Problem-Based Learning (PBL) Learning Strategy

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Abstract

In choosing the right learning model, a teacher must pay attention to students' abilities and choose a learning model that can motivate them to learn and develop their potential so they can overcome problems in life. Problem-Based Learning is considered a learning model that can help students maximize their potential and develop skills in solving problems in everyday life. PBL is a learning approach that trains students through problem-solving activities, encouraging them to think critically, find creative solutions, and develop their ability to solve problems both independently and collaboratively. This study aims to analyze the concepts, characteristics, and implementation of the PBL model in learning. PBL is viewed as an approach that helps students develop their potential while enhancing problem-solving skills. This research employs a qualitative method using a library research approach, drawing on various relevant literature sources. The results indicate that PBL is effective in increasing student engagement, critical thinking skills, and problem-solving abilities, although it requires proper planning and effective classroom management.

Keywords: *Problem-Based Learning (PBL); Learning; critical thinking; Problem-Solving.*

Abstrak

Dalam memilih model pembelajaran yang tepat, seorang guru harus memperhatikan kemampuan siswa dan memilih model pembelajaran yang dapat memotivasi mereka untuk belajar dan mengembangkan potensi diri sehingga dapat mengatasi masalah dalam kehidupan. Problem Based Learning dianggap sebagai salah satu model pembelajaran yang dapat membantu siswa memaksimalkan potensi mereka dan mengembangkan kemampuan dalam memecahkan masalah di kehidupan sehari-hari. Problem based learning (PBL) adalah pembelajaran yang melatih siswa belajar melalui pemecahan masalah sehingga mendorong siswa untuk berpikir kritis, mencari solusi kreatif, dan mengembangkan kemampuan mereka dalam menyelesaikan masalah secara mandiri maupun kolaboratif. Tujuan penelitian ini adalah untuk menganalisis konsep, karakteristik, dan penerapan model PBL dalam pembelajaran. PBL dipandang sebagai salah satu pendekatan pembelajaran yang mampu menolong siswa untuk memaksimalkan potensi diri mereka sekaligus membangun keterampilan memecahkan masalah dalam kehidupan sehari-hari. Penelitian ini merupakan penelitian kualitatif melalui metode studi kepustakaan atau library research yang bersumber dari berbagai literatur relevan. Hasil studi mengungkapkan bahwa Problem Based Learning (PBL) terbukti ampuh untuk meningkatkan keaktifan siswa, kemampuan berpikir kritis, serta keterampilan memecahkan masalah, walaupun butuh perencanaan dan pengelolaan pembelajaran yang baik.

Kata Kunci: *problem-based learning (pbl); pembelajaran; berpikir kritis; pemecahan masalah.*

Introduction

Education is one of the important pillars in improving the quality of human resources (Suryani et al., 2026). In the learning process, selecting the right learning model is a crucial factor in determining student success. Teachers are required to select and implement learning models that not only align with the material's characteristics but also optimally develop students' potential. Effective learning models are expected to encourage students to be active, think critically, and be able to face various challenges in everyday life.

One learning model considered capable of improving students' activeness and critical thinking skills is Problem-Based Learning (PBL). Glazer stated that PBL emphasizes learning as a process involving problem-solving and critical thinking in a real-life context.(Nafiah & Suyanto, 2014)This model focuses on using problems as a basis for learning, thus encouraging students to be actively involved in finding answers and improving their problem-solving and collaboration skills.(Putri, 2025a)PBL is important because it places real problems as the focus of learning, which can encourage students to think critically, seek creative solutions, and develop their problem-solving skills.(Putri, 2025).

According to(Rachmawati & Rosy, 2020) Critical thinking is a focused way of thinking, meaning that learning focuses on students' problem-solving abilities, correlated with the use of logic in real life. Through critical thinking, students are required to be sensitive to various things by considering existing facts, and then deciding what is relevant and what is not.(Hastawan et al., 2023). Students are expected to have sufficient basic skills in scientific processes, so that improvements in learning activities are needed. However, during implementation, various challenges remain, influenced by the learning process, both internal and external. Internal factors include students' attention, motivation, composure, habits, and learning goals. External factors, on the other hand, include teaching materials that are too dense, making students reluctant to understand or remember them, limitations in learning media, and teaching materials that are not supported by adequate media, making them difficult for students to digest. Furthermore, teachers

often take over learning, use monotonous teaching methods, and teachers' suboptimal learning management abilities.(Nadiyah et al., 2022).

Various previous studies have shown that problem-based learning improves students' problem-solving skills, technical abilities and work readiness.(Ramadhan et al., 2026). Research by(Mulyadi et al., 2024) shows that the implementation of PBL can significantly improve student learning outcomes. In addition, research conducted by (Simangunsong et al., 2023) also shows that the application of PBL can enhance student creativity, particularly in the development of digital literacy. However, these studies still have limitations, including the lack of specific studies on the application of the PBL model in specific learning contexts or other relevant skill areas.

Furthermore, implementation in educational institutions is still suboptimal due to teaching methods that tend to lean toward traditional teaching methods and the emergence of various obstacles such as teacher preparedness and time constraints. Research investigating the implementation of PBL in classroom environments is relatively limited. Therefore, in-depth research is needed to maximize the application of PBL to improve the quality of the learning process and the overall outcomes achieved by students. Therefore, the purpose of this study is to fill this gap by further analyzing the application of the PBL model to improve student abilities.

Research Methods

This study uses a qualitative approach with a library research method. This study was conducted by reviewing various literature sources such as scientific journals, books, and articles relevant to the topic of Problem Based Learning. Research data was obtained through a literature study sourced from 15 journal articles and 4 books related to Problem Based Learning. The data collection technique was carried out through documentation studies, namely by collecting and reviewing various references related to the research study. This study uses qualitative descriptive analysis, namely by processing, reviewing, and concluding information from various literature sources that have been collected. The implementation of this research was carried out through several stages. First, the

researcher collected various literature relevant to Problem Based Learning (PBL) from journals, books, and scientific articles. Second, the collected literature was analyzed to find related concepts, findings, and theories. Third, the data obtained was classified according to the research focus. Finally, the researcher drew conclusions based on the results of the data analysis.

Results and Discussion

Understanding Problem-Based Learning (PBL) Learning Strategy

Problem-based learning in English is usually called problem-based learning (PBL). This method was first introduced in the early 1970s as a way to find solutions to diagnoses by asking questions relevant to the situation. According to Duch (in (Sumartini, 2015), Problem-based learning is an approach that prioritizes the use of real problems as a context to help students develop critical thinking skills, problem-solving skills, and gain an understanding of the core of the material being taught.

Learning strategies are the entire process and methods of learning activities of educators and students in achieving learning objectives.effective and efficient according to the sequence of activities, methods, media and learning time used by educators and students in learning activities(Indriawati et al., 2021).

Problem Based Learning (PBL) is a student-oriented or student-centered learning approach that emphasizes student involvement in solving authentic problems, with the hope that they can participate actively optimally, including students' ability to explore, develop higher skills and inquiry, solve problems, and increase self-confidence and evaluate in the problem-solving process, so that interest in learning will develop by itself.(Suginem, 2021).

A problem-based learning strategy can be defined as a series of learning activities focused on the scientific process of solving problems. These problems can be taken from textbooks or other sources, such as events in the local environment, family events, or community events.

Based on the above opinion, it can be concluded that by implementing the PBL approach, educators can connect the content delivered with students' real

experiences and encourage them to be actively involved in seeking and finding answers to solve problems related to the material. The problem-based learning model is an ideal method to apply because the learning process is very much in line with the characteristics of students who enjoy working in groups and enjoy doing things or being directly involved.

SProblem-solving learning strategies can be applied: a. If educators want students to not only remember the lesson material but also understand it well; b. If educators intend to develop students' rational thinking skills, namely the ability to analyze situations, apply their knowledge in new situations, and recognize the difference between facts and opinions; c. If educators want students to be able to solve problems and create intellectual challenges for students; d. If educators want students to be more responsible in their learning; e. If educators want students to be able to understand the relationship between theory and reality in their lives.(Nasution, 2017).

Features and characteristics of PBL

The PBL model is characterized by the use of everyday problems as learning materials for students to practice and improve their critical thinking and problem-solving skills, while also fostering an understanding of key concepts. The teacher's role is to focus on supporting students in developing independent skills. Problem-based learning focuses on higher-level thinking in problem-related situations, including learning styles.(Hardika Saputra, 2020).

Characteristics: PBL includes a high emphasis on independent learning, the use of a variety of sources of knowledge, not just one source, and its approach is collaborative, communicative, and cooperative (Darmadi et al., 2024). The characteristics of a problem-oriented learning strategy emerge during its implementation. The various steps taken in the process must be structured according to the strategy's systematics. The steps in a problem-based learning strategy can be explained according to Operationally, namely, first, students are faced with a problem. Second, students discuss the issue according to the guidelines in each small group. In this discussion, students clarify the facts in a case based on their existing knowledge. Students also explain the process of the sequence of events that

occurred in a problem, starting from the incident, who was involved, and what actions were taken by the perpetrator and victim. Students try to find out the causes that led to the problem. Next, students design steps to resolve the problem.

*Third,*Students actively participate in group discussions about how to solve existing problems. Problem solving is based on references available in the library, websites, the community, or through observation. Fourth, by utilizing the knowledge gained from existing references, students share information with their peers in their discussions or other groups to gain new insights or learn about social issues from other groups. Fifth, groups present solutions to problems and review what they have learned. The entire group must be involved in the review activity, either in pairs or groups or with teacher guidance. Each student must reflect on their contribution to the problem-based learning process.

Problem Criteria in Problem-Based Learning

The rationale for developing this learning strategy aligns with a constructivist perspective, which emphasizes the importance of students exploring their surroundings and constructing meaningful knowledge individually. When students enter the classroom, they don't come with a blank slate; rather, they already possess prior knowledge.

With this in mind, learning should begin by posing problems that are relevant to their environment (contextual problems). According to(Hardika Saputra, 2020), the questions and problems raised must meet the following criteria: a. authentic, that is, the problem must be more connected to the real life of students rather than just based on the principles of a particular scientific discipline;
b. clear, that is, the problem must be formulated clearly so as not to cause new confusion for students that will make it difficult for them to solve it; c. easy to understand, that is, the problem posed should be clear and appropriate to the level of understanding of the students, and arranged based on their development; d. broad and relevant to the learning objectives, that is, the problem formulated should cover a variety of learning materials that are appropriate to the time, space, and resources available. In addition, the problem formulated must be based on the learning

objectives that have been determined; e. Useful, that is, the problem formulated must provide benefits both for students as problem solvers and for teachers as problem compilers. A problem that is utilized can improve students' thinking skills in solving problems and motivate them to learn.

Advantages and Disadvantages of PBL

This problem-based learning model has many advantages in the learning process. The advantages of the PBL learning model, according to (Rambe et al., 2022).The problem-solving method in PBL is very effective in helping students master the material. This process occurs throughout the learning activity and can challenge students' skills and provide a sense of satisfaction when they successfully find the answer. Furthermore, PBL can increase student engagement in learning, making it more active and meaningful. This model also makes it easier for students to transfer knowledge to overcome challenges in everyday life and helps increase their understanding and responsibility for the learning process. Furthermore, PBL encourages students to view learning as a thinking process, not just as acquiring material from a teacher or book. The resulting learning environment is more enjoyable, engaging for students and allows for application in everyday life, which can stimulate students' learning.

On the other hand, the PBL method also has several disadvantages. Sometimes, students hesitate to try due to a lack of interest and confidence in facing problems they perceive as difficult. Furthermore, implementing this model requires a relatively long preparation time to be optimally implemented. Another drawback is the possibility that students will be less motivated to learn if they don't understand the purpose or rationale behind the problem.

The Role of Teachers in PBL

Education is a basic human need to explore one's abilities, both in terms of thought, emotion, and behavior. Over time, education has Education has undergone significant changes reflected in the system, curriculum content, technological aids, and teaching methods to better suit the needs of the current era. This change also shifts the teacher's role from merely imparting knowledge to being a guide who

assists and facilitates students' learning process in an active and independent manner. One of the teacher's roles in the educational process is as a facilitator. As a facilitator, the teacher has the task of supporting the learning process. Facilitators are responsible for directing, providing guidance, providing assistance in student learning activities, and motivating students. There are eleven roles held by teachers as facilitators, namely(Ismail et al., 2024): First, the teacher tries to listen and not dominate. Second, the teacher is patient. Third, respectful and humble. Fourth, willing to learn. Fifth, act as an equal. Sixth, be friendly and integrated. Seventh, do not try to lecture. Eighth, be authoritative. Ninth, do not take sides and criticize. Tenth, be open. Eleventh, be positive.

Conclusion

Based on the research findings, it can be concluded that problem-based learning is an effective learning model for improving the quality of the learning process. This study aimed to outline the concept, characteristics, and application of PBL in learning activities. The results showed that PBL can increase student participation, improve critical thinking skills, and hone problem-solving skills through direct participation in contextual issues.

The results of this study indicate that student success in implementing PBL depends not only on the use of problems to stimulate learning but also on the teacher's role as a facilitator who can guide, direct, and create a supportive learning environment. Furthermore, this study emphasizes that PBL has the advantage of creating more meaningful and relevant learning in everyday life, despite several challenges such as time constraints, teacher readiness, and student motivation. The innovation of this research lies in the presentation of an analysis that combines the concepts, characteristics, steps, and advantages and disadvantages of PBL comprehensively in one systematic study based on a literature review.

The implications of this research demonstrate the need to improve teachers' abilities in designing and implementing problem-based learning effectively, as well as the importance of adequate learning environment support for optimal PBL implementation. Therefore, educators are advised to be more creative in implementing the PBL model and adapting it to student characteristics and learning

conditions. Furthermore, further research is expected to explore the application of PBL more empirically in the field to gain a deeper and more adaptive understanding.

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