

Exploration of Students' Experiences in English Language Learning through Problem-Based Learning—An Action Research

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Abstract: This study explored high school students' English language learning through Problem-based learning (PBL). Students' collaboration in PBL, their perspectives on the PBL process, the teacher's challenges encountered during PBL implementation, and the relevant adjustments and improvements made were studied through qualitative methods using an observation guide and semi-structured interviews. This study aims to investigate the effectiveness of PBL in the English language learning of high school students. Lesson plans were designed to conduct two PBL cycles, comprising seven stages of the PBL process. Each PBL cycle was performed using the lesson plan designed by the researcher. 30 participants learned through PBL, were observed through the observation guide, and were interviewed via semi-structured interviews. The qualitative research results indicated that students developed abilities like acquiring knowledge and learning skills, solving real-life problems, critical thinking, and collaborating in group work. On the other hand, PBL is different from the traditional learning methods, thus, both students and teachers need to adjust to the roles. The teacher, as a facilitator in PBL, should be trained through professional development to improve classroom practices, fostering better learning environments and high performance.

Keywords: English Language Learning, High School, PBL, Action Research.

1. Introduction

The demands of learners in the twenty-first century cannot be met by the traditional teaching methodology, which expects students to memorize and retain information without testing their understanding of its relevance and application in everyday life (Munawaroh et al., 2022; Suwastini et al., 2021). Students should learn and perform in a positive, cooperative, and active manner. Due to the widespread use of the language and the expansion of information, there is a great need for updating English language instruction and learning as students aim to enhance their critical thinking skills, English correctness, and proficiency (Azman & Shin, 2012).

PBL is an instructional strategy that gives students opportunities to tackle real-

world and meaningful problems. PBL allows students to embrace complexity, find delight and significance, and hone their problem-solving skills in the real world (Aryanti & Artini, 2017; Khotimah, 2014; Suwastini et al., 2021). PBL encourages the development of independent learning, great problem-solving skills, and efficient communication and teamwork abilities. In conclusion, PBL is an effective method or stand-in technique used in English language classes to enhance teaching and learning of the language, emphasizing learning new information and applying it to real-world issues (Legg & Hutter, 2007).

This study is dedicated to exploring the implementation of PBL during English language learning in high school to probe into students' experiences of learning through PBL and the teacher's perspectives on the implementation of PBL in teaching.

Students are centered on PBL; therefore, students' views and performance need to be studied sufficiently to implement PBL into effect. The following research questions will be addressed to study the implementation of PBL during English language learning. RQ 1: What issues are there for students' collaboration during group work in the PBL learning process?

RQ 2: What are the students' perspectives on the strengths and weaknesses during the seven stages of the PBL process?

RQ 3: What are the challenges encountered, and improvements made by the teacher in implementing PBL?

2. Literature review

2.1 English Language Learning in High School

Researchers explore diverse challenges of English language learning, factors, and methods to prompt high school students' English language learning. Wilang (2021) studied and collected data from 467 students enrolled in normal programs in Bangkok public schools, which were quantitatively examined using a modified mentality survey. The results showed that students had a growth mentality toward their potential, others' achievements, critiques, roadblocks, and difficulties. Cognitive difficulties include a lack of vocabulary and basic English knowledge, difficulty understanding some words and accented speech, difficulty translating from Language 2 to Language 1, difficulty choosing words to use in a particular context, difficulties with listening, reading, and writing, and slow cognitive processing (Wilang, 2021).

Motivation for learning is essential in language learning. Jiao and Liang (2022) investigated the motivational impact on English learning achievement and the structure of high school students' desire to learn English. The findings present that research on the motivation of second language learners is essential to high-quality instruction in the pursuit of sustainable development, which can foster the development of creative skills and ensure the long-term viability of high-quality education.

Except for motivation, some students have beliefs on English language learning, which can affect their learning. Abdollahzadeh and Rajaeenia (2024) studied the English language beliefs of Iranian high school students, as language learning beliefs are an important factor influencing student learning outcomes. The findings demonstrate that high school students in Iran look up to their language teachers as experts and role models. Students' personal beliefs will be greatly influenced

by their opinions and beliefs regarding language acquisition, which are conveyed through their instructional methods.

In addition, English language learning demotivating factors were also investigated, like Alyousif and Alsuhaibani (2021) investigated language learning demotivating factors among high school EFL students. The findings demonstrated that the most demotivating elements for EFL students to learn English were a lack of engaging themes, a dearth of English practice opportunities, an excessive focus on grammar, and incompetent teachers. On the other hand, Saudi EFL students lose motivation due to the challenges of learning English words and phrases by heart and the uncertainty around how to study on their own for English classes.

Researchers are dedicated to exploring English language teaching and learning methods to facilitate high school students' English learning and improvement. Students' motivation and practical skills, such as collaborating and applying English in real life, need to be developed further, and effective methods should be implemented.

2.2. PBL Implementation in English Language Learning

There are now many different student-centered, active learning-based methods, models, and methodologies used in the teaching-learning process. The PBL method is among these instructional techniques (Koşer, 2022). PBL is a good alternative to cultivating 21st-century skills. Furthermore, teachers' and students' roles in PBL should be clearly defined to ensure that PBL is implemented effectively. However, since students are the center of learning and constantly required to figure out the answer independently, it may occasionally take longer to do so throughout a PBL procedure (Koşer, 2022).

