Students. *Scientific Journal of Classroom Action Research*, 1(1), 39-51.
- Estiono, A. R., Listiyani, M., Mahirriya, P., Putri, A. A., & Poerwanti, J. I. S. (2025). Application of the *Project Based Learning* (PjBL) model with the Cultural Responsive Teaching (CRT)

- approach to improve student learning achievement in science subjects Class IV SD N Pajang 1. *Journal of Social Sciences, Humanities, Education, and Cultural Studies*, 2(1), 7-12.
- Estiono, A. R., Listiyani, M., Mahirriya, P., Putri, A. A., & Poerwanti, J. I. S. Application of *Project Based Learning* (PjBL) Model with Cultural Responsive Teaching (CRT) Approach to Improve Student Learning Achievement in Science Subjects Class IV SD N Pajang 1. *Journal of Social Sciences, Humanities, Education, and Cultural Studies*, 2(1), 7-12.
- Fahrezi, I., & Taufiq, M. (2020). Meta-analysis of the influence of the *Project Based Learning* learning model on student learning outcomes in elementary school science subjects. *Scientific Journal of Teacher Professional Education*, 3(3), 408-415.
- Fitri, Y., Desyandri., Erita, Y. (2022) Improving Science Learning Outcomes of Grade IV Elementary School Students: The Application of a Constructivist Learning Approach. *PGSD Scientific Journal FKIP Mandiri University*, 08(02), 2982-2992.
- Hamidah, I., & Citra, S. Y. (2021). The Effectiveness of the *Project Based Learning* (PjBL) Learning Model on Student Interests and Learning Outcomes. *BIOEDUSAINS: Journal of Biology and Science Education*, 4(2), 307-314.
- Hardiana, D. (2023). Increasing Interest in Learning Social Science through *Culturally Responsive Teaching* in Grade IV Students of SDN 01 Summersari. *Didactic: PGSD Scientific Journal of STKIP Subang*, 9(2), 2394-2405.
- Hasanah, A., Amelia, C. R., Salsabila, H., Agustin, R. D., Setyawati, R. C., Elifas, L., & Marini, A. (2023). Integrating the Independent Curriculum in Science Learning: Efforts to Maximize Students' Understanding of Local Culture. *Journal of Basic Education and Social Humanities*, 3(1), 89.
- Khalisah, H., Firmansyah, R., Munandar, K., & Kuntoyono, K. (2024). Application of PjBL (*Project Based Learning*) with a CRT (*Culturally Responsive Teaching*) Approach to Improve Student Learning Outcomes in Biotechnology Materials for Classes X-7 SMA Negeri 5 Jember. *Journal of Biology*, 1(4), 1-9.
- Kong, Y. (2021). The Role Of Experiential Learning On Students' Motivation And Classroom Engagement. *Frontiers In Psychology*, 12, 771272.
- Kristanti, N. N. D., & Sujana, I. W. (2022). Interactive Learning Media Based on Contextual Learning Social Studies Content on Natural Appearance Materials. *Journal of Educational Research and Development*, 6(2), 202-213.
- Luma, S. L., Makahinda, T., & Umboh, S. I. (2022). Application of *Project Based Learning* Model with a Contextual Approach. *Charm Science: Journal of Physics Education*, 3(2), 68-73.
- Machali, I. (2022). How to conduct classroom action research for teachers. *Ijar*, 1(2), 315-327.
- Maulana, M. A., & Mediatati, N. (2023). Application of the *Project Based Learning* Model Through a *Culturally Responsive Teaching* Approach to Improve Collaboration and Student Learning Outcomes. *Literacy: Journal of Educational Sciences*, 14(3), 153-163.
- Najwa, N. A., & Suciptaningsih, O. A. (2023). Analysis of the Development of Regional Potential-Based School Operational Curriculum on the Independent Curriculum. *JIIIP-Scientific Journal of Education*, 6(9), 6513-6517.
- Nurhasanah, A., Ramadhanti, S., Utami, S., & Putri, F. A. (2022). Improving Elementary School Students' Understanding of The Concept Through Meaningful Learning In David Ausbel's Perspective. *Journal of Basicedu*, 6(4), 5728-5734.
- Panjaitan, W. A., Simarmata, E. J., Sipayung, R., & Silaban, P. J. (2020). Efforts to improve student learning outcomes use the Discovery Learning learning model in elementary schools. *Journal of Basic Education*, 4(4), 1350-1357.
- Personal, R. A., & Jamaludin, U. (2023). Characteristics of Learning and Learning of Elementary School Age Children. *Didactic: PGSD Scientific Journal STKIP Subang*, 9(2), 4744-4753.
