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# Level Up With Problem-Based Learning Students' Perception Of Its Impact On Learning In Efl Context

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***Abstract***

*This study aims to investigate the impact of Problem-Based Learning (PBL) on the outcomes of the 9th-grade students in an English language learning context. Drawing on theories of PBL and previous research, the study employs a surveying approach to explore students' perceptions and performance following PBL implementation. The findings reveal a positive result of PBL from students' perception, demonstrating improvements in understanding course materials, critical thinking, problem-solving skills, self-directed learning, confidence in knowledge application, and finally their scores. Additionally, students show increased engagement and motivation in PBL activities, attributing it to the relevance and appeal of presented problems. These results emphasize the efficacy of PBL in enhancing students' experiences and preparing them for real-world challenges.*

***Keywords****: problem-based learning, English as a Foreign Language (EFL), EFL learning, student perception*

## INTRODUCTION

Traditional education often relies on passive learning methods, where teachers transmit information to students who then passively receive and memorize it. Problem-Based Learning (PBL) has emerged as an alternative to traditional teaching methods. Originally designed for medical education, PBL has since been adopted across various other disciplines. Problem-based learning (PBL) was introduced into higher education curricula in the 1960s, originating from medical education to prepare students for solving patient problems in clinical settings (Barrett, 2006).

Problem-based learning is a student-centered approach grounded in constructivist theory, where learners collaborate and direct their own learning to build knowledge by solving open-ended problems without predetermined solutions (Duch, et al, 2001). PBL requires students to work collaboratively to solve real-world problems, which enhances their critical thinking skills and problem-solving abilities In PBL, resolving the inherent dissonance within the problems students encounter is central to their process of constructing knowledge and, ultimately, learning (Marra, et al., 2014).

Problem-based learning (PBL) serves as a structured approach to learning through discovery, promoting knowledge internalization and enhanced comprehension in students (Delisle, 1997). By actively engaged in solving real-world problems, students are prompted to analyze and synthesize information, develop critical thinking and problem-solving skills, collaborate effectively with others, communicate their findings clearly, and become self-directed learners.

Despite the potential of PBL in language education, there remains a need for further research to systematically evaluate its effectiveness across different educational contexts and subject areas. This research aims to analyze the impact of problem-based learning (PBL) on students' academic achievement in learning EFL and PBL exeperience by providing a comprehensive overview of current research on the impact of PBL on student outcomes as well as

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analyzing students' experience with PBL by distributing questionnaire. This research will contribute to the ongoing effort to improve educational outcomes and prepare students for success in the real-world situation.

Research questions

R1. How does Problem-Based Learning (PBL) influence the development of critical thinking, problem-solving skills, and engagement in English as a Foreign Language (EFL) learning?

R2. What is the impact of Problem-Based Learning (PBL) on the academic achievement and self-confidence of EFL learners in understanding and applying subject matter?

## LITERATURE REVIEW

### *Problem-based Learning*

PBL (problem-based learning) is a dynamic learning approach where students actively explore and solve real-world challenges to gain deeper insights into intricate concepts (Barell, 2007). Problem-based methodologies prioritize learning through inquiry processes that revolve around understanding what information is necessary to tackle and enhance a specific situation. (Boud & Feletti, 1997). Therefore, it can be concluded that PBL encourages student-driven exploration to answer questions and solve real-world problems as well as promotes deeper learning by asking students to analyze and find solutions to challenging situations.

Furthermore, problem-based learning (PBL) is best defined as the learning that emerges from working toward understanding or resolving a problem, which is introduced at the start of the learning process and serves as a stimulus for applying problem-solving and reasoning skills, as well as for seeking and studying the knowledge required to understand the problem's underlying mechanisms and potential solutions (Barrows & Tamblyn, 1980). PBL can be viewed as rooted in a network of practices and commitments to experiential constructivist learning theory and pedagogy, with a strong focus on and inquiry (Kerr, 2015).