PBL is effective in developing students' practical skills during learning. Kök and Duman (2023) conducted research lasting 10 weeks through sequential explanatory mixed methods to measure the impact of PBL on problem-solving abilities and to understand what students think about PBL. The qualitative results showed that PBL's capacity for problem-solving had improved. The students said that their problem-solving skills had improved because of PBL-related tasks such as problem-solving, solution-making, analysis, and research; nevertheless, their experiences learning the English language through PBL were not fully described. In addition, Alghamdy (2023) investigated how PBL was applied in a high school to assist ninth-grade students with their writing and grammar skills, as well as how PBL strategies impact the capacity of students learning English as a foreign language to compose cohesive paragraphs. Students performed better on the post-test of grammatical competency and paragraph composition than on the pre-test after PBL was implemented in the classroom. To determine the effects of PBL, its application in English language instruction should be investigated further.

Since PBL is still a relatively new concept in China, there is a dearth of pertinent and thorough studies on the subject. Wei and Wei (2023) investigated the use of PBL in high school English reading and examined the need for reforming both the methods and the content of instruction. PBL can be implemented, and several recommendations have been made. First, it is important to employ PBL implementation with respect for the actual situation, such as combining the PBL method with the traditional one to provide students with room to adapt. To make learning relevant to everyday life, the teaching materials should be chosen carefully.

Also, when implementing PBL, the teacher must change their position to that of a facilitator and collaborator, in addition to the students changing their learning models to become the focal point of learning.

Although PBL is seen as a realistic strategy, both teachers and students need to adapt to it. If they understand PBL, teachers and students will know how to use it for learning and teaching. Students should be given more opportunities to learn through PBL, even though both teachers and students frequently encounter various obstacles and difficulties during the process. Additionally, the real opinions of students must be investigated to encourage their motivation and impact on education.

The importance of collaboration has been highlighted in numerous studies, nevertheless, facilitators' observation guides have rarely been carried out in detail. During the PBL implementation process, students' experiences with English language learning should be thoroughly examined, thus, the teacher can monitor the students' collective progress. However, the use of PBL in high school English language instruction has been rarely used, according to earlier research; as a result, the findings are limited. This study will close a knowledge gap in PBL for teaching English in high school.

3. Method

3.1. Research Design

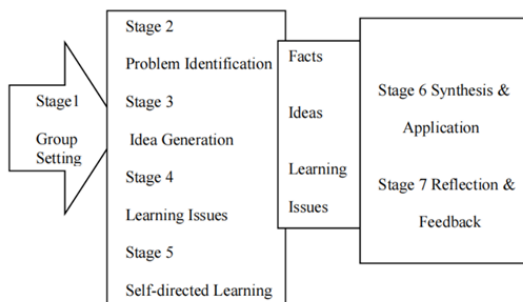
The methodological design of this study involved an action research study. Action research (AR) inquiry entails gathering information about the practice from people who engage in it, organizing modifications to the practice, carrying them out, and assessing their effectiveness. AR is a qualitative method that emphasizes solving the issues by generating knowledge and acting within the social structure to which the problem is linked. The following section addresses the seven stages of the PBL process model because PBL was used as a learning method in this study, and the research design of AR was taken to explore the implementation of PBL during English language learning.

3.2. The 7-Stage PBL Process Model

As illustrated in Figure 1, the seven-stage PBL paradigm created and imagined by Temasek Polytechnic of Singapore exhibits a methodical thought methodology. Stage 1 is a group setting, and in this stage, students need to establish their groups and create group rules by themselves. In Stage 2, students are given a problem scenario, which is ambiguous and related to real-life situations. The following stages include idea generation and learning issues. In the third stage, students come up with concepts to comprehend and define the nature of the issues. The issues and learning challenges need to be identified by students in the fourth stage, and these issues are summarized in the aspects of facts, ideas, learning issues, and action plan in the form of a FILA chart. Next, the essential stage of PBL is Stage 5 self-directed learning, in which students need to fulfil their roles and tasks and collaborate in groups to search for learning materials, discuss, and find out solutions to problems. After students generate solutions, they need to gather to

synthesize their results in Stage 6 of synthesis and application. Moreover, students should present their results through deliverables. Finally, in Stage 7 of reflection and feedback, students need to discuss and reflect on issues, challenges, and improvements in this crucial step.

Figure 1: The 7 Stages of the PBL Process.



(Source: Temasek Centre for Problem-based Learning, p. 11)

The seven-stage PBL model is a methodical and steady procedure that helps students improve their learning capacities and skills. Students ought to be the focal point and key players in PBL learning.

3.3. Participants

The study focuses on how PBL is used in a high school in Dalian City when students are studying English. Student participants in this study were those enrolled in English language courses as required. The study, therefore, covered all 30 students in a single Grade Two class. The participants are 16 to 17-year-old students enrolled in the 2024–2025 school year. To organize, carry out, and assess the learning experiences of students, the teacher, who doubles as both a researcher and a practitioner, is an essential participant in the study.

