Problem Based Learning Model

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Abstract

The Problem Based Learning (PBL) model is a teaching method that prioritizes active student involvement in developing analytical skills, problem-solving abilities, and teamwork. In its implementation, learners are presented with authentic and challenging problems that require analytical and exploratory thinking through inquiry, group discussion, and individual reflection. Teachers act as facilitators who guide the learning process without directly providing solutions, thereby fostering students' independence in constructing knowledge. This method has proven effective in improving conceptual comprehension, boosting learning motivation, and fostering lifelong learning skills. The aim of this article is to examine the core concepts of Problem-Based Learning (PBL). outline its implementation process, and discuss the advantages and obstacles faced within formal education environments. Based on theoretical analysis, PBL is considered applicable across various educational levels, particularly in the context of 21st-century skill development. Therefore, PBL serves as an effective strategy for creating active, contextual, and meaningful learning experiences.

Keywords: Earning through real-world problem solving. Reflective and logical thinking.*student-centered learning., educational strategy.*

INTRODUCTION

Education is now no longer understood only as a means to teach basic skills such as reading, writing, and arithmetic, but as a comprehensive process that aims to develop students' potential to the maximum, both in intellectual, social, and personal aspects. Education is a form of structured interaction between educators and students in a meaningful learning environment. In this case, teachers have a very important role as facilitators and guides who not only transfer knowledge, but also equip students with life skills that are relevant to everyday life. Therefore, teachers bear a great responsibility in forming a generation that is not only academically intelligent, but also has good character and morals. One way to achieve this goal is to create an effective learning process, which focuses on developing the character and competence of students.(Dahlia, 2022)

Problem Based Learning (PBL) approach is a learning model that can improve the learning process by developing systematic knowledge and mindset through problem-solving steps. This learning allows students to combine and use concepts, formulas, and rules that they have previously learned to solve problems

in new contexts. The PBL learning model not only emphasizes the ability to solve problems, but also appreciates each stage that students go through in the learning process.(Fatharani et al., 2024).

One of the main characteristics of this model is that learning begins with the presentation of contextual problems by educators, namely problems that are relevant to real-life situations or students' daily lives. In its implementation, students are directed to work in groups to formulate and identify the core of the problem based on their initial knowledge. Furthermore, students independently or in groups conduct information searches, study relevant materials, and formulate solutions to the problems faced. Thus, PBL is designed as an effective learning strategy in fostering learning independence and increasing students' intellectual capacity holistically.(Nurhayati & , Langlang Handayani, 2020).

Optimal learning outcomes are achieved when students are directly involved in learning. With the right model, teachers can help students access information, develop ideas, and improve logical thinking skills and abilities. One approach that encourages active student participation is Problem Based Learning (PBL). PBL is a learning method that focuses on solving real problems that require in-depth investigation. This approach is a strategic choice to improve the quality of learning, because it requires students to play a role in finding the right solution.(Sari & Rosidah, 2023).

The objectives of the study were to: 1) Explain various learning methods applied in the PBL model based on a literature review. 2) Identify the advantages and challenges that arise in the use of PBL strategies at various levels of education. 3) Present a summary of best practices in implementing PBL to improve students' thinking skills, problem solving, and independence. 4) Provide advice to educators and education practitioners on how to implement PBL strategies that are effective and in accordance with current learning needs. As part of their role in managing the classroom, teachers are required to be wise in choosing approaches, methods, and learning models that can create an active, creative, innovative, effective, and interesting learning atmosphere for students. Integrating learning models with the right media can increase the effectiveness of the learning process. One model that

can be applied is Problem Based Learning (PBL), which aims to help educators hone students' critical thinking skills and problem-solving abilities throughout learning.(Puspitasari et al., 2022).

RESEARCH METHODS

This study adopts a qualitative approach with a library research method. The researcher analyzed a number of scientific journals, both from within the country and abroad, that discuss the Problem Based Learning (PBL) learning strategy. The selection of this method aims to gain a deeper understanding of the implementation of PBL, as well as to determine its advantages and disadvantages. and its influence on the process and learning outcomes of students. The articles reviewed were taken from the last five to ten years so that the information obtained remains relevant and up to date. Data sources come from journals available in databases such as Google Scholar and ERIC. The selected journals are journals that discuss the implementation or strategy of PBL in education, have a direct relationship to the research topic, and have gone through a review process by experts.

The existing data is then viewed through an analytical approach, where researchers explore key themes, patterns of learning strategies, and key findings that reveal how PBL is effective in the classroom. The analysis process is carried out in a structured manner by grouping information based on various aspects such as implementation strategies, the roles of teachers and students, evaluation methods, and factors that support and hinder the implementation of PBL. From this analysis, researchers draw conclusions about the most effective PBL strategies. The results of this study are expected to provide benefits both in terms of theory and practice, especially for teachers and curriculum makers in designing more relevant learning that focuses on solving everyday problems.

RESULTS AND DISCUSSION

Don Woods introduced the concept of Problem Based Learning (PBL). Over

time, this model has gained popularity globally and has been widely adopted, especially in health education. McMaster University itself developed PBL based on a philosophical foundation that includes three main visions, namely: a holistic view of humans and society, an understanding of the role of the medical profession in a social context, and a new approach to student-centered education. The development and theoretical foundation of PBL are influenced by educational psychology theories from figures such as John Dewey, who emphasizes the importance of direct experience-based learning, and Jerome Bruner, who views the learning process as an active activity in which students transform information into meaningful knowledge.

