JOURNAL OF ENGLISH TEACHING, APPLIED LINGUISTICS AND LITERATURES (JETALL)

English Language Education Study Program, FKIP Universitas Lambung Mangkurat Banjarmasin
Volume 8 Number 2 2025

The Impact of Project-Based Learning on Deep Learning: Enhancing Meaningful, Mindful, and Joyful Learning in EFL Contexts

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Abstract: This study examines how Project-Based Learning (PjBL) impacts deep learning by emphasizing meaningful, mindful, and enjoyable aspects of learning in English as a foreign language (EFL). PjBL involves students in real projects and encourages them to collaborate, participate, and solve problems. This study aimed to measure the effectiveness of PjBL in improving students' engagement and deep learning experiences in EFL contexts. A quantitative research design was applied. The sample consisted of 30 grade 11 students from a senior high school in Central Java, Indonesia, who had previously participated in English learning through the PjBL method. The instruments included observation sheets, questionnaires, pre-tests, and post-tests. Validity and reliability were ensured through expert judgment, validity assessments, and Cronbach's Alpha reliability tests. The collected data were analyzed using descriptive and inferential statistical analysis techniques. The results revealed a positive impact of PjBL on students' engagement, meaningful learning, and EFL proficiency.

Keywords: *Project Based Learning, Deep Learning, Meaningful learning, Mindful learning, Joyful learning.*

INTRODUCTION

English as a Foreign Language (EFL) learning in Indonesia faces significant challenges in improving the quality and effectiveness of the teaching-learning process, as described by Novita and Nurdianingsih (2020). In the context of English language teaching, many Indonesian educators still rely heavily on traditional methods such as memorization and repetitive exercises. These approaches are insufficient for fostering learning that is meaningful, mindful, and joyful, elements that are essential for effective and sustainable education.

One of the main issues in EFL instruction in Indonesia is the dominant role of the teacher. Classroom activities tend to be teacher-centered, where students follow instructions without being given space to take initiative. Suyanto (2017) highlights that most learning activities remain teacher-controlled, with educators acting as the primary drivers of both content and classroom rhythm. In such situations, students lose the opportunity to engage actively and take responsibility for their own learning. This leads to low levels of cognitive and affective involvement among students in their English learning process.

To address these problems, Project-Based Learning (PjBL) has gained increasing attention as a potential solution in EFL education. PjBL is an instructional approach that emphasizes active student engagement in real-world, contextual projects. Through this method, students are encouraged to integrate their knowledge into problem-solving, teamwork, and the creation of tangible products that reflect their understanding of the subject matter. In EFL learning, this approach is believed to foster greater student involvement by presenting both cognitive challenges and affective, ethical, and aesthetic dimensions.

According to Chen et al. (2021), PjBL enhances students' learning experiences by promoting critical and creative thinking through meaningful interaction. In the EFL setting, PjBL allows learners to

experience the language not only as a set of grammatical rules and vocabulary but also as a living, contextual tool of communication. This positions PjBL as a promising approach to facilitate deep learning, a process characterized by long-term, in-depth, and transformative educational engagement.

However, the implementation of PjBL in Indonesia is still far from optimal. A study by Hidayat et al. (2024) revealed several obstacles in applying PjBL in classrooms, including time constraints, inconsistent teacher supervision, and students' lack of initiative in communicating their learning difficulties. Moreover, some teachers struggle to align project goals with the expected learning outcomes. These challenges suggest that while PjBL holds significant potential to enhance the quality of EFL instruction, its application requires thoughtful planning, teacher readiness, and institutional support.

This study is important because there is still limited research that explicitly connects the implementation of PjBL with the realization of deep learning in the context of English language education in Indonesia. Most previous studies have focused primarily on exam scores or vocabulary gains without exploring how students cognitively, affectively, and socially engage in the learning process. Therefore, this research aims to explore how PjBL facilitates student engagement in meaningful, mindful, and joyful learning, and how this approach contributes to improved language learning outcomes in EFL classrooms.

The focus of this research is guided by the following questions:

1. How does PjBL affect students' engagement in meaningful, mindful, and joyful learning?
2. How do students perceive the effectiveness of PjBL in fostering deep learning?
3. What is the impact of PjBL on students' English language learning outcomes?

LITERATURE REVIEW

Deep Learning in EFL Context

Deep learning was initially introduced by Marton and Säljö (1976) as a learning approach that emphasizes deep understanding and the interconnection of concepts rather than superficial memorization. One foundational theory that supports this learning approach is Piaget's Constructivism Theory, which posits that learners construct knowledge through the processes of assimilation and accommodation by integrating new knowledge into existing cognitive structures. This view aligns with the idea that learning becomes effective when students build on meaningful experiences.

In the context of English as a Foreign Language (EFL), deep learning is crucial as it allows learners to go beyond rote vocabulary and grammar acquisition. According to Entwistle and Peterson (2004), deep learning includes the ability to think critically, comprehend concepts thoroughly, and apply knowledge in varied situations. The Indonesian Ministry of Education (Kemendikbud, 2025) echoes this by emphasizing the need for learning environments that are mindful, meaningful, and joyful to foster student-centered education in increasingly complex global contexts.

The Three Pillars of Deep Learning: Meaningful, Mindful, and Joyful Learning

Meaningful learning refers to students' ability to connect new information with prior knowledge, which results in long-lasting and applicable understanding. Mayer (2019) explained that meaningful learning occurs when students actively form mental representations of new material and relate them to what they already know, facilitating comprehension and application in real-world contexts. This process encourages deeper thinking, organization, and reflection, beyond surface-level memorization. Renkl and Atkinson (2022) also argued that

meaningful learning empowers students to process content using active cognitive strategies that enhance comprehension and relevance.

Mindful learning, on the other hand, requires learners to be fully engaged in the learning process. It emphasizes present awareness, reflection, and emotional regulation. Zeidan et al. (2010) described mindful learning as a process where students focus attentively on learning experiences, thus promoting self-awareness and reducing distractions. According to Lee (2021), mindful learning has been found to increase students' learning engagement, calmness, and receptiveness to new content, ultimately enhancing learning quality through heightened attention and critical thinking.

Joyful learning centers on cultivating an enjoyable, motivating, and inclusive environment. According to Chen et al. (2021), this approach minimizes academic stress and enhances motivation by integrating fun and emotionally positive elements into the learning process. Liu and Chen (2022) highlighted that gamification, creative tasks, and engaging activities contribute to a positive atmosphere that improves learning outcomes and fosters long-term interest. Joyful learning does not only entertain; it creates emotionally rich contexts that enable deeper cognitive processing and personal growth.

Donasari et al. (2023) emphasized that joyful learning supports critical thinking and deeper understanding by allowing students to experience excitement and creative expression during learning activities. In addition, Ayala and Acuna (2024) asserted that joyful experiences improve concentration and cognitive retention. As Xu (2022) summarized, the integration of these three elements meaningful, mindful, and joyful learning forms the foundation of a truly student-centered deep learning experience.

Project-Based Learning (PjBL) and Its Relationship to Deep Learning

Project-Based Learning (PjBL) is an instructional strategy designed to foster student agency and engagement through real-world projects. Mergendoller et al. (2022) described PjBL as an approach where students investigate authentic problems, collaborate with peers, and generate products that reflect their understanding. In EFL settings, this method encourages language use in authentic contexts, enhancing communicative competence.

Several studies have demonstrated the benefits of PjBL in enhancing students' cognitive and language skills. Biazus and Mahtari (2022) found that middle school students improved their creative thinking through PjBL. Similarly, Parrado-Martínez and Sánchez-Andújar (2020) reported that high school students developed better writing, collaboration, and critical thinking skills through project-based tasks. Moreover, Guo et al. (2020) and Kim (2021) emphasized that PjBL facilitates students' communication and critical thinking in EFL classrooms.

From a social constructivist perspective, Dharmayanti and Joni (2022) highlighted that PjBL supports language acquisition as students negotiate meaning and co-construct understanding during group tasks. The method also integrates the four major language skills, listening, speaking, reading, and writing, while promoting 21st-century competencies such as creativity, critical thinking, communication, and collaboration. Sukiawati (2020) and Argawati (2020) further noted that PjBL can improve grammar and vocabulary mastery by immersing learners in meaningful, student-driven language use.

However, not all findings support the superiority of PjBL. García-Rodríguez et al. (2021) found no significant improvement in graduate students' problem-solving or information management skills following PjBL interventions. Likewise, Gratchev and Jeng (2018) observed similar

achievement levels between students engaged in traditional learning and those in PjBL programs, pointing to students' lack of interest in unfamiliar methods. In another study, Kızkapan and Bektaş (2017) reported no significant difference in post-test scores between students taught using PjBL and those taught through conventional methods.

Furthermore, Hidayat et al. (2024) noted implementation challenges in Indonesian classrooms, such as limited teacher guidance, group imbalances, and lack of student initiative. Teachers also struggled to align projects with curriculum goals and address students' specific learning difficulties during project development.

Despite these limitations, the theoretical and empirical foundation for PjBL remains strong. When implemented effectively, it can serve as a powerful vehicle for deep learning enabling EFL students to experience learning that is not only linguistically effective but also meaningful, mindful, and joyful.

RESEARCH METHODOLOGY

This study uses a quasi-experimental design, as participants were selected purposively, not randomly. The research involved comparison groups to evaluate the effect of Project-Based Learning (PjBL) on students' meaningful, mindful, and joyful learning outcomes. Quantitative data will be collected through pre-tests and post-tests to measure changes in learning outcomes. The instrument used will be an English test, which will be analyzed using descriptive statistics and paired sample t-tests or ANCOVA to see significant differences before and after the implementation of PjBL. The validity and reliability of the data were maintained by conducting instrument trials and consulting experts for input. This study will also pay attention to ethical aspects, such as asking for student and school approval, maintaining data confidentiality, and ensuring that participation is voluntary. This research focuses on 11th grade students of from one senior high school in Central Java, Indonesia as participants. This study uses an experimental project based learning approach and a traditional approach. The experimental group will use a more interactive and project-based (PjBL) approach, while the control group will use a more traditional and theoretical method. The purpose of comparing these two groups is to see the effectiveness of different learning methods in improving students' English language skills. To address the research questions, three instruments will be employed: an Observation Checklist, a Likert-Scale Questionnaire, and an English Comprehension Test. These instruments are designed to systematically measure the effects of Project-Based Learning (PjBL) on students' engagement, perceptions of deep learning, and language learning outcomes. An Observation Checklist will be used to assess students' engagement in meaningful, mindful, and joyful learning during PjBL activities. The checklist is adapted from engagement frameworks that emphasize cognitive, emotional, and behavioral engagement in learning contexts. Key indicators include active participation in discussions and problem-solving tasks (meaningful learning), self regulation and metacognitive reflection (mindful learning), and enthusiasm, collaboration, and enjoyment in learning activities (joyful learning). Each observed behavior will be rated on a structured scale to ensure consistency and reliability in data collection.

To explore students' perceptions of PjBL in fostering deep learning, a Likert-Scale Questionnaire will be administered. The questionnaire consists of closed-ended statements rated on a five-point Likert scale (1 = strongly disagree to 5 = strongly agree). The items measure students' perceptions of how PjBL enhances critical thinking, problem-solving, self-

directed learning, and conceptual understanding, all of which contribute to deep learning. Additionally, the questionnaire includes items on students' motivation, engagement, and perceived relevance of PjBL to real-world learning experiences. Last, to determine the impact of PjBL on students' language learning outcomes, an English Comprehension Test will be administered. The test assesses students' proficiency in reading, listening, and comprehension in the context of PjBL-driven tasks. The test is designed based on curriculum-aligned standards and includes texts and listening materials with real-world problem-solving scenarios to reflect the PjBL approach. The test scores are analyzed to determine whether compared to those in traditional learning environments.

Data Analysis Procedure

The data collected in this study was analyzed using quantitative statistical methods to examine the impact of Project-Based Learning (PjBL) on students' engagement, perceptions of deep learning, and language learning outcomes. The analysis will be conducted using IBM SPSS software, ensuring systematic and accurate data interpretation First, the Observation Checklist data will be analyzed using descriptive statistics (e.g., mean scores, frequency distributions) to determine patterns of student engagement in meaningful, mindful, and joyful learning. T-test analysis will be performed to examine the relationships between specific engagement indicators and overall learning effectiveness in PjBL settings. Second, the Likert-Scale Questionnaire responses will be analyzed using descriptive and inferential statistics. The mean, standard deviation, and frequency distribution of students' responses will be calculated to assess their perceptions of PjBL's effectiveness in fostering deep learning. Additionally, factor analysis will be conducted to identify key dimensions underlying students' perceptions, and regression analysis will be used to determine whether students' engagement levels predict their perception of deep learning. Third, the English Comprehension Test scores will be analyzed using paired-sample t-tests (for pre-test and post-test comparisons) to measure improvements in students' language proficiency after implementing PjBL. If multiple groups are compared (e.g., experimental and control groups), an independent-samples t-test or ANOVA will be used to assess significant differences in learning outcomes.

RESULT AND DISCUSSION

Students' Perception of PjBL and Its Impact on Meaningful, Mindful, and Joyful Learning Engagement

NO	Statement	Scale Value
1	Students show high curiosity during the problem solving process	4
2	Students actively discuss and collaborate in PjBL groups	4
3	Students are able to connect learning topics with real life	3
4	Students appear focused and fully involved during PjBL activities	4
5	Students show enthusiasm when facing challenges in learning	4
6	Students can reflect deeply on their learning process	3
7	Students appear to enjoy the learning process despite facing difficulties	4
8	Students show initiative to search for information independently	4
9	Students show positive expressions such as smiling, laughing, or making pleasant comments during learning activities	4
10	Students show satisfaction with the learning outcomes obtained through PjBL	3

Tabel 1. Descriptive Statistics of Student Engagement – Experiment Class

NO	Statement	Scale Value
1	Students show high curiosity during the problem solving process	2
2	Students actively discuss and collaborate in PjBL groups	3
3	Students are able to connect learning topics with real life	3
4	Students appear focused and fully involved during PjBL activities	3
5	Students show enthusiasm when facing challenges in learning	1
6	Students can reflect deeply on their learning process	2
7	Students appear to enjoy the learning process despite facing difficulties	2
8	Students show initiative to search for information independently	3
9	Students show positive expressions such as smiling, laughing, or making pleasant comments during learning activities	4
10	Students show satisfaction with the learning outcomes obtained through PjBL	4

Tabel 2. Descriptive Statistics of Student Engagement – Control Class

Based on the results of the descriptive analysis, the experimental class showed a higher level of engagement compared to the control class, with an average overall score of 3.7, while the control class only achieved 2.7. Most of the indicators in the experimental class scored "4" (very good), especially in the aspects of collaboration, enthusiasm, and student initiative during learning. Meanwhile, the lowest score was in the reflection and satisfaction indicators with

learning outcomes, which were still in the "good" category (score 3). These findings indicate that the implementation of Project-Based Learning (PjBL) is able to increase student engagement cognitively, emotionally, and socially in the learning process.

Students' Perception of the Effectiveness of PjBL in Fostering Deep Learning

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Q1	30	2	5	3.87	0.730
Q2	30	2	5	3.90	0.803
Q3	30	2	5	3.87	0.819
Q4	30	2	5	3.93	0.740
Q5	30	3	5	3.97	0.809
Q6	30	2	5	3.93	0.828
Q7	30	3	5	4.07	0.740
Q8	30	3	5	3.97	0.615
Q9	30	2	5	4.00	0.871
Q10	30	2	5	3.87	0.776
Valid N (listwise)	30				
(Scale: 1 = Strongly Disagree, 2 = Disagree , 3 = Neutral, 4 = Agree, 5 = Strongly Agree)					

Tabel 3. Descriptive Statistics of Student Perceptions – Experiment Class

Based on the descriptive data in the experimental class, the overall mean value of students' perceptions of project-based learning (PjBL) was around 3.94, indicating that most students gave a positive assessment of the implementation of PjBL in their class. The item with the highest value was Q7 (PjBL motivates me to collaborate and learn from friends) with a mean = 4.07, indicating that the collaboration aspect is the most prominent element of students' experience in participating in PjBL. Meanwhile, the items with the lowest values were Q1, Q3, and Q10, each with a mean = 3.87. These three items are related to students' interest in participating in learning, understanding of the material, and activeness.

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Q1	30	1	5	2.93	1.258
Q2	30	1	5	3.20	1.297
Q3	30	1	5	3.23	1.165
Q4	30	1	5	3.17	1.053
Q5	30	1	5	2.97	1.098
Q6	30	1	5	2.90	1.125
Q7	30	1	5	3.07	1.230
Q8	30	1	5	3.27	1.311

Q9	30	1	5	3.13	1.306
Q10	30	1	5	2.90	1.185
Valid N (listwise)	30				
(Scale: 1 = Strongly Disagree, 2 = Disagree , 3 = Neutral, 4 = Agree, 5 = Strongly Agree)					

Tabel 4. Descriptive Statistics of Student Perceptions – Control Class

For the control class, the overall average of students' perceptions of learning was lower, at around 3.08, indicating that their perceptions tended to be neutral to slightly positive towards the learning methods applied. The item with the highest score was Q8 (I feel that this learning helps me understand the material) with a mean = 3.27, indicating that students still felt a little benefit in understanding the material, although not as strong as in the experimental class. The items with the lowest scores were Q1 (I feel interested in following this learning) and Q10 (I feel that this learning makes me more active), both with a mean = 2.90, indicating low motivation and active involvement in traditional learning.

The Impact of Project-Based Learning on Students' Language Learning Outcomes

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Pre-Test Experiment Class	30	20	90	49.33	24.486
Post-Test Experiment Class	30	40	100	75.33	16.132
Pre-Test Control Class	30	10	90	53.00	22.461
Post-Test Control Class	30	70	100	88.67	8.996
Valid N (listwise)	30				

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
hasil	Equal variances assumed	334	564	-1.896	118	60	-850.000	448.260	-1.737.677	37.677
	Equal variances not assumed			-1.896	117.977	60	-850.000	448.260	-1.737.678	37.678

Based on the Independent Samples Test output table in the "Equal variances assumed" section, the Sig. (2-tailed) value is 0.060 > 0.05. So, as the basis for decision making in the independent

sample t-test, it can be concluded that H0 is accepted and Ha is rejected. Thus, there is no significant (real) difference between the average learning outcomes of students in the experimental class and the control class at the high school level

PjBL Affect Students' Engagement

Based on the results of observations and quantitative analysis of student engagement, it can be seen that the implementation of Project-Based Learning (PjBL) in the experimental class can increase student engagement in a meaningful, mindful, and joyful learning process. The average score of student engagement in the experimental class reached 3.7, higher than the control class which was only 2.7. This shows that PjBL encourages students to be more active, focused, and enthusiastic during learning. Students are more interested and feel that learning is more meaningful because they are directly involved in solving real and collaborative problems, in accordance with the findings of Mergendoller et al. (2022) which states that PjBL improves conceptual understanding and critical thinking because students feel that their learning is relevant. In addition, Parrado-Martínez & Sánchez-Andújar (2020) also showed that collaboration in projects can improve students' communication and critical thinking skills. In the context of learning English as a foreign language, PjBL also contributes to improving overall language skills (reading, writing, listening, speaking) as emphasized by Dharmayanti & Joni (2022). High student involvement in the experimental class also reflects a mindful learning process where students are more aware and actively involved and joyful, where students show positive expressions and enjoy learning despite facing challenges.These findings support the deep learning approach outlined by Marton & Säljö (1976) and are reinforced by Piaget's constructivism theory, where knowledge is built through meaningful experiences and active interactions. Learning through PjBL is able to integrate the three aspects of deep learning: meaningful (related to real life), mindful (awareness and full attention), and joyful (enthusiastic and enjoyable), as also developed by the Ministry of Education and Culture (2025) and clarified by Xu (2022). However, it should be noted that the success of PjBL implementation is highly dependent on proper implementation. Hidayat's study (2024) shows that challenges such as lack of teacher monitoring, inconsistent language use, and lack of cooperation between students can hinder the effectiveness of PjBL. Therefore, optimal PjBL implementation needs to pay attention to careful planning, teacher support, and good classroom management to ensure that student engagement is truly achieved in depth and comprehensively.

Students Perceive The Effectiveness of PjBL in Fostering Deep Learning

Based on the results of the study on students' perceptions of the effectiveness of Project-Based Learning (PjBL) in encouraging deep learning, it can be concluded that students in the experimental class showed a much more positive response than students in the control class. The average score of students' perceptions in the experimental class was 3.94, much higher than the control class which was only 3.08. This indicates that the PjBL approach is generally considered more effective in creating meaningful and deep learning by students. Specifically, the item with the highest score in the experimental class was Q7 (mean = 4.07), which indicates that students feel motivated to collaborate and learn from friends during the project-based learning process. This collaboration is a key element in deep learning, as it facilitates the exchange of ideas, discussions, and collective problem solving. This is in line with the views

of Entwistle & Peterson (2004) and Marton & Säljö (1976), which state that deep learning involves deep conceptual understanding, critical thinking, and the ability to apply knowledge in new contexts. In addition, this finding is reinforced by the study of Mergendoller et al. (2022) which states that PjBL can improve conceptual understanding and critical thinking skills because students feel that they are learning something relevant and useful. Parrado-Martínez & Sánchez-Andújar (2020) also support this by stating that PjBL that emphasizes collaboration can improve students' communication and critical thinking skills. This shows that in the context of learning English as a foreign language, PjBL creates an atmosphere that is not only communicative but also encourages higher cognitive engagement, which is the main characteristic of deep learning. However, although the average score in the experimental class was quite high, there were three items that recorded relatively lower scores (Q1, Q3, and Q10 with a mean = 3.87), which were related to interest, understanding, and activeness in learning. This indicates that the implementation of PjBL has not been fully optimal in several aspects, especially in maintaining consistent motivation and active participation of all students. This finding is in accordance with the study of Hidayat et al. (2024) which shows that obstacles in the implementation of PjBL, such as lack of teacher monitoring and time constraints, can hinder the overall effectiveness of PjBL. In contrast, in the control class using traditional methods, students' perceptions tended to be neutral to slightly positive. The highest score was only 3.27 (Q8), indicating that although traditional methods still have some benefits in helping to understand the material, the learning experience in general does not provide the same depth or emotional involvement as PjBL. The low scores of Q1 and Q10 in the control class (mean = 2.90 each) reflect the lack of interest and active participation of students, which are characteristic of surface learning, not deep learning. In relation to Piaget's constructivism theory, learning through PjBL allows students to construct their own knowledge through real experiences and social interactions, which supports the deep learning process. By providing opportunities for students to actively explore and produce real projects, PjBL creates a mindful, meaningful, and joyful learning experience (Xu, 2022). This is also reinforced by the view of Dharmayanti & Joni (2022) that PjBL, especially in English learning, not only improves language skills but also develops high-level thinking skills such as creativity, collaboration, and communication. Thus, based on student perception data and reviewed from various literature studies, it can be concluded that students view Project-Based Learning as an effective learning method in encouraging deep learning, although its implementation still needs to be refined in several technical aspects of implementation in the classroom.

Impact of PjBL on Students' Language Learning

Based on the results of this study, the implementation of Problem Based Learning (PjBL) has a positive impact on improving students' English learning outcomes, especially in the context of language comprehension. This is indicated by an increase in the average score in the experimental class from 49.33 in the pre-test to 75.33 in the post-test. The results of the Paired Samples Test showed a significance value (Sig. 2-tailed) of 0.000 <0.05, which means that there is a significant difference between the pre-test and post-test scores. This shows that the use of PjBL is able to improve students' ability to understand the English material being taught. Although the control class also experienced a higher average increase in scores (from 53.00 to 88.67), it should be noted that this increase cannot be directly attributed to a particular learning

method because there was no special learning model intervention like in the experimental class. The two classes showed no statistically significant difference (Sig. = 0.060 > 0.05). Thus, although the difference in final results appears higher in the control class, the effectiveness of PjBL in improving learning outcomes can still be proven internally in the experimental class. This finding aligns with the study by Mergendoller et al. (2022), which emphasized that PjBL can increase student engagement in learning through solving relevant and meaningful real problems. When students feel that learning is relevant to real life, they tend to be more active, motivated, and think critically. Likewise, Parrado-Martínez & Sánchez-Andújar (2020) found that PjBL can significantly improve students' English communication and writing skills because students are encouraged to work together and complete tasks independently. In addition, the results of this study also support the concept of deep learning as explained by Marton & Säljö (1976) and developed by Piaget's constructivist theory. PjBL allows students to not only memorize information, but also link new knowledge to previous experiences through contextual and collaborative activities. Within the framework of mindful, meaningful, and joyful learning (Xu, 2022), PjBL creates a fun and meaningful learning environment where students can learn consciously and actively, and are able to develop 21st-century skills such as critical thinking, communication, and collaboration (Guo et al., 2020). However, it is important to consider other research findings, such as those from García-Rodríguez et al. (2021) and Kızkapan & Bektaş (2017), which show that the impact of PjBL is not necessarily superior to traditional methods, depending on the implementation context and instructional support. Research by Hidayat et al. (2024) also highlights the limitations of PjBL implementation in practice, such as lack of teacher supervision, uneven group selection, and time constraints. Considering the results of this study and previous studies, it can be concluded that PjBL has the potential to provide a positive impact on improving students' English learning outcomes, especially in terms of deep understanding. However, its effectiveness is highly dependent on the quality of planning, implementation, and the active role of teachers in facilitating a reflective and collaborative learning process. Therefore, teacher training and institutional support are important factors in maximizing the potential of PjBL in the context of learning English as a foreign language.

CONCLUSION

Based on the findings of this study, it can be concluded that the implementation of Project-Based Learning (PjBL) has a positive impact on promoting deep learning in the EFL context by enhancing students' engagement in meaningful, mindful, and joyful learning. The results from classroom observation, pre-test and post-test analysis, as well as students' perception questionnaires consistently show that PjBL fosters greater student involvement, awareness, and enjoyment throughout the learning process. PjBL was shown to significantly increase students' engagement, with the experimental group demonstrating higher levels of active participation, focus, and emotional investment compared to the control group. This is in line with Piaget's constructivist theory and the concept of deep learning by Marton and Säljö (1976), emphasizing that learning occurs through meaningful experience and reflection. Students also perceived PjBL as more effective in encouraging deep learning, particularly in terms of collaboration, critical thinking, and real-world application. Although there were some challenges in maintaining consistent motivation and participation, the overall perception favored PjBL over

traditional methods. Furthermore, although the statistical comparison between experimental and control groups showed no significant difference in final post-test scores, the internal gains within the experimental group provide strong evidence that PjBL contributes positively to students' English language development. The integration of real-life contexts and collaborative projects helps students deepen their understanding and apply language skills meaningfully.

In conclusion, Project-Based Learning can serve as an effective pedagogical approach in EFL classrooms, fostering not only cognitive growth but also emotional and social engagement. However, the success of PjBL heavily relies on well-planned implementation, teacher support, and structured classroom management. Therefore, future implementation of PjBL should emphasize teacher training and institutional readiness to maximize its potential in promoting deep, mindful, and joyful learning.

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