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The Implementation of Project based Learning in Physical Education at Elementary Schools

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Abstract

The Implementation of Project Based Learning as an Innovative Learning Approach in the Context of Physical Education at Elementary Schools. This research employs a qualitative approach with a case study research design. It was conducted at SD Negeri 75 Palembang, Grade V. Data was collected through observation, interviews, and document analysis. Thematic data analysis was utilized to identify patterns in learning outcomes and student responses to this learning approach. The results of the study indicate that the implementation of PjBL in physical education at the elementary level positively contributes to students' understanding of concepts, critical thinking skills, collaborative skills, and motivation to learn. Projects designed in real-world contexts provide students with deep and relevant learning experiences, thereby enhancing their engagement in learning. Additionally, learning through PjBL also offers teachers opportunities to observe students' holistic development and provide appropriate feedback. In conclusion, the application of PjBL in physical education at the elementary level is effective in enhancing students' understanding of concepts and their engagement. Recommendations from this research include further training for teachers in designing and implementing meaningful projects, as well as broader integration of the PjBL approach into the Physical Education curriculum at the elementary school level.

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INTRODUCTION

Education is a sector greatly influenced by the advancements in science and technology. It plays a crucial role in enhancing the quality of human resources in the future, ultimately aiming to instill good values in individuals systematically. Education can also be defined as the process of developing one's own abilities or individuals that will be utilized (Ismail et al., 2021). Education is important in shaping children to have skills. Education is an effort to help the souls of students both physically and spiritually, from their natural disposition towards human civilization and improvement (Sujana, 2019). The educator's task of preparing quality students, equipped with skills and capable of competing globally, is indeed a challenge. Physical education is also an integral part of the education process (Lestari, 2021)

Physical education is not only an essential component of human life, but also engaging in sports can enhance one's physical fitness and overall health**.** Physical education is not just about physical activity alone; it is also part of a learning process that supports the holistic development of students. Physical education is an integral part of overall education that plays a role in shaping excellent human resources (Mustafa & Dwiyogo, 2020). However, challenges continue to arise in providing engaging and meaningful learning experiences for students in the classroom. Students must have creativity and innovation, which is why project-based learning is highly necessary for them.

Project-based learning has great potential to provide more engaging and meaningful learning experiences for students(Wahyu et al., 2018). Project-Based Learning is indeed a versatile teaching method applicable across all educational levels. In this approach, educators serve as facilitators. The primary objective of Project-Based Learning is to facilitate problem-solving, empowering students not only to discover solutions but also to grasp the concept of problem-solving and cultivate critical thinking skills (Murniarti, 2017) . Students are guided to explore, evaluate, interpret, synthesize, and present information in groups, which is beneficial for their learning process (Saputro, 2018). The implementation of Project-Based Learning (PjBL) is a form of applying the independent curriculum. The research aims to reveal the effectiveness of learning using the Project-Based Learning model compared to conventional models(Sari et al., 2023).

Learning using the Project-Based Learning model will stimulate children's skills, so that every project they produce enhances conceptual understanding and addresses other important issues. This is in line with the transition from the 2013 curriculum to the independent curriculum, making project-based learning the main character of the independent curriculum. "Merdeka Belajar" (Freedom to Learn) is a new breakthrough by the Minister of Education and Culture of the Republic of Indonesia to make the learning process in every school more effective and efficient. The positive impact of "Merdeka Belajar" is aimed at teachers, students, and even parents. Independent learning prioritizes students' interests and talents, fostering a creative and enjoyable attitude among students (Khoirurriijal et al., 2022)

Project-Based Learning (PjBL) is used to engage children in learning, with specific products as outputs. In Project-Based Learning, children will develop a project either individually or in groups to produce a product. This project approach should have a concrete topic or theme that is close to the child's personal experiences

and environment, interesting, and has emotional and intellectual potential (Nisfa et al., 2022). The project-based learning model can stimulate motivation, process, and improve students' learning achievements by using problems related to specific subjects in real-life situations (Mulyana et al., 2022). Project-Based Learning is a teaching model used by teachers where students are required to design, problem-solve, make decisions, and are given the opportunity to produce new works, making learning meaningful. The purpose of using the project-based learning model is to stimulate children's creativity and teach them to always think critically in finding solutions to problems and making decisions about the issues they face (Handayani & Sinaga, 2022).

The main goal of PjBL is to encourage children to use existing knowledge and implement it in project-based learning activities, expressing their creativity and imagination in creating projects. Problem-Based Learning model is a learning model that can shape and advance students to have skills in solving a problem in student learning activities and also to encourage students to develop thinking skills so that they can think more critically (Puspita et al., 2018). PjBL is primarily designed to help students develop thinking skills, problem-solving skills, and intellectual skills (Ashari & Salwah, 2017). Based on the observations conducted at the Elementary School during learning, the following issues were identified: Children are not yet trained in critical and creative thinking. Children lack the ability to collaborate. Educators have not provided projects that can stimulate children's development. Regarding the development of children, issues faced by educators include: Some children still lack interest and are in the initial stages of development. Developmental progress is as expected, but there are no children who have reached an excellent developmental stage.

Based on the previous research findings, the implementation of the project-based learning model has been shown to improve learning outcomes (in physical education) in the subject of large ball games (soccer-basic passing techniques) among students in Grade VIII.I. The implications of this research are expected to enhance student learning outcomes through the use of appropriate teaching models (I Gusti Made et al., 2022). Hasil penelitian Model Project Based Learning (PjBL) can be applied to learning volleyball bottom passing (Raaiyatini & Arifin, 2023). The project-based learning model can enhance learning outcomes in large ball sports among students. It is also recommended for physical education teachers to use the project-based learning (PjBL) model as it can improve students' learning outcomes in both knowledge and skills aspects (Bagus et al., 2023)

This study aims to prove the effectiveness of the project-based learning (PjBL) model in stimulating the development of elementary school children. The effectiveness of implementing project-based learning (PjBL) can be observed from the level of children's developmental achievements at SD Negeri 75 Palembang. Based on this, the implementation of the PjBL model in physical education learning activities is necessary, as the PjBL model is suitable for enhancing the development of elementary school children.

METHODS

This research was conducted at SD Negeri 75 Palembang, Grade V. The research utilized a qualitative approach with a case study design. The case study approach is used when researchers aim to gain an understanding of a problem, event,

or phenomenon of interest within the context of natural real-life situations (Nurahma et al., 2021). A qualitative approach was chosen because it provides flexibility in exploring and understanding complex phenomena in natural contexts.

Qualitative research is intended to understand specific phenomena. These phenomena can be something experienced by the research subjects such as behavior, perception, motivation, actions, and so on, which are holistically described in words depicting the actual conditions. The data obtained is processed using qualitative methods, with data analysis being inductive/qualitative in nature. The results of qualitative research emphasize meaning rather than generalization (Fiantika et al., 2022). The case study design was selected because it allows researchers to investigate specific phenomena in depth, in this case, the implementation of PjBL in physical education at the elementary school level.

Participants

The research participants consist of one Grade V class from SD Negeri 75 Palembang who were involved in the learning process using the PjBL approach in physical education. The class selection was based on collaboration with schools willing to participate in this research.

Data Collection Instruments:

The instruments used in this research are as follows:

1. Observation: The researcher will observe the learning process during the implementation of PjBL in physical education. Observations will be conducted directly in the classroom.
2. Interviews: Interviews will be conducted with physical education teachers involved in the learning process using PjBL, to gain a deeper understanding of lesson planning, implementation, and evaluation.
3. Document Analysis: Documents such as lesson plans, teaching materials, and student evaluation results will be analyzed to obtain a more comprehensive understanding of the learning process.

Research Procedure

Preparation Phase: The researcher will collaborate with physical education teachers to design relevant and meaningful projects in the context of physical education. Preparation also includes briefing students on the objectives, processes, and learning expectations using PjBL. Implementation Phase: The learning process using PjBL will be conducted for one semester. The researcher will observe, record learning activities, and interact with teachers and students during the implementation process. Analysis Phase: Data collected from observations, interviews, and document analysis will be thematically analyzed. Patterns and findings will be identified to answer the research questions. Data Analysis: Data will be thematically analyzed, where patterns and themes emerging from the data will be identified. This analysis will help understand the impact and effectiveness of PjBL in physical education at the elementary school level. Through this approach, it is hoped that this research can provide deep insights into the effectiveness of PjBL in enhancing physical education in elementary schools, and provide recommendations for the development of more effective learning approaches in the future.

RESULT

Based on the research conducted with educators in elementary schools using

the project-based learning (PjBL) model, it is found that:

1. Improvement in students' conceptual understanding:

The implementation of Project-Based Learning (PjBL) in physical education at the elementary school level results in an enhancement of students' conceptual understanding. Through projects relevant to daily life, students are engaged in solving real-world problems that require an understanding of physical education concepts. Observations indicate that students actively link theoretical concepts with practical applications in the projects they undertake

2. Increased Student Engagement:

PjBL also leads to an increase in student engagement in physical education. Students actively participate in the learning process, collaborate with their peers to complete projects, and voluntarily seek additional information to support their projects. Observations indicate a high level of enthusiasm among students during the learning process. Here are the research findings that indicate an increase in student engagement in PjBL learning

Fig 1. Increased Student Engagement

3. Development of Critical Thinking and Collaborative Skills:

During the implementation of PjBL, students also develop critical thinking and collaborative skills. They are encouraged to solve problems independently and work together in groups to achieve common goals. Interviews with physical education teachers reveal that students demonstrate improvement in their ability to formulate problem-solving strategies, make decisions, and collaborate in teams. Here are the research findings that indicate evidence of the development of critical thinking and collaborative skills, which can be seen in the following image:

Fig 2. Development of Critical Thinking and Collaborative Skills

DISCUSSION

The research findings indicate that the implementation of PjBL in physical education at the elementary school level is effective in enhancing conceptual understanding, student engagement, as well as the development of critical thinking and collaborative skills.

1) Improvement in Conceptual Understanding:

The results of this research are consistent with previous findings indicating that project-based learning can enhance students' conceptual understanding. The Project-Based Learning (PjBL) model is a learning approach that fosters conceptual understanding through meaningful problem investigation and the creation of tangible products (Alawiyah & Sopandi, 2016). Through involvement in real projects, students have the opportunity to

experience and apply theoretical concepts in meaningful contexts for them.

2) Increased Student Engagement:

Increased student engagement in physical education through PjBL provides students with the opportunity to take an active role in their learning, which in turn enhances their motivation and involvement. Project-based learning can enable students to gain a deeper understanding of the principles and practical operations of experiments, increase their interest and motivation, and promote the development of their active learning and innovative thinking skills, thus improving learning outcomes (Zhang & Ma, 2023)

3) Development of Critical Thinking and Collaborative Skills

PjBL not only enhances conceptual understanding but also develops students' critical thinking and collaborative skills. It turned out that PjBL increased the development of both learners' knowledge and skills. Students also felt that PjBL encouraged their collaboration and negotiations within the group (Guo et al., 2020). Through PjBL, students are given the opportunity to think critically about complex issues and work together in teams to achieve common goals. Similarly, previous research explains Project-Based Learning (PBL) in enhancing creative thinking within the framework of Education (Yu, 2024)

The implications of this research underscore the importance of considering PjBL as a learning approach that can enhance the quality of physical education in elementary schools. Using the PjBL method in teaching is an innovative technique (Anggraini & Wulandari, 2020). Based on interviews with educators, several strengths and weaknesses were identified. The strengths of Project-Based Learning include making children excited about activities, helping them understand the value and usefulness of a product or work, making them more independent, and overall, improving six aspects of child development. The project-based learning model can bridge students' creativity through project-based problem-solving activities (Sahtoni et al., 2017). Meanwhile, in terms of implementing the Strengthening Student Profile Project embedded in the independent curriculum, this activity will benefit children in various ways, such as strengthening their character in developing active potential, allowing them to design learning, thus making them skilled, resilient, and knowledgeable in project work, and helping them manage their time effectively.

Learning through projects can also train students in problem-solving skills, responsibility, and concern for the environment, as well as pride in the results achieved. However, the weakness of Project-Based Learning is that educators have not been able to design themes maximally because Project-Based Learning has not been integrated into the curriculum so far; educators still struggle and need familiarization to connect Project-Based Learning with theme and sub-theme materials. Additionally, the activities involved have the potential to consume a lot of time because students enthusiastically gather information, leading to a lack of focus on the project's outcome. Furthermore, educators have not been able to provide examples of products that can be used as input sources due to the nature of Project-Based Learning.

CONCLUSION

This study provides a deep understanding of the effectiveness of Project-Based Learning (PjBL) in Physical Education, Sports, and Health (physical education) at the elementary

school level. Based on the results and discussion, several conclusions can be drawn:

1. PjBL Improves Conceptual Understanding:

The implementation of PjBL leads to an improvement in the conceptual understanding of physical education among students. Through meaningful projects relevant to everyday life, students can experience and apply theoretical concepts in real-world contexts.

2. PjBL Increases Student Engagement:

PjBL enhances student engagement in physical education. Students actively participate in the learning process, fostering intrinsic motivation to learn and actively participate in learning activities.

3. PjBL Develops Critical Thinking and Collaborative Skills:

PjBL not only enhances conceptual understanding but also develops students' critical thinking and collaborative skills. Students learn to creatively solve problems, think critically, and work collaboratively in teams to achieve common goals.

Therefore, the main conclusion of this research is that PBL is effective in enhancing the quality of physical education in elementary schools. The implications of this study underscore the importance of considering PBL as a beneficial alternative in designing engaging, meaningful, and experiential learning for students in the context of physical education. It is hoped that this research can make a positive contribution to the development of more effective learning approaches to support the goals of physical education in elementary schools..

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