THE IMPLEMENTATION OF PROJECT-BASED LEARNING ON DEEP LEARNING

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ABSTRACT

Project-Based Learning (PBL) is a learner-centered approach to learning that has the potential to support deep learning through active, collaborative, and contextual learning experiences. However, research on the implementation of PBL in supporting deep learning, as well as teachers' understanding of the relationship between these two concepts in English language learning, remains limited. This study aims to examine the implementation of Project-Based Learning in supporting Deep Learning and to explore teachers' understanding of the relationship between PBL and Deep Learning. The study employed a qualitative approach using a case study design at Mutiara Terpadu High School in Palabuhanratu. Data were collected through classroom observations, semi-structured interviews, and document analysis, and were subsequently analyzed using thematic analysis. The research findings indicate that the implementation of PBL supports deep learning through discussions, pair work, group projects, presentations, peer assessment, reflection, and individual assignments, which foster meaningful learning, mindful learning, joyful learning, collaboration, critical thinking, problem-solving, knowledge transfer, reflection, and deep conceptual understanding. In addition, teachers have a comprehensive understanding of the relationship between PBL and Deep Learning, emphasizing the importance of student-centered learning, meaningful learning experiences, the development of higher-order thinking skills, as well as continuous facilitation and reflection. Thus, the implementation of Project-Based Learning contributes to creating meaningful and authentic English language learning that supports the development of Deep Learning.

Keywords: *Project-Based Learning, Deep Learning, English language learning.*

ABSTRAK

Project-Based Learning (PBL) merupakan pendekatan pembelajaran yang berpusat pada peserta didik dan berpotensi mendukung terciptanya Deep Learning melalui pengalaman belajar yang aktif, kolaboratif, dan kontekstual. Namun, kajian mengenai implementasi PBL dalam mendukung Deep Learning serta pemahaman guru terhadap hubungan kedua konsep tersebut dalam pembelajaran bahasa

Inggris masih terbatas. Penelitian ini bertujuan mengkaji implementasi Project-Based Learning dalam mendukung Deep Learning serta mengeksplorasi pemahaman guru mengenai hubungan antara PBL dan Deep Learning. Penelitian menggunakan pendekatan kualitatif dengan desain studi kasus di SMA Mutiara Terpadu Palabuhanratu. Data dikumpulkan melalui observasi kelas, wawancara semi-terstruktur, dan analisis dokumen, kemudian dianalisis menggunakan analisis tematik. Hasil penelitian menunjukkan bahwa implementasi PBL mendukung Deep Learning melalui kegiatan diskusi, kerja berpasangan, proyek kelompok, presentasi, peer assessment, refleksi, dan penugasan individu yang mampu mendorong meaningful learning, mindful learning, joyful learning, kolaborasi, berpikir kritis, pemecahan masalah, transfer pengetahuan, refleksi, dan pemahaman konseptual yang mendalam. Selain itu, guru memiliki pemahaman yang komprehensif mengenai hubungan antara PBL dan Deep Learning dengan menekankan pentingnya pembelajaran yang berpusat pada peserta didik, pengalaman belajar yang bermakna, pengembangan keterampilan berpikir tingkat tinggi, serta fasilitasi dan refleksi secara berkelanjutan. Dengan demikian, implementasi Project-Based Learning berkontribusi dalam menciptakan pembelajaran bahasa Inggris yang bermakna, autentik, dan mendukung berkembangnya Deep Learning.

Kata Kunci: Project-Based Learning, Deep Learning, pembelajaran bahasa Inggris.

A. Introduction

The transformation of education in the 21st century calls for learning that is not only focused on mastering subject matter but also capable of developing critical thinking, collaboration, creativity, reflection, and the application of knowledge in various real-life contexts. One approach that has garnered significant attention in achieving these goals is Deep Learning—a learning process that emphasizes deep conceptual understanding through students' active engagement in constructing knowledge. To support the creation of such learning, Project-Based Learning (PBL) is viewed as a learning model with great potential because it encourages students to learn through inquiry, problem-solving, collaboration, and the completion of authentic projects.

Conceptually, Project-Based Learning is closely related to Deep Learning. However, the implementation of PBL in the classroom does not always result in a deep learning experience. In practice, learning activities often focus more on completing the final product than on the process of knowledge construction, reflection, and the development of students' conceptual

understanding. Furthermore, limited instructional time, the management of project activities, variations in student participation levels, and teachers' readiness to facilitate learning pose challenges that affect the effectiveness of PBL in supporting the characteristics of Deep Learning. These conditions indicate that the success of PBL implementation is determined not only by the learning model itself but also by how teachers understand and implement the relationship between PBL and Deep Learning.

In the context of English language learning, these challenges become even more complex because teachers are expected to design learning activities that encourage students to think critically, collaborate, reflect on their learning experiences, and apply their knowledge to authentic situations. Teachers who have a good understanding of the connection between Project-Based Learning and Deep Learning will be better able to design student-centered learning experiences so that the learning process is not only oriented toward task completion but also toward the development of higher-order thinking skills and meaningful understanding.

Several studies have shown that Project-Based Learning (PBL) makes a positive contribution to the learning process. Tiara et al. (2025) state that the implementation of PBL supports the creation of meaningful, mindful, and joyful learning in accordance with the principles of Deep Learning. The study also revealed that the implementation of PBL still faces various challenges, such as time constraints, project activity management, and variations in student participation, which affect the development of critical thinking, reflection, collaboration, and knowledge construction. Furthermore, various previous studies have shown that PBL can increase student engagement, collaboration skills, and motivation to learn; enhance higher-order thinking skills; and create more meaningful learning experiences through inquiry-based activities, problem-solving, and the application of knowledge in real-world contexts.

Nevertheless, most previous studies have focused on the impact or effectiveness of Project-Based Learning on student learning outcomes. Studies exploring how teachers understand the relationship between Project-Based Learning and

Deep Learning, particularly in English language learning, remain relatively limited. In fact, teachers' understanding of these two concepts plays a crucial role in determining how instruction is designed, implemented, and evaluated so that it can create learning experiences that truly support Deep Learning. The limitations of these studies indicate a research gap that warrants further attention.

Based on the above discussion, this study aims to examine the implementation of Project-Based Learning in supporting Deep Learning in English language instruction and to explore teachers' understanding of the relationship between these two concepts. The findings of this study are expected to contribute to the development of research on Project-Based Learning and Deep Learning, while also serving as a reference for teachers in developing more meaningful, contextual, and learner-centered instruction.

B. Research Method

This study employs a qualitative approach using a case study design to gain an in-depth understanding of the implementation of Project-Based Learning (PBL) in supporting Deep Learning in English language instruction. This approach was chosen because the study focuses on exploring teaching practices and teachers' perceptions in a real-world context, without aiming to generalize the research findings. According to Creswell (2014), a case study is a qualitative research approach used to explore a case in depth through comprehensive data collection from various sources. The research was conducted at Mutiara Terpadu Palabuhanratu High School in April–May 2026, involving an English teacher as the main participant.

In qualitative research, the researcher serves as the primary instrument responsible for collecting, analyzing, and interpreting data (Moleong, 2018). To support this process, this study utilized semi-structured interview guidelines, observation sheets, and documentation as supporting instruments. Data were collected through classroom observations, semi-structured interviews, and document analysis. Observations were conducted to identify the implementation of Project-Based Learning (PBL) and the emergence of Deep Learning characteristics during

the learning process, including students' active engagement, conceptual understanding, critical thinking, problem-solving, knowledge transfer, as well as reflection and metacognition. Interviews were used to explore teachers' perceptions, experiences, and understanding of the relationship between PBL and Deep Learning. Meanwhile, documentation in the form of teaching modules, instructional materials, project guidelines, assessment rubrics, student project outcomes, and documentation of learning activities was analyzed as supporting data as well as for triangulation (Bogdan & Biklen, 2007).

The data were analyzed using the thematic analysis technique developed by Braun and Clarke (2006). The analysis was conducted in six stages: familiarizing with the data, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and drawing conclusions. To ensure the credibility of the findings, the study employed methodological triangulation through observation, interviews, and documentation (Denzin, 1978), member checking by confirming interview results with participants, as well as prolonged engagement and persistent observation to gain a deeper understanding of the learning context.

C.Result and Discussion

The results of the observation show that the implementation of Project-Based Learning (PBL) in English language instruction has integrated the principles of Deep Learning from the introductory stage, through the core activities, to the conclusion of the lesson. In the introductory stage, teachers foster readiness to learn through apperception activities, motivation-building, the presentation of learning objectives, and a pre-test using Kahoot. In addition to creating a conducive learning environment, teachers also connect new material to students' everyday experiences—for example, through discussions about food and beverage products that include usage instructions as an introduction to procedure texts. This strategy demonstrates that the learning process does not begin with the direct presentation of concepts but rather through the activation of students' prior knowledge, enabling them to more easily construct their

understanding of the material being studied.

These findings are consistent with the theory of meaningful learning proposed by Ausubel (1968), which states that learning becomes more meaningful when new information is linked to learners' existing knowledge structures. This view is reinforced by Novak (2010), who explains that meaningful learning occurs when learners are able to integrate new experiences into their existing cognitive structures. Thus, apperception, the communication of learning objectives, and the use of real-life contexts in the early stages of learning serve as a crucial foundation for the development of deep learning, as they encourage learners to understand concepts through experiences that are relevant to their lives.

In the core activities, the implementation of PBL is realized through various activities that place students at the center of learning. Teachers not only explain the characteristics of procedure texts but also provide opportunities for students to identify linguistic elements, arrange the steps of a scrambled text, discuss in pairs, develop group projects, present project results, conduct peer assessments, and compose procedure texts independently. Throughout this process, the teacher acts as a facilitator who provides guidance, feedback, and support when students encounter difficulties. Learning activities take place collaboratively so that students are actively involved in exchanging ideas, solving problems, building knowledge, and applying the concepts they have learned in authentic situations.

This implementation demonstrates the emergence of various characteristics of Deep Learning, including meaningful learning, mindful learning, joyful learning, critical thinking, collaboration, problem-solving, knowledge transfer, and deep conceptual understanding. When students rearrange the sequence of a procedural text, they do not merely recall information but also analyze the relationships between steps, evaluate logical sequences, and make critical decisions. Similarly, in group project activities, students are engaged in the process of selecting a topic, dividing tasks, discussing alternative solutions, and collaboratively producing an outcome. These activities

demonstrate that learning occurs through the process of knowledge construction, not merely through the reception of information from the teacher.

The findings of this study align with the concept of Deep Learning proposed by Fullan et al. (2017), which emphasizes the importance of developing deep understanding, critical thinking skills, collaboration, creativity, communication, and the transfer of knowledge into authentic contexts. The OECD (2019) also explains that Deep Learning occurs when students actively construct knowledge and are able to apply it to various meaningful situations. The results of this study show that the implementation of PBL provides space for students to investigate problems, discuss, produce projects, and reflect on their learning experiences so that learning does not stop at a superficial mastery of concepts but develops into a deeper understanding.

Furthermore, project activities conducted in pairs or groups demonstrated that collaboration is a key component of learning. Students exchanged ideas, provided feedback, reached agreements, and solved problems together. These findings support Thomas's (2000) assertion that PBL is a student-centered learning model based on the completion of meaningful projects. In line with this, Larmer, Mergendoller, and Boss (2015) emphasize that high-quality project-based learning must provide students with opportunities to engage in inquiry, collaborate, make decisions, and take responsibility for their learning process. From a constructivist perspective, the results of this study also align with Piaget's (1970) theory, which views knowledge as the result of students' active construction through learning experiences. On the other hand, Vygotsky's (1978) sociocultural theory explains that social interaction during discussions and group work plays a crucial role in developing students' cognitive abilities. Thus, the collaborative process observed in this study not only increased participation but also strengthened the collective construc The results of the observation also showed that project-based activities provided authentic learning experiences because the learning materials were linked to real-life situations relevant to the students' lives. Students were given the freedom to choose project topics

based on their daily experiences and then apply them in writing procedure texts and giving presentations in English. These activities encourage students to connect the concepts they have learned to real-life contexts, thereby facilitating the transfer of knowledge. This finding aligns with Dewey's (1938) view, which emphasizes that meaningful learning develops through real-life experiences relevant to students' lives. Furthermore, this principle is consistent with the Buck Institute for Education (2018), which identifies authenticity as one of the key characteristics of Project-Based Learning.tion of knowledge.

In the closing phase, the teacher conducts a review of the material, a reflection on the learning process, an evaluation, and provides guidance on the project for the next session. Students are asked to identify the new knowledge they have gained, their most memorable learning experiences, and the difficulties they still face through a reflection sheet. This activity demonstrates that reflection is an important part of the learning process because it helps students become aware of the development of their understanding and evaluate the learning process they have undergone. According to Langer (2000), mindful learning is characterized by an individual's awareness of their ongoing thought processes and learning experiences. This view is reinforced by Flavell (1979), who explains that the ability to reflect on one's thought processes is part of metacognition, which plays a crucial role in building deeper understanding.

The findings of this study reinforce the results of research by Putra et al. (2025) and Tiara et al. (2025), which indicate that the implementation of PBL can enhance participation, collaboration, and meaningful learning experiences. However, this study offers a distinct contribution because it not only demonstrates the impact of PBL on learning outcomes but also explains in detail how the characteristics of Deep Learning emerge at each stage of the learning process—from the introduction, through the core activities, to the conclusion. Thus, this study demonstrates that the success of PBL implementation is determined not only by the final products produced by students but also by the quality of the learning process that fosters

knowledge construction, reflection, collaboration, critical thinking, and the application of concepts in real-life contexts.

D. Conclusion

The research findings indicate that the implementation of Project-Based Learning (PBL) in English language instruction supports the realization of deep learning through a series of learner-centered learning activities, including discussions, pair work, group projects, presentations, peer assessment, reflection, and individual assignments. These activities create meaningful, collaborative, contextual, and authentic learning experiences that encourage students to construct knowledge, develop critical thinking and problem-solving skills, engage in reflection, and apply their knowledge to real-world situations. These findings indicate that the implementation of PBL is not only oriented toward project completion but also contributes to the development of Deep Learning characteristics, such as meaningful learning, mindful learning, joyful learning, collaboration, deep conceptual understanding, and the contextual application of knowledge.

This study also shows that teachers have a comprehensive understanding of the relationship between Project-Based Learning and Deep Learning. Teachers view PBL as a learner-centered approach to learning that fosters active participation, collaboration, meaningful learning experiences, and the development of higher-order thinking skills. In addition, teachers emphasize the importance of facilitation, guidance, feedback, motivation, and continuous reflection to ensure a deep learning process. Thus, this study confirms that the successful implementation of PBL in supporting deep learning is determined not only by the completion of a project as a final product but also by the quality of the learning process, which enables students to actively construct understanding and apply knowledge in various real-life contexts.

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