The benefits for students when they apply PBL are: (1) immerse themselves in realistic open-ended scenarios that simulate real-world work environments; (2) collaborate in groups to identify both known and unknown elements of the problem, and determine the best approaches for acquiring the information needed to solve it; (3) employ critical thinking and problem-solving skills to investigate the problem and brainstorm a diverse range of potential solutions; and (4) analyze the situation to ensure the initial problem framing is accurate and identify any additional issues that require attention (Kurt, 2020).

Ali (2019) described the difference between tranditional learning and problem-based learning in the following figure.

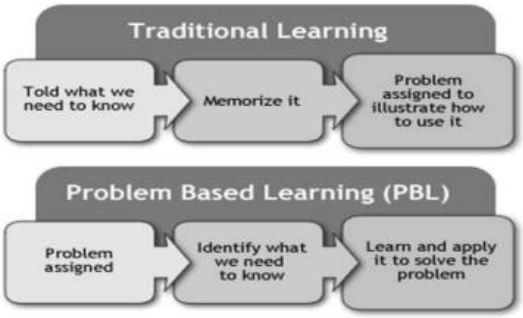


**Figure 1**. Difference between traditional learning and PBL

There are three models for engaging students in problem-solving through teacher-directed instruction:

1. **You are**… statements: Students are placed in a complex situation and asked to assume a role requiring them to solve problems.
2. **What if…?** questions: Students are challenged to respond to compelling hypothetical situations, stimulating critical thinking.

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3. **Specific claims or judgments**: Students are presented with a particular viewpoint and asked to agree/disagree, providing justifications for their response.

These models are presented as a framework for teachers to design problem-based learning activities. Importantly, the section emphasizes the need for teachers to carefully plan and organize their approach, similar to how chefs prepare for a complex culinary endeavor, before engaging students in these activities (Barell, 2007).

Problem-based learning frees teachers from rigid materials, allowing them to create engaging problems that connect to students' lives and address diverse learning goals (Delisle, 1997). In developing a problem for employing PBL, there are several things a teacher should consider, namely: selecting suitable material, dentifying the resource accessibility, crafting a problem statement suitable for growth, rooted in student encounters, aligned with the curriculum, accommodating diverse teaching methods, open-ended, selecting a motivational task, formulating a focused query, and deciding on assessment methods (Delisle, 1997). By carefully considering these factors, teachers can leverage the power of PBL to create dynamic and meaningful learning experiences that empower students to become active learners and problem-solvers.

***The Effects of Problem-based Learning***

According to Larson (2001), students in PBL classrooms enhance their social skills by having more opportunities to use language for authentic communication. Meanwhile, Nilson (2016) stated that a well-structured problem-based learning (PBL) project enables students to develop various skills, including teamwork, project management, leadership, oral and written communication, self-awareness, group process evaluation, independent work, critical thinking, concept explanation, self-directed learning, application of course content to real-world scenarios, research, information literacy, and interdisciplinary problem-solving.

Majority of studies ( (Malmia, et al., 2019); (Juandi & Tamur, 2021); (Dwisnu, 2021); (Klegeris & Hurren, 2011); (Rahman, Zamili, & Munawwaroh, 2021)) show PBL significantly improves learning outcomes across various subjects, including critical thinking, problem-solving, reading comprehension, and writing skills. Students' listening skill also improved more with PBL than traditional approaches (Mardina, Misrita, & Bahing, 2022). Moreover, the environmental literacy-oriented problem-based learning model has a significant effect on narrative writing skills of elementary school students (Binasdevi, Laily, Udin, Maufur, & Ummah, 2022). In addition, several studies ( (Demirel & Dagyar, 2016); (Batdi, 2014); (Klegeris & Hurren, 2011)) highlight PBL's positive impact on student attitudes towards learning and motivation, making them more engaged and enthusiastic. Meanwhile, (Rizka & Lismalinda, 2021) stated there is an effect of using PBL on sociolinguistic learning outcomes for private university students in Aceh.

Furthermore, PBL appears particularly effective in enhancing critical thinking ( (Suryanti & Nurhuda, 2021); (Jumariati, Amelia, & Elyani, 2021); (Juandi & Tamur, 2021)). As to the adaptability, PBL shows can be used across different educational levels (Zakaria, Maat, & Khalid, 2019) and subjects ( (Aidoo, Boateng, Kissi, & Ofori, 2016); (Rosyidin, Nurrudin, & Dewanti, 2022); (Malmia, et al., 2019)), suggesting its versatility in diverse learning environments. When implemented effectively, problem-based learning can have a significant impact on Indonesian EFL learners, propelling their speaking and writing abilities to new heights, especially amidst diverse and difficult learning conditions (Wijaya, 2022).

However, the application of PBL encounters some challenges and considerations. (Alfares, 2021) highlights challenges in implementing PBL effectively, emphasizing the need for careful planning and appropriate technology integration. Meanwhile, (Amini, Setiawan, Fitria, & Ningsih, 2019) found PBL less effective than another model, suggesting context and specific design matter for successful implementation. Moreover, (Yew & Goh, 2016) raise the question of which specific PBL components contribute most to its effectiveness, calling for further research.

## RESEARCH METHOD

The researcher used quantitative method through survey to collect data to see the students perception on PBL impact on learning. Survey research quantifies trends, attitudes, and opinions

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within a population by examining a representative sample (Creswell & Creswell, 2018). A questionnaire, the core of a survey, consists of a series of questions or statements designed to collect information from participants and is the primary method for gathering quantitative data (Taherdoost, 2022).

Therefore, data were collected by means of a questionnaire containing 11 items which were Likert-like items based on a scale from "strongly disagree" to "strongly agree". A Likert-type scale itself utilizes a series of statements expressing beliefs, preferences, judgments, or opinions to define, describe, and measure a specific idea (Warmbrod, 2014).

***Population and sample***

The population constitutes the entire group of subjects relevant to the research study (Shukla, 2020). Accordingly, the population of this study are the ninth grade students of MTs Islamiyah Kubangkaress, Cinangka, Serang, Banten academic year 2024/2025. There were 35 students in one class.

Meanwhile, the sample of this research was taken using simple random sampling technique from the population. The sample was 22 students of class 9. Simple random sampling is a common sampling method in survey and quantitative research methodologies (Rahi, 2017).

The researcher chose this school as the subject of research because this school has implemented problem-based learning as a method in teaching English.

***Research Procedure***

In conducting the research, the following steps were taken:

1. Defining research questions.
2. Determining target population and sampling.
3. Designing questionnaire: clear, concise statements divided into two variables, namely PBL experience (X) and academic achievement (Y).
4. Collecting data by distributing the questionnaire using online platform through Google Form which consisted of eleven statements that students need to rate using a Likert scale of 1 (strongly disagree) to 5 (strongly agree) to answer the research questions as shown below.

**Table 2.** Likert-scale items in questionnaire

Please rate your agreement with the following statements using a scale of 1 (strongly disagree) to 5 (strongly agree).

| NO | ASPECT | QUESTIONS | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|---|
| 1 | PBL Experience | I actively participated in discussions and group activities during PBL sessions. | | | | | |
| 2 | | PBL activities helped me understand the course material better than traditional lectures. | | | | | |
| 3 | | The problems presented in PBL activities were relevant and engaging. | | | | | |
| 4 | | I felt well-supported by my peers and instructors during PBL activities. | | | | | |
| 5 | | PBL activities helped me develop critical thinking skills. | | | | | |
| 6 | | PBL activities helped me improve my problem-solving skills. | | | | | |
| 7 | | PBL activities encouraged me to take ownership of my learning. | | | | | |
| 8 | Academic Achievement | I believe my understanding of the subject matter has improved since participating in PBL. | | | | | |
| 9 | | I feel more confident in applying my knowledge to solve problems in the subject area. | | | | | |
| 10 | | I found myself more engaged and motivated to learn the subject matter during PBL activities. | | | | | |
| 11 | | I believe my grades in the subject have improved since participating in PBL. | | | | | |

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5. Data tabulation: data gained was tabulated and each statement was coded based on the variable to which it belongs as presented in the following table.

**Table 2.** Data tabulation from questionnaire

| No. (Participant) | PBL Experience (X) | | | | | | | TOTAL X | Academic Achievement (Y) | | | | TOTAL Y |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | X1 | X2 | X3 | X4 | X5 | X6 | X7 | | Y1 | Y2 | Y3 | Y4 | |
| 1 | 3 | 4 | 5 | 3 | 4 | 3 | 4 | 26 | 5 | 5 | 4 | 5 | 19 |
| 2 | 3 | 4 | 4 | 4 | 4 | 4 | 5 | 28 | 5 | 4 | 4 | 4 | 17 |
| 3 | 4 | 4 | 4 | 5 | 4 | 5 | 5 | 31 | 4 | 4 | 4 | 4 | 16 |
| 4 | 3 | 5 | 3 | 3 | 3 | 4 | 5 | 26 | 4 | 4 | 3 | 5 | 16 |
| 5 | 3 | 3 | 4 | 4 | 3 | 4 | 4 | 25 | 4 | 4 | 4 | 4 | 16 |
| 6 | 3 | 4 | 3 | 3 | 4 | 4 | 4 | 25 | 3 | 3 | 3 | 4 | 13 |
| 7 | 3 | 4 | 4 | 4 | 3 | 3 | 4 | 25 | 5 | 5 | 4 | 5 | 19 |
| 8 | 4 | 3 | 5 | 3 | 3 | 3 | 4 | 25 | 4 | 5 | 4 | 4 | 17 |
| 9 | 4 | 3 | 4 | 5 | 5 | 4 | 5 | 30 | 4 | 3 | 5 | 5 | 17 |
| 10 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 27 | 4 | 5 | 4 | 4 | 17 |
| 11 | 5 | 5 | 1 | 1 | 5 | 5 | 5 | 27 | 5 | 5 | 1 | 5 | 16 |
| 12 | 3 | 2 | 3 | 3 | 4 | 3 | 3 | 21 | 4 | 3 | 2 | 5 | 14 |
| 13 | 2 | 3 | 1 | 2 | 4 | 1 | 3 | 16 | 3 | 2 | 3 | 2 | 10 |
| 14 | 4 | 3 | 3 | 4 | 3 | 4 | 3 | 24 | 5 | 4 | 5 | 3 | 17 |
| 15 | 3 | 4 | 4 | 4 | 3 | 3 | 4 | 25 | 3 | 4 | 3 | 3 | 13 |
| 16 | 3 | 4 | 5 | 4 | 3 | 4 | 5 | 28 | 4 | 4 | 5 | 5 | 18 |
| 17 | 3 | 3 | 4 | 4 | 3 | 4 | 3 | 24 | 4 | 3 | 3 | 4 | 14 |
| 18 | 3 | 4 | 4 | 5 | 4 | 5 | 5 | 30 | 4 | 5 | 5 | 5 | 19 |
| 19 | 4 | 3 | 5 | 4 | 3 | 5 | 4 | 28 | 5 | 5 | 5 | 4 | 19 |
| 20 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 35 | 5 | 5 | 5 | 5 | 20 |
| 21 | 3 | 4 | 3 | 4 | 5 | 4 | 3 | 26 | 5 | 5 | 4 | 5 | 19 |
| 22 | 3 | 4 | 3 | 4 | 4 | 5 | 5 | 28 | 5 | 5 | 3 | 4 | 17 |

6. Data analysis: descriptive & inferential statistics using SPSS.
7. Report findings: clear, concise report with results & conclusions.

## FINDINGS AND DISCUSSION

### *Students' Perception on The Influence of PBL on The Development of Critical Thinking, Problem-solving Skills, and Engagement*

To answer the first research question (variable X), a frequency analysis was conducted on the Likert scale data using SPSS. This analysis provides insights into the distribution of responses across the five-point Likert scale, from strongly disagree (1) to strongly agree (5), for each item in the questionnaire.

**Descriptive Statistics**

| | N | Minimum | Maximum | Mean | Std. Deviation |
|---|---|---|---|---|---|
| X1 | 22 | 2 | 5 | 3.36 | .727 |
| X2 | 22 | 2 | 5 | 3.73 | .767 |
| X3 | 22 | 1 | 5 | 3.68 | 1.129 |
| X4 | 22 | 1 | 5 | 3.73 | .985 |
| X5 | 22 | 3 | 5 | 3.77 | .752 |
| X6 | 22 | 1 | 5 | 3.91 | .971 |
| X7 | 22 | 3 | 5 | 4.18 | .795 |
| Valid N (listwise) | 22 | | | | |

**Table 3.** Descriptive statistics of responses on variable X

The following section presents the frequency distribution of responses for each item on the Likert scale. The analysis provides a clear picture of the respondents' level of agreement or disagreement with each statement.

**X1**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Disagree | 1 | 4.5 | 4.5 | 4.5 |
| | Neutral | 14 | 63.6 | 63.6 | 68.2 |
| | Agree | 5 | 22.7 | 22.7 | 90.9 |
| | Strongly agree | 2 | 9.1 | 9.1 | 100.0 |
| | Total | 22 | 100.0 | 100.0 | |

**Table 4.** Frequency distribution of responses for item X1

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For item X1 (I actively participated in discussions and group activities during PBL sessions), the table shows that the majority of respondents, 63.6%, remained neutral about the statement, indicating a lack of strong opinions or preference. A notable proportion of respondents, 22.7%, agreed with the statement, while 9.1% strongly agreed. Only one individual, representing 4.5%, disagreed with the statement. This suggests that while there is some level of agreement, a significant portion of the group may be undecided or indifferent.

**X2**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Disagree | 1 | 4.5 | 4.5 | 4.5 |
| | Neutral | 7 | 31.8 | 31.8 | 36.4 |
| | Agree | 11 | 50.0 | 50.0 | 86.4 |
| | Strongly agree | 3 | 13.6 | 13.6 | 100.0 |
| | Total | 22 | 100.0 | 100.0 | |

**Table 5.** Frequency distribution of responses for item X2

In contrast, item X2 (PBL activities helped me understand the course material better than traditional lectures) demonstrates a more affirmative trend. Half of the respondents, 50%, agreed with the statement, and 13.6% strongly agreed, showing a clear inclination toward agreement. Meanwhile, 31.8% of participants remained neutral, and 4.5% disagreed. The data for X2 reveals a stronger consensus compared to X1, with a higher proportion of participants expressing positive agreement.

**X3**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Strongly disagree | 2 | 9.1 | 9.1 | 9.1 |
| | Neutral | 6 | 27.3 | 27.3 | 36.4 |
| | Agree | 9 | 40.9 | 40.9 | 77.3 |
| | Strongly agree | 5 | 22.7 | 22.7 | 100.0 |
| | Total | 22 | 100.0 | 100.0 | |

**Table 6.** Frequency distribution of responses for item X3

Table 6 presents the frequency distribution of responses for item X3 (the problems presented in PBL activities were relevant and engaging). The results show a relatively balanced distribution of responses across the five-point Likert scale. A significant proportion of respondents disagreed with the statement, with 27.3% of respondents selecting "Neutral" and 9.1% selecting "Strongly disagree." This suggests that a considerable portion of the sample either did not agree or strongly disagreed with the statement presented in item X3. However, a combined 63.6% of respondents expressed either "Agree" (40.9%) or "Strongly agree" (22.7%) with the statement, indicating a degree of positive sentiment towards the item.

**X4**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Strongly disagree | 1 | 4.5 | 4.5 | 4.5 |
| | Disagree | 1 | 4.5 | 4.5 | 9.1 |
| | Neutral | 5 | 22.7 | 22.7 | 31.8 |
| | Agree | 11 | 50.0 | 50.0 | 81.8 |
| | Strongly agree | 4 | 18.2 | 18.2 | 100.0 |
| | Total | 22 | 100.0 | 100.0 | |

**Table 7.** Frequency distribution of responses for item X4

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Table 7 presents the frequency distribution of responses for item X4 (I felt well-supported by my peers and instructors during PBL activities). The results show that a majority of respondents (50.0%) agreed with the statement, indicating a positive sentiment towards the item. Furthermore, 18.2% of respondents strongly agreed with the statement, further supporting the positive view towards the item. Conversely, only a small proportion of respondents disagreed with the statement, with 4.5% selecting "Disagree" and 4.5% selecting "Strongly disagree." This suggests that a majority of the sample either agreed or strongly agreed with the statement presented in item X4. Additionally, 22.7% of respondents were neutral towards the statement, indicating that they neither agreed nor disagreed with it.

**X5**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Neutral | 9 | 40.9 | 40.9 | 40.9 |
| | Agree | 9 | 40.9 | 40.9 | 81.8 |
| | Strongly agree | 4 | 18.2 | 18.2 | 100.0 |
| | Total | 22 | 100.0 | 100.0 | |

**Table 8.** Frequency distribution of responses for item X5

Table 8 presents the frequency distribution of responses for item X5 (PBL activities helped me develop critical thinking skills). The results show a relatively balanced distribution of responses across the agree and neutral categories. A notable proportion of respondents (40.9%) were neutral towards the statement, indicating that they neither agreed nor disagreed with it. Furthermore, 40.9% of respondents agreed with the statement, suggesting a degree of positive sentiment towards the item. However, only 18.2% of respondents strongly agreed with the statement, indicating a relatively low level of strong agreement.

**X6**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Strongly disagree | 1 | 4.5 | 4.5 | 4.5 |
| | Neutral | 5 | 22.7 | 22.7 | 27.3 |
| | Agree | 10 | 45.5 | 45.5 | 72.7 |
| | Strongly agree | 6 | 27.3 | 27.3 | 100.0 |
| | Total | 22 | 100.0 | 100.0 | |

**Table 9.** Frequency distribution of responses for item X6

Table 9 presents the frequency distribution of responses for item X6 (PBL activities helped me improve my problem-solving skills). The results show a positive leaning distribution of responses across the five-point Likert scale. A majority of respondents (45.5%) agreed with the statement, indicating a positive sentiment towards the item. Furthermore, 27.3% of respondents strongly agreed with the statement, further supporting the positive view towards the item. Conversely, only a small proportion of respondents disagreed with the statement, with 4.5% selecting "Strongly disagree" and 22.7% selecting "Neutral." This suggests that a majority of the sample either agreed or strongly agreed with the statement presented in item X6.

**X7**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Neutral | 5 | 22.7 | 22.7 | 22.7 |
| | Agree | 8 | 36.4 | 36.4 | 59.1 |
| | Strongly agree | 9 | 40.9 | 40.9 | 100.0 |
| | Total | 22 | 100.0 | 100.0 | |

**Table 10.** Frequency distribution of responses for item X7

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The table presents the frequency distribution of responses for item X7 (PBL activities encouraged me to take ownership of my learning). The results show a positive leaning distribution of responses across the five-point Likert scale. A majority of respondents (40.9%) strongly agreed with the statement, indicating a positive sentiment towards the item. Furthermore, 36.4% of respondents agreed with the statement, further supporting the positive view towards the item. Conversely, only 22.7% of respondents were neutral towards the statement. This suggests that a majority of the sample either agreed or strongly agreed with the statement presented in item X7.

Overall, the findings suggest a generally positive perception of PBL among the respondents. While some items showed mixed responses or a degree of neutrality, a majority of respondents expressed positive views on PBL's effectiveness in enhancing understanding, improving problem-solving skills, and encouraging active learning. The findings suggest that PBL is perceived favorably by the respondents, with support for its role in developing critical thinking and fostering a positive learning experience.

***Students' Perception on The Impact of PBL on Self-confidence in Understanding and Applying Subject Matter***

To answer the second research question (variable Y), another frequency analysis was applied on the Likert scale data using SPSS. The results are presented in the following tables.

**Descriptive Statistics**

| | N | Minimum | Maximum | Mean | Std. Deviation |
|---|---|---|---|---|---|
| Y1 | 22 | 3 | 5 | 4.27 | .703 |
| Y2 | 22 | 2 | 5 | 4.18 | .907 |
| Y3 | 22 | 1 | 5 | 3.77 | 1.066 |
| Y4 | 22 | 2 | 5 | 4.27 | .827 |
| Valid N (listwise) | 22 | | | | |

**Table 11.** Descriptive statistics of responses on variable Y

Meanwhile, the frequency distribution of responses for each item is presented below.

**Y1**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Neutral | 3 | 13.6 | 13.6 | 13.6 |
| | Agree | 10 | 45.5 | 45.5 | 59.1 |
| | Strongly agree | 9 | 40.9 | 40.9 | 100.0 |
| | Total | 22 | 100.0 | 100.0 | |

**Table 12.** Frequency distribution of responses for item Y1

The table presents the distribution of responses for variable Y1 (my understanding of the subject matter has improved since participating in PBL). Out of 22 valid responses, 13.6% of respondents chose "Neutral," representing 3 individuals. The majority of participants, 45.5% (10 individuals), selected "Agree," while 40.9% (9 individuals) indicated "Strongly Agree." This indicates a positive tendency toward agreement regarding the statement or question associated with Y1.

**Y2**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Disagree | 1 | 4.5 | 4.5 | 4.5 |
| | Neutral | 4 | 18.2 | 18.2 | 22.7 |
| | Agree | 7 | 31.8 | 31.8 | 54.5 |
| | Strongly agree | 10 | 45.5 | 45.5 | 100.0 |
| | Total | 22 | 100.0 | 100.0 | |

**Table 13.** Frequency distribution of responses for item Y2

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The table shows the response distribution for variable Y2 (I was more confident in applying my knowledge to solve problems in the subject area) among 22 participants. A small proportion, 4.5% (1 individual), disagreed, while 18.2% (4 individuals) remained neutral. The majority leaned toward agreement, with 31.8% (7 individuals) agreeing and 45.5% (10 individuals) strongly agreeing. This reflects a predominantly positive sentiment toward the statement, with minimal neutral or dissenting responses.

**Y3**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Strongly disagree | 1 | 4.5 | 4.5 | 4.5 |
| | Disagree | 1 | 4.5 | 4.5 | 9.1 |
| | Neutral | 6 | 27.3 | 27.3 | 36.4 |
| | Agree | 8 | 36.4 | 36.4 | 72.7 |
| | Strongly agree | 6 | 27.3 | 27.3 | 100.0 |
| | Total | 22 | 100.0 | 100.0 | |

**Table 14.** Frequency distribution of responses for item Y3

The table displays the distribution of responses for variable Y3 (I was more engaged and motivated to learn the subject matter during PBL activities) among 22 participants. A small portion of respondents, 4.5% (1 individual each), strongly disagreed or disagreed with the statement. 27.3% (6 individuals) remained neutral, while 36.4% (8 individuals) agreed, making it the most frequent response. Similarly, 27.3% (6 individuals) strongly agreed. This demonstrates a generally positive sentiment, with a notable portion expressing neutrality and minimal disagreement.

**Y4**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Disagree | 1 | 4.5 | 4.5 | 4.5 |
| | Neutral | 2 | 9.1 | 9.1 | 13.6 |
| | Agree | 9 | 40.9 | 40.9 | 54.5 |
| | Strongly agree | 10 | 45.5 | 45.5 | 100.0 |
| | Total | 22 | 100.0 | 100.0 | |

**Table 15.** Frequency distribution of responses for item Y4

The table presents the frequency distribution for variable Y4 (my grades in the subject have improved since participating in PBL), highlighting respondents' levels of agreement. Out of 22 total respondents, the majority expressed positive agreement, with 40.9% (9 respondents) agreeing and 45.5% (10 respondents) strongly agreeing. A smaller portion of respondents showed neutrality, with 9.1% (2 respondents) selecting the neutral option, while only 4.5% (1 respondent) disagreed. Since all responses are valid, there are no missing data, and the valid percent matches the regular percent. This distribution suggests that the statement or question associated with Y4 resonates positively with most respondents.

It can be seen from the findings above that PBL has positive impact on student outcomes because it helps them understand the materials better and as a result, improve their scores. PBL also develops their critical thinking skills as well as problem-solving skills, takes ownership of their learning, and build confidence in applying their knowledge.

Overall, the findings suggest a generally positive perception of PBL among the respondents. While some items showed mixed responses or a degree of neutrality, a majority of respondents expressed positive views on PBL's effectiveness in enhancing understanding, improving problem-solving skills, and encouraging active learning. The findings suggest that PBL is perceived favorably by the respondents, with support for its role in developing critical thinking and fostering a positive learning experience. These results affirm the value of PBL as an effective

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learning approach, while highlighting areas for potential enhancement, particularly in fostering greater engagement.

The result of the study by (Aliyu, Fung, Rashid, & Nimehchisalem, 2020) showed that PBL improved the students' writing in all components. In addition, (Qomariyah & Utama, 2021) in their investigation on PBL found that students in the PBL group scored significantly higher than the control group. This suggests that PBL effectively increases learning interest. Similarly, a study by (Rahman, Zamili, & Munawwaroh, 2021) indicated that applying problem-based learning in instruction positively affects learning outcomes, especially problem solving and critical thinking ability.

Therefore, this present study has similarities to the previous studies in that PBL has positive impact on students outcomes. In addition to improving students scores and understanding about the subject matter, PBL was proven to enhance students engagement and motivation in learning.

## CONCLUSION

This study aims to explore the impact of Problem-Based Learning (PBL) on the academic achievement of 9th-grade students in an English language learning context. The findings of this study demonstrate that problem-based learning (PBL) has a positive impact on student outcomes by enhancing their understanding of subject matter, which subsequently leads to improved academic performance. Additionally, PBL fosters critical thinking and problem-solving skills, encourages students to take ownership of their learning process, and builds confidence in applying their knowledge. The respondents generally expressed favorable perceptions of PBL, highlighting its effectiveness in promoting active learning, engagement, and motivation. Although some responses indicated neutrality, the majority affirmed the benefits of PBL in supporting academic and personal development.

These findings align with previous research. For instance, studies by Aliyu, Fung, Rashid, and Nimehchisalem (2020) revealed that PBL improved students' writing across all components, while Qomariyah and Utama (2021) found that students in PBL groups scored significantly higher than those in control groups, indicating increased learning interest. Similarly, Rahman, Zamili, and Munawwaroh (2021) reported that PBL positively influenced learning outcomes, particularly in problem-solving and critical thinking skills.

In line with these previous studies, the present research confirms that PBL not only enhances students' academic achievement and understanding but also promotes engagement and motivation in learning English as a Foreign Language (EFL). Consequently, the research objective to analyze the impact of PBL on students' academic achievement and PBL experience has been successfully achieved. These findings underscore the value of PBL as an effective pedagogical approach for improving both cognitive and affective learning outcomes.

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