This process is believed to be able to increase learning motivation, information retention, and cognitive and personal development of students as a whole. PBL is designed by compiling complex and multidisciplinary problems, aiming to encourage students to find relevant and applicable solutions. This approach is seen as an effective strategy for educators in developing student competencies, especially in improving problem-solving skills.(Mayasari et al., 2016).

In general, the learning model involves a series of steps that must be followed by teachers to achieve effective learning goals. This model also emphasizes the importance of active student involvement in constructing their own knowledge. PBL aims not only to equip students with problem-solving skills, but also to foster independence in the learning process.

The main characteristics of PBL include:

1. learning must be able to attract students' interest;
2. the teacher acts as a facilitator or guide;
3. students are given time to gather information and design problem-solving strategies, thereby stimulating creative thinking;
4. learning materials do not have to be too difficult so as not to cause fear;
5. a comfortable, enjoyable, and environmentally based learning atmosphere.(Ripai & Sutarna, 2019).

The application of PBL involves the formulation of complex and multidisciplinary problems, with the aim of encouraging students to find relevant and effective solutions. PBL is considered an effective approach for educators to support the development of student competencies, especially in terms of problem-solving skills. In this case, the role of the teacher is to facilitate the development of independent learning skills in students. Problem-based learning focuses on strengthening high-level thinking skills in the context of real problems, as well as on how students learn in these situations.(Wena, 2020).

In addition, the Problem Based Learning (PBL) model is effective in improving students' problem-solving skills, allowing them to evaluate and improve their abilities in overcoming various challenges. This is due to the fact that in PBL, students not only seek solutions, but are also trained to solve problems independently. Learning problems reflect the circumstances they face in life. Thus, this is an effective approach, able to enhance the student learning process by encouraging active involvement of students, which will ultimately increase their enthusiasm in participating in learning.

The PBL model is very appropriate to apply, considering the number of advantages it has, including:

1. increase physical and mental activity,

2. encourage students to learn through real experiences, not just memorizing,

3. creating classes as a space to solve problems that are relevant to situations in the field,

4. allows students to construct their own learning materials with guidance from the teacher.(Ariyani & Kristin, 2021).

The selection of appropriate methods can increase the effectiveness of the learning process. One that is often used to encourage participation is PBL, which has been proven effective in strengthening their involvement in the learning process. The PBL method has been proven to have a significant positive impact, especially in terms of critical thinking challenges, communication between students, its usefulness as a pedagogical approach, and organization and interaction between students and teachers.(Ahmar et al., 2020).

Based Learning (PBL) is a learning method that involves students to learn actively by solving real problems in groups. This method aims to increase curiosity, develop thinking skills, and make students more active in the learning process.

Advantages of PBL:

1. Helping students better understand the subject matter.
2. The challenge of solving problems makes learning more interesting.
3. Helping students connect lessons with everyday life.
4. Encourage students to learn independently and take responsibility for their learning.
5. Teaches that learning is a thinking process, not just memorizing from books.
6. The learning atmosphere becomes more enjoyable.

Disadvantages of PBL:

1. Students who lack confidence or are not interested may be reluctant to try.
2. It takes quite a long time to prepare.
3. If students do not understand the purpose of the problem being discussed, they may be less enthusiastic about learning.(Borges et al., 2014).

The variety of methods applied by teachers is expected to increase the enthusiasm for learning. In an optimal classroom atmosphere, the relationship between teachers and students must be mutually supportive. This leads to learning that is no longer one-way, where teachers only provide material and students only listen and take notes without active involvement. Instead, students are expected to be actively involved in the learning process through discussion, expressing opinions, exploring the knowledge they have, and sharing understanding in the classroom environment. This will make the learning atmosphere more interesting, interactive, and meaningful.(Irdian et al., 2022).

In learning that uses the Problem Based Learning (PBL) approach, students are given the opportunity to solve problems through group discussions. The application of PBL has been proven to be effective in increasing their understanding of the material. This increase is influenced by various factors, both from within the students themselves and from the surrounding environment. In addition, the use of innovative learning models such as PBL can attract students'

attention, making them more focused and interested during the learning process in class.(Saharsa et al., 2018).

This approach is in line with the main principles of cognitive psychology, which include: (1) the learning process is an activity of actively building knowledge, not just passively receiving information; (2) the importance of self-awareness in the learning process, or what is known as metacognition (knowing about knowing); and (3) the important role of context and social environment in influencing and strengthening the learning process. Presenting problems at the beginning of learning does not seem difficult, because this step can trigger students' curiosity, encourage the inquiry process, increase active involvement in learning activities, and foster learning motivation. The Problem Based Learning (PBL) model is designed to help students build a foundation of knowledge that is deep and can be applied flexibly, encourage independent learning skills, and foster intrinsic motivation in the learning process.(Sucipto, 2017). PBL shows a positive influence on improving student learning outcomes. Meanwhile, educators act as facilitators who provide support and direction during the learning process. Implementation of the PBL model is a strategic step in creating learning that can increase student interest in learning, especially in facing and solving problems in an active and structured way.(Zhou et al., 2020).

CONCLUSION

Based on the discussion about Problem Based Learning, it can be concluded that PBL is an effective model to increase active participation, develop critical thinking, solve problems, and encourage independence in learning. By using problems related to everyday life, students are encouraged to explore knowledge more deeply and connect various concepts from various disciplines. Teachers as mentors in PBL must be able to create an environment that supports and motivates students. Overall, the implementation of the PBL strategy has a good impact, interest in learning, and readiness to face challenges in the real world.

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