- Putri, R. T. U., Dewi, N. K., & Wati, T. S. A. (2024). Efforts to improve English learning outcomes using the *Culturally Responsive Teaching* (CRT) approach in grade 5 students of SDN

- Kertobanyon, Madiun. *Didactic: PGSD Scientific Journal of STKIP Subang*, 10(04), 221-229.
- Rahmadayanti, D., & Hartoyo, A. (2022). An Independent Curriculum Portrait of Freedom of Learning in Elementary School. *Journal of Basic Science*, 6(4), 7174-7187.
- Rahman, R., & Fuad, M. (2023). Implementation of the Independent Learning Curriculum in Religious Learning in Elementary Schools. *DISCOURSE: Indonesian Journal of Social Studies and Education*, 1(1), 75-80.
- Salma, I. M., & Yuli, R. R. (2023). Building a Paradigm on the Meaning of Teachers in *Culturally Responsive Teaching* in the Implementation of the Independent Curriculum in the 21st Century Era. *Journal of Educational Technology*, 1(1), 11-11.
- Sari, T. T. (2022). The application of *the project-based learning* model to increase the activeness of the content of Indonesian lessons. *Business Journal PGSD*, 2(2), 509-515.
- Septiyana, N. D. (2021). The Use of The PJBL Model to Improve Mathematics Learning Outcomes. *In Social, Humanities, and Educational Studies (SHES): Conference Series* (Vol. 4, No. 5, pp. 1582-1586).
- Setiawan, M. R. (2024). Implementation of the Disaster Management Program by the Regional Disaster Management Agency (BPBD) of Pekanbaru City. *Journal of Public Administration Review*, 1(2), 1290-1309.
- Siregar, I., Satria, M. A., Sanjur, S., & Dianur, S. T. Problem Solving Strategies in Classroom Action Research. *QOUBA: Journal of Education*, 1(2), 14-29.
- Suciani, R. N., Azizah, N. L., Gusmaningsih, I. O., & Fajrin, R. A. (2023). Strategies for reflection and evaluation of classroom action research. *Journal of Student Creativity*, 1(2), 114-123.
- Nisah, N., Widiyono, A., Milkhaturohman, M., & Lailiyah, N. N. (2021). The Effectiveness of *the Project Based Learning Model* on Improving Science Learning Outcomes in Elementary Schools. *Pedagogy: Journal of Educational Research*, 8(2).
- Sukma, Y. E., & Fajriyah, K. (2025). The effectiveness of PjBL based on product differentiation and the CRT-TaRL approach in improving the learning outcomes of social studies of grade 5c students at SD Negeri Sendangmulyo 2 Semarang. *Scientific Journal of Basic Education (JIPDAS)*, 5(1), 499-507.
- Sulastri, S., Setiawan, H., & Widyaningrum, R. (2024). Improving the learning outcomes of IPAS by applying the *Culturally Responsive Teaching* (CRT) approach to grade IV students of SDN Jajartunggal 3 Surabaya. *Perspectives: Journal of Education and Language Sciences*, 2(2), 167-173.
- Syzdykbayeva, A. D., Mambetalina, A. S., Nuradinov, A. S., Kurmanbekova, M. B., & Kabylbekova, Z. B. (2020). Collaborative Environment As A Means Of Forming Success Of A Future Teacher Of Elementary Classes In Project Activity. *Journal of Intellectual Disability-Diagnosis and Treatment*, 8(3), 370-376.
- Ummroh, N. (2024). Application of the PjBL Model with the CRT Approach for Improving Student Learning Outcomes in Science Subjects Class IV-B SDN Pandanwangi 01. *Journal of Learning, Guidance, and Education Management*, 4(5), 10-10.
- Wahyunita, S. T. D., Aliyah, N. K., & Romanta, K. M. (2024). Improving Fisheries Learning Outcomes Through the PjBL Model with a CRT Approach at SDN Sukosari 02. *Journal of Academic Media (JMA)*, 2(11).
- Wibowo, D. C., Ocberti, L., & Gandasari, A. (2021). Case Study of Factors Affecting Mathematics Learning Outcomes at SD Negeri 01 Nanga Merakai. *Scientific Journal of Aquinas*, 4(1), 60-64.
- Yulia, N. M., Fithriyah, D. N., & Faizah, L. N. (2024). The IPAS learning module for class IV is based on local wisdom in the independent curriculum. *Journal of Flobamorata Basic Education*, 5(2), 222-229.
- Yuliani, W. (2024). The implementation of the CRT approach in science subjects uses *the project based learning* (PjBL) model in grade V students of SDN Pandanwangi 1. *Journal of Mathematics and Natural Sciences and Its Learning (JMIPAP)*, 4(5), 5-5.