3.4. Lesson Plan

Instead of listening to the teacher's lecture, PBL provided a fresh viewpoint on the current teaching methodology, one in which students worked with real-world, practical scenarios to obtain their own experiences. According to Barrett and Moore, one of the main features of PBL is that students are given problems at the beginning of the learning process instead of after various curriculum inputs. The PBL problem may be a case, scenario, challenge, visual prompt, conundrum, design brief, perplexing phenomenon, or other motivating factors (Barrett & Moore, 2011, as cited by Andreasen & Nielsen, 2013). In this study, lesson plans were created to pinpoint the facilitator's role, the student's activities, and the components of cultural awareness (CA) elements through the seven-stage PBL process listed in Table 1.

The lesson plan was conducted based on the stages of the PBL process, and in PBL, the teacher acted as a facilitator to assist and provide guidelines to students when it was necessary, meanwhile, students worked independently and

collaborated following various work in different stages. Moreover, the development of CA was involved in English language learning, thus, CA elements were presented in the lesson plan.

Table 1: Lesson Plan throughout the Stages of PBL.

PBL Stage	Role of Facilitator		Activities of Students	CA Elements
1	Only interferes if the conflict is furious		Expressing and intercommunicating their ideas freely	
2	Provide some guidelines for the students		Practice listing key points and taking remarkable notes	Acquire knowledge of the culture relating to food and Chinese cuisine
3	Facilitate helping students comprehend and define the nature of issues		Express the challenges actively and conduct critical thinking.	Comprehending cultural connotations, assessing similarities and contrasts across cultures
4	Help formulate	Students learning	Express the learning challenges actively and conduct critical thinking	Acquiring knowledge of culture, comprehending cultural connotations, assessing similarities and contrasts across cultures, absorbing cultural essence
	Challenges			
5	Observe students' collaboration in group work		Collaborate to seek out knowledge as they go into self-directed learning	Acquiring knowledge of culture, comprehending cultural connotations, assessing similarities and contrasts across cultures, absorbing cultural essence
6	Assess students' outcomes		Solving the issues	Establishing correct values and fostering cultural self-assurance
7	Assess students' capability of reflection		Reflect on the issues, the problem-solving approaches they choose, the learning objectives, the talents they gained, and the learning process	

3.3. Instruments

3.3.1. Observation Guide

As a participant and observer in this study, the researcher used observational methods to gather information and see how the students worked together in the learning process. 30 participants were divided into five groups, and each group contained six members named No.1,2,3,4,5, and 6. Research question 1 aimed to observe how students collaborated in group work in the PBL process to explore what issues there are for students' collaboration during group work in the PBL learning process.

The researcher assigned a schedule for each group's self-directed learning session, which was captured on video. The focus of the observation was on how the participants in the groups resolved disagreements and what their roles were. During the fifth stage of self-directed learning in the seven stages of the PBL process model, the observation guide was used to document the participants' level of collaboration in group work.

3.3.2. Semi-structured Interviews

18 student participants were chosen for semi-structured interviews on their opinions of the PBL learning process. Research question 2 was targeted to explore students' perspectives of PBL. RQ 2: What are the students' perspectives on the strengths and weaknesses during the seven stages of the PBL process?

The formative assessment scores represented the students' PBL learning results. Therefore, the 18 participants were grouped based on their assessment results. As a result, from the total scores of all the examinations, three groups of five students each were chosen based on great scores (75% and above), satisfactory scores (60-74%), and low scores (59% and below). The other three interviewees were volunteers to be interviewed.

3.3.3. Documents

AR was used in this study, and it is a useful and efficient tool for the teacher-researcher to experience the teaching methodology and identify issues with students' learning. The teacher's experience of implementing PBL was investigated to assist in analyzing students' learning through PBL.

A teacher's journal is a confidential record of previously experienced and felt situations and events. Reflection is the conscious process of examining the past, current decisions, and feelings; it involves considering the importance and consequences of concepts and deeds (Simmons et al., 2021). There are differences between journals and reflections, which lie in their functions. Journaling offers a space to produce ideas, establish objectives, and create workable plans, boosting personal development and success. Reflection enables researchers to learn valuable lessons from their experiences to improve their decision-making and avoid repeating their mistakes. Presentations, essays, worksheets, and individual and group deliverables that students finished were all used as records of their work during the data-gathering phase of the research process.

4. Results and Findings

4.1 Summary of Observation Results

The observation centered on the participants' group responsibilities and the resolutions to the problems. Furthermore, observations made during the study provided insight into how participants used the PBL process to collaborate on their learning.

Members actively engaged in group work as the PBL process proceeded, utilizing their skills to support one another in addressing challenging areas so that they could solve issues as a team. Most participants were glad to work together and converse with one another and discuss difficulties since everyone had unique viewpoints that allowed various approaches to be taken. Gradually, students collaborated actively in group work and tended to develop team awareness.

Students could collaborate and assist other members to solve issues related to learning and disagreements during learning as PBL proceeded deeper. Students' comprehension of each participant's involvement and contribution improved in the PBL process. The analysis emphasized how PBL helped students develop their all-

around skills. In this way, students progressively increased their team awareness through practice. Therefore, when students understood their responsibilities and obtained team awareness, they could solve the problems encountered.

Throughout the PBL process, students demonstrated varying degrees of proficiency in their problem-solving techniques. For instance, students faced numerous difficulties throughout group projects, and when members' viewpoints differed, there were heated arguments. However, students compiled everyone's ideas and came up with the best solution. This demonstrated their capacity for democratic debate and logical problem-solving.

It was presented that students developed a positive collaborative attitude, team awareness, and problem-solving skills through the observation conducted by the teacher. However, students' perspectives on the PBL process and improvements that they achieved need to be explored further.

4.2. Summary of Interview Results

Since PBL places the students at the center of learning, their opinions about it, including its advantages and disadvantages, are crucial for future research. This study focuses on exploring the students' perspectives on the strengths and weaknesses of the PBL process through semi-structured interviews. 18 interviewees were split into four groups according to their assessment findings during the PBL process. Four groups of interviewees (F1–F4) were formed: five high school sophomores who excelled at PBL learning were in the first group (F1); the second group (F2) contained five sophomores who performed mediocly in PBL learning; five sophomores who performed poorly in learning through PBL were included in the third group (F3); and three participants who willingly consented to be interviewed made up the fourth group (F4). Every participant was chosen to offer a range of viewpoints and experiences from various learning performance levels, and they were all from the same high school. PBL can be better understood by students when they see its benefits and drawbacks from their viewpoints. Through interviews, participants shared their thoughts on PBL's advantages, which included the following elements.

4.2.1. Knowledge and Learning Skill Acquisition

Regarding improving students' knowledge and learning skill acquisition, students demonstrated that they had discovered many things that they were previously unaware of in the past. Furthermore, students underlined the significance of knowledge integration, and a successful scenario necessitates the integration of multidisciplinary knowledge. This all-encompassing method of instruction expanded students' horizons and enabled them to address issues more comprehensively.

4.2.2. Enhancement of Thinking Ability

Thinking ability is essential to every stage of PBL. After learning through PBL, students found that when faced with complex problems, they broke them down into smaller ones and tackled them step by step. Students also stated that PBL enabled them to examine issues from various angles and deepen their understanding of knowledge, developing critical thinking by solving real-world problems through hands-on activities.

4.2.3. Improvement of Problem-Solving Ability

One of the aims of learning through PBL is to learn to solve problems in real life. During the PBL process, students' problem-solving skills were enhanced significantly. The students collaborated in groups and conducted extensive preliminary research, using questionnaires and interviews to understand people's perceptions and preferences regarding various cuisines. This methodical exercise taught students how to make ideas a reality, even though it was a complicated process that involved time management, venue setup, and group members' collaboration.

Despite the benefits of PBL, it was the students' first experience with PBL during their English language studies, they encountered pertinent obstacles and hurdles during the PBL process, which are shown from the students' perspective below.

4.2.4. Time Management

Researchers contend that PBL has positive effects in learning; meanwhile, advantages, challenges, and risks exist in the implementation of PBL. PBL demands time to study and appraise related material and sources, which can be tough for individuals with tight schedules, especially when students need to debate and present (Mei & Wang, 2023).

Throughout the PBL process, students who are the focal point of instruction must do better both within and outside the classroom. For example, one interviewee outlined some challenges: "There aren't many advantages. If I may say so, it's most likely that I occasionally get to hear alternative viewpoints. However, it's usually hectic, and occasionally we talk for hours without reaching a decision, which seems like a waste of time." On the other hand, students argued that PBL was motivating and interesting in some ways, but time management was challenging because each step could take longer than anticipated, and they hoped they could get answers from teachers as in traditional learning methods.

4.2.5. Heavy Workload

Students spent more time learning through PBL than traditional learning methods, which placed a heavier workload on students. Several interviewees shared similar perspectives that they didn't know where to start, as there was too much-scattered information. Students agreed that PBL could encourage their active learning, but the workload was too heavy, and the pressure increased as a result. Additionally, students realized that PBL has undoubtedly improved their capacity for independent learning, however, it resulted in the abandonment of fundamental information.

Features of PBL are reflected in students' opinions on its benefits and drawbacks, and teachers' opinions about the difficulties of researching PBL should also be highlighted to shed some insight into future research.

4.3. Challenges and Improvements in Implementing PBL

AR is a useful and efficient method for both the teacher acting as the researcher also to experience the teaching method and identify issues with students' learning, and this study uses it. Following the application of PBL through AR, this study focuses on the teacher-researcher's experiences in the classroom.

4.3.1. Challenges Encountered

4.3.1.1. High Workload

Since PBL implementation needed more complex preparation and took longer than traditional learning methods. Moreover, planning, creating, guiding, and conducting various assessments required a significant amount of the teacher's time and effort. Additional workload could cause stress and fatigue, which would reduce the effectiveness of PBL implementation (Schneider, 2023).

4.3.1.2. Time Constraints

When added to a researcher's already hectic schedule, research can be a strain. Consequently, the researcher's shortage of time was the main problem and obstacle in the execution of PBL and the conduct of AR.

4.3.1.3. A Lack of Support

PBL is an unusual method that would disrupt regular instruction, and the school administration office was hesitant to permit the participants to study from it in the classroom during regular business hours. Inadequate support can also lead to a lack of communication among educators, which can serve as motivation and help in resolving a variety of issues (Allotta, 2023, as cited by Suyuti, 2024).

4.3.1.4. Inadequate Knowledge

The researcher used PBL and AR for the first time, and no peers could offer the experience to draw from, therefore, other teachers and peers were unfamiliar with these approaches. Proficiency in PBL and AR was required, as well as the ability to create scenarios, effectively mentor students, and conduct a variety of evaluations.

4.3.1.5. Lack of Resources

Most students in China are generally unable to fully benefit from PBL because of the country's enormous population and unequal distribution of educational resources, as they lack the necessary technology and software, trained teachers, and the ability to learn on their own (Mei & Wang, 2023). For example, in the high school where this study was conducted, there was only one psychology classroom available during after-school hours, therefore, some students missed class because of scheduling conflicts.

4.3.1.6. Challenges Related to the PBL Process

In this study, the teacher-researcher focused on implementing PBL during English language learning. During the PBL process, the teacher faced difficulties brought on by the students.

PBL was intended to inspire students by granting them responsibility and ownership over their education, however, students demonstrated a lack of motivation to learn through PBL. On the other hand, PBL requires students to take charge of their learning, develop self-directed learning skills to investigate learning difficulties,

and work cooperatively to find solutions. However, the students were not accustomed to the change and could not perform their responsibilities well. Moreover, broad coverage of materials in the PBL process was challenging for both the facilitator and the students to obtain resources and data. Except for the difficulties in learning, time-consuming assessments in PBL differed from traditional summative assessments, which mostly focused on various formative assessments of students' various levels of learning through PBL. Despite the consumption of large amounts of time, it was impossible to demonstrate the benefits that PBL provided in a short time, and there was potential to have negative impacts on academic achievements.

Even though PBL implementation presented some difficulties, it provided a fantastic chance for the researcher to refine teaching and further investigate the implementation of PBL in English language learning.

4.3.2. Adjustments and Improvements Made

Although difficulties and challenges existed during the implementation of PBL in English language learning, the teacher could adjust to achieve improvements and reflect on students' learning and the teacher's teaching. In this study, the following adjustments were conducted.

The teacher conducted adequate communication with the students regarding their daily study schedule to plan on schedule and ensure that students could utilize the appliances effectively. Meanwhile, as little support was granted by the administration office and parents, the teacher invited a few parents and students to a colloquium to explain PBL and obtain support so that they could understand that PBL may eventually result in lifelong learning for students. There are far more advantages than disadvantages (Shah et al., 2024). Moreover, students were the center of PBL, which needed to be remembered in the implementation of PBL. Therefore, the teacher considered the opinions and remarks of the students and asked the students about their thoughts on the lesson, what they found challenging, what they wanted to learn more about, and what they didn't find interesting. In addition, if students made endeavors and efforts, they were encouraged and rewarded appropriately to make students retain their level of engagement and dedication. Finally, the teacher studied and developed a correct perspective on PBL learning and teaching and reinforced the study of PBL and pertinent ideas to help students learn through PBL correctly and successfully.

5. Discussion

PBL is becoming increasingly indispensable in learning in the 21st century to develop students' skills in solving real-life problems and collaborating with group members. Researchers have argued that EFL instruction is a top priority worldwide, yet educational approaches don't always adapt to students' changing demands. PBL is effective in helping students' study on their own and become more proficient in English learning (Guo et al., 2024). Teacher-driven teaching strategies that emphasize imparting predetermined grammar, reading, and writing material are frequently used in high schools in China. It is acknowledged that these typical English classrooms emphasize discipline and adherence to the teacher's preset learning objectives and outcomes, rely on rote memory and copying exercises, and offer few possibilities

for peer and teacher interaction (Yin, Yang & Li, 2020). Students in high schools are in a critical stage of learning the English language and need more opportunities to develop their various practical abilities and skills. In this study, two cycles of PBL were implemented to explore students' experiences of English language learning through PBL and to investigate the teacher's reflection via action research.

5.1. Students' Collaboration in the PBL Process

5.1.1 Improvement of Collaboration

When PBL was first adopted, the concept that it should be centered on group study included the claim that by encouraging collaborative teamwork, PBL helped students acquire the abilities needed for professional practice (Barrows & Tamblyn, 1980 as cited by Murray-Harvey, Pourshafie & Reyes, 2013). The results of this study indicated that students improved their collaboration skills during SDL group work in the PBL process.

Although students encountered some challenges that were observed and recorded by the teacher through journals, like there were still some members who tended to violate rules, other members in group work would remind and try to make every one of the groups follow the rules and make sure their learning proceeded smoothly. However, based on the observation records, students' participation and collaboration attitudes became positive, especially in the second PBL cycle, which was in line with the findings of Murray-Harvey et al. (2013) that students' performances regarding their group work experience revealed a collaborative mindset that was classified as "Learning about self," "Valuing others' perspectives," and "Interdependence." Gradually, students could keep positive collaborative norms and demonstrate a great sense of responsibility. As students became familiar with collaboration with others in their group work, they participated more actively in group work to assist each other and tackle problems together, which improved a lot compared to the initial stage. Therefore, through collaboration in PBL, students gradually acknowledged the values of participation and collaboration. Thus, PBL is effective in promoting positive participation and collaboration of emerging students, which is consistent with Havenga and Drevin (2020) contending that teamwork, communication, and coordination of cooperative activities involving meetings, crucial group discussions, and support can all help each other in PBL.

5.1.2. Creation of Team Awareness

The foundation of collaborative learning is the notion that learning in a group can only be considered successful when all members accomplish shared objectives. Consequently, team members must support, help, share, and encourage one another to learn to be collaborative. To accomplish the group's shared objectives, each member of the group has specific teaching and learning duties, and group members must teach and learn from one another (Johnson & Johnson, 1986 as cited by Chang, Yan & Lu, 2022). Through learning activities in group work during the PBL process, students demonstrated various levels of collaboration and developed team awareness to collaborate, take responsibility, share their outcomes, and support each other, which is in line with Lou, Abrami and d'Apollonia (2001) that since the problem-solving

process in a PBL classroom is done in teams, teachers must organize the students and offer direction as needed. To motivate pupils to meet learning objectives, teams or small groups are more effective than individual instruction.

In the second cycle of the PBL process, students developed a deeper understanding of each member's participation and contribution to group work, which enhanced the effectiveness of group work. Students gradually formed their team awareness through practice in the PBL process.

5.1.3. Enhancement of Problem-solving Ability

Based on the results recorded and analyzed, students demonstrated problem-solving abilities at different levels during the PBL process. In PBL, especially in SDL, students encountered many problems concerning learning through PBL and in group work.

PBL was implemented in English language learning for the first time, and students met with many problems related to learning through PBL, which was completely different from traditional conventions, and collaboration in group work to deal with learning issues together with others. However, through two cycles of PBL, students developed their problem-solving abilities through rational thinking and democratic discussions. Moreover, as students learned through and understood PBL better when they faced disagreements and conflicts, they displayed various conflict-resolution strategies. The development of problem-solving ability was in line with the results of Murray-Harvey et al. (2013) and Saputra et al. (2019), reflecting that those students believed that working through the challenges together improved their ability to solve problems. Others mentioned how they had enjoyed working together to solve challenges, pointing out that they had engaged in deep critical thought about learning and teaching to solve or help solve the PBL case.

Therefore, PBL effectively develops students' collaboration skills and improves their collaboration attitude. Moreover, through practice in PBL, students created their team awareness and enhanced their problem-solving abilities. PBL has proven efficacy in establishing foundations for students to enhance students' knowledge and cultivate autonomous and collaborative learning abilities. Students' interactions inside the groups create a collaborative learning environment (Hommes, 2014, as cited by Hidayati, Zubaidah & Amnah, 2023).

Collaboration entails establishing ground rules, ensuring that each team member plays their part, and identifying mutual advantages by recognizing each member's advantages and disadvantages. When students work together, they can solve problems together and accomplish shared objectives by creating, observing, and improving shared knowledge during exchanges (Lai, 2011, as cited by Hidayati et al., 2023). Student collaboration skills are essential for fostering social competencies like academic self-concept and dispute-resolution abilities (Ginsburg-Block, 2006, as cited by Hidayati et al., 2023).

5.2. Students' Perspectives on the Strengths and Weaknesses of the PBL Process

The advantages and disadvantages of PBL have been generated for many years by researchers after studying and applying PBL. On the other hand, PBL focuses on

students as the center of learning, thus, students' understanding and perspectives on the strengths and weaknesses should be explored more deeply. In this study, through two cycles of PBL, students learned and experienced the complete PBL process and created their understanding and perspectives on PBL. Students generated their views regarding the strengths and weaknesses of PBL.

5.2.1. Perception of Strengths of PBL

The results generated through semi-structured interviews show that PBL has a positive impact on students' knowledge and learning skill acquisition. In the process of PBL, students understood the importance of integrating knowledge, mastered a learning management approach, and learned how to adjust plans and respond to changes. For instance, Romantsova (2018) similarly summarized that to solve issues in problem-based learning, prior knowledge is necessary. Thus, basic knowledge is continuously updated and revised. This strengthens the student's fundamental understanding of the subject. In addition, because PBL involves life-based skills and activities, appropriately trained people can also acquire these skills. Consequently, these abilities can be useful in practical situations.

Students could consider problems from different perspectives and acknowledge the importance of innovative thinking in practice. PBL increases students' engagement with societal issues and facilitates decision-making, which is in line with Martins, Falbo Neto and Silva (2018) and Wendt Mischiatti et al. (2019). A similar result also comes from Bambang et al. (2023), that problem-based learning has an impact on critical thinking. Students who use the PBL paradigm to learn more actively in class have higher critical thinking abilities. When the students face the issues in their local surroundings in groups, they can find solutions.

Students presented significant improvements in problem-solving abilities during PBL. Students could be involved in venue setup, personnel coordination, and time management to turn ideas into reality to solve problems. Therefore, students learned to solve problems through creative thinking. It is in line with Amin et al. (2020) that the PBL paradigm teaches students how to address problems through group discussions. It is clear from the phases of the group's investigation and study. Students can practice and share ideas when they try to solve problems together.

In summary, PBL fostered critical and logical thinking, promoted discussions, promoted self-studies, and enhanced teamwork abilities. The analysis of actual cases and circumstances is one of the main benefits. The students were able to experience real-world scenarios, where they had to make decisions after weighing all the options in the scenario (Meiste, Lankauskiene & Arbidane, 2019). Additionally, the fact that they could approach the issue or circumstance from several angles and that it integrated other disciplines was crucial.

5.2.2. Perception of Weakness of PBL

Although there are many benefits of learning through PBL for students to develop their abilities, such as learning skill acquisition, critical thinking, and solving problems in real life, students encounter challenges and difficulties in the PBL process, which were generated from interviews.

Students needed to do more work in and out of class during the PBL as the center of learning. Thus, some students thought that it was a waste of time to learn in a group and discuss different ideas. Moreover, some students believed that PBL was interesting and motivating, but managing time was difficult as every step of PBL would take a long time to complete, which made students exhausted and disappointed sometimes. The result is in line with Meiste et al. (2019) contending that the time-consuming nature was PBL's greatest drawback. To get solutions to problems, students must put in a lot of effort to gather information, do research, and gather the necessary data. Moreover, too much self-work was required, and there were occasionally too challenging issues for analysis.

On the other hand, in the PBL process, too much scattered information needed to be sorted out, and students would be confused; at the same time, the workload and the pressure increased. When some students did not participate actively and took on their responsibilities, the progress and effectiveness of the group work would slow down. Similar research results are shown in Meiste et al. (2019), stating that the largest obstacle to problem-based learning was students' complaints of not having enough time or desire, and occasionally not wanting to collaborate in groups.

Students' dual perspectives on the strengths and weaknesses of PBL demonstrate that PBL is an excellent method to enhance students' learning skills, critical thinking, and problem-solving abilities. Meanwhile, PBL has an impact on improving teachers' teaching, like facilitating students' motivation and collaboration.

5.3. Teacher's Perspectives on Implementing PBL

5.3.1. Challenges Encountered

PBL was implemented for the first time during English language learning, students and the teacher met with both opportunities and challenges to adjust to PBL in learning and teaching. In this study, AR was utilized; thus, the teacher also researcher revealed experiences regarding difficulties of implementing PBL.

Because PBL implementation required more complex preparation and took longer than traditional learning techniques, it presented a significant obstacle in terms of added workload and burden. When added to a researcher's already hectic schedule, research can be a strain. PBL implementation may face opposition in schools used to traditional methods because, in addition to a lack of teacher updates and changes, there are misconceptions and concerns among the teaching staff that oppose the new reality. In other words, the teacher perceived the new model, which removed the realm of learning to make the students more independent, as a threat to their conservative and conventional positions. Moreover, there was a lack of resources, including a proper classroom, software, hardware, and materials needed by students and the teacher. These results verified the results of Schneider (2023), Suyuti (2024), Cecilio-Fernandes, Steenhof and Sandars (2024), Mei and Wang (2023), Beers (2005), Gil (2015) and Wendt Mischiatti et al. (2019).

5.3.2. Adjustments and Improvements Made

There were difficulties when PBL was being implemented. The researcher did, however, get the chance to make changes and enhancements and carry out additional research.

Regarding the challenge related to the stress of limited time and burden, the teacher tried to plan the schedule more reasonably in PBL cycle 2 and communicate with students to adjust to a daily study schedule. Meanwhile, the teacher coordinated with relevant departments to make sure students could use the appliances on time.

Parents and the administration office of the school were worried that students' academic achievement would be affected, thus, the teacher had mini-lectures to explain PBL to them and demonstrated the practical benefits that students would obtain through PBL. Moreover, the teacher considered students' perspectives and comments in the lessons to engage students more in learning. On the other hand, if students made progress, they would be encouraged and rewarded to be motivated sufficiently. Through the adjustments and improvements in the implementation of PBL, students could understand PBL more deeply, meanwhile, the teacher could reflect on problems in teaching.

6. Conclusion

This study aimed to present students' learning experiences through PBL during English language learning via action research. Students' collaboration in PBL and perspectives on the strengths and weaknesses of PBL were explored through the instruments of an observation guide and semi-structured interviews. On the other hand, the teachers' perspectives on implementing PBL were also demonstrated through the documents.

It was verified through the observation guide and the teacher's journals that students developed their relevant abilities in collaboration when they studied through PBL, generating positive participation and attitude in group work, formation of team awareness, and development of problem-solving abilities. Therefore, even though in the starting stage students could not adjust to learning through PBL and collaborating in group work, they could develop skills to cooperate with others as learning proceeded, fostering abilities to collaborate, which is completely different from conventional methods.

As presented in the results, the strengths and weaknesses of PBL were analyzed through students' perspectives generated in interviews. Through students' experiences of learning through PBL, they could understand the nature of PBL. Students contended that through PBL, they could obtain knowledge and learning skills, enhance their thinking abilities, and improve their problem-solving abilities. Students also learned to transmit theoretical knowledge into practical applications. However, PBL was completely different from traditional learning methods, thus, students met with challenges in the PBL process. The perception of weaknesses of PBL presented two aspects, mainly including time management and heavy workload. Learning through

PBL demands that students invest more time in collecting information, discussing with others, and presenting outcomes in proper ways. Therefore, all the factors mentioned above would take a longer time because students needed to solve problems in real life without providing an answer. On the other hand, the workload would increase as students must study through the seven-stage PBL process. Even if there were challenges and difficulties in the PBL process, which tended to make students exhausted and frustrated sometimes, students argued that they could

make progress in communication and presentation in English, obtaining various knowledge, developing logical and critical thinking abilities, and learning to solve problems through collaboration in group work, which they could not practice in conventional learning methods.

It is still necessary to reflect on the teacher's experience of implementing PBL. Through the implementation of PBL in teaching it was verified that the teacher needed to study PBL deeply and implement PBL more in teaching to design lessons and scenarios appropriately. Moreover, the challenges and difficulties encountered in the implementation of PBL were analyzed to adjust and improve in future research.

7. Limitations and Recommendations

This study explored the implementation of PBL for high school students during English language learning. The study selected students of Grade 2 at a public high school in Dalian City as the participants, and the course was selectively compulsory, Book II. Thus, this study examined high school students' learning experiences through PBL but did not involve participants from other cities. Additionally, more different levels of student and teacher participants could be involved in future research. On the other hand, the role of the teacher as a facilitator in PBL should be trained through professional development to improve classroom practices. Therefore, for the effective implementation of PBL, ample learning and teaching materials and appliances should be available in schools, fostering better learning environments and high performance.

References

- Abdollahzadeh, E. & Rajaeenia, M. (2024). English Language Learning Beliefs of Iranian High School Students. *TESL-EJ*, 28(1), pp. n1. doi: <https://doi.org/10.55593/ej.28109a6>
- Alghamdy, R. Z. (2023). Efficacy of Problem-Based Learning Strategy to Enhance EFL Learners' Paragraph Writing and Grammar Skills. *Arab World English Journal (AWEJ)*, 14(1), pp. 43–58. doi: <https://doi.org/10.24093/awej/vol14no1.3>
- Alyousif, R. & Alsuhaibani, Z. (2021). English Language Learning Demotivating Factors for Saudi High School EFL Students. *English Language Teaching*, 14(8), pp. 29–39. doi: <https://doi.org/10.5539/elt.v14n8p29>
- Amin, S., Uta, S., Bachri, S., Sumarmi, S. & Susilo, S. (2020). Effect of Problem Based Learning on Critical Thinking Skill and Environmental Attitude. *Journal for the Education of Gifted Young Scientists*, 8(2), pp. 743–755. doi: <https://doi.org/10.17478/jegys.650344>
- Andreasen, L. B. & Nielsen, J. L. (2013). Dimensions of problem based learning—dialogue and online collaboration in projects. *Journal of Problem Based Learning in Higher Education*, 1(1), pp. 210–229. doi: <https://doi.org/10.5278/ojs.jpblhe.v1i1.283>
- Aryanti, N. W. V. & Artini, L. P. (2017). The Impact of Problem Based Learning on Productive Skills and Attitude toward English Language Learning. In *2nd International Conference on Innovative Research Across Disciplines (ICIRAD 2017)* (pp. 15–20). Atlantis Press. doi: <https://doi.org/10.2991/icirad-17.2017.4>

- Azman, N. & Shin, L. K. (2012). Problem-based Learning in English for a Second Language Classroom: Students' Perspectives. *The International Journal of Learning*, 18(6), pp. 109–126. doi: <https://doi.org/10.18848/1447-9494/CGP/v18i06/47648>
- Bambang, B. H., Suprianto, B., Wardhono, A. & Kuntadi, C. (2023). Factors Influencing Critical Thinking: Problem Base Learning, Discovery Learning, and Project Base Learning. *Dinasti International Journal of Digital Business Management (DIJDBM)*, 4(3), pp. 1–12. doi: <https://doi.org/10.31933/dijdbm.v4i3.1793>
- Beers, G. W. (2005). The Effect of Teaching Method on Objective Test Scores: Problem-Based Learning Versus Lecture. *Journal of Nursing Education*, 44(7), pp. 305–309. doi: <https://doi.org/10.3928/01484834-20050701-03>
- Cecilio-Fernandes, D., Steenhof, N. & Sandars, J. (2024). The challenge of transfer to clinical practice: The illusion of learning and illusion of teaching. *Medical Teacher*, 46(12), pp. 1647–1648. doi: <https://doi.org/10.1080/0142159X.2024.2323243>
- Chang, Y.-H., Yan, Y.-C. & Lu, Y.-T. (2022). Effects of Combining Different Collaborative Learning Strategies with Problem-Based Learning in a Flipped Classroom on Program Language Learning. *Sustainability*, 14(9), pp. 5282. doi: <https://doi.org/10.3390/su14095282>
- Gil, A. C. (2015). *Didática do ensino superior*. São Paulo: Atlas. Retrieved from <https://ria.ufrn.br/jspui/handle/123456789/733>
- Guo, Q., Jamil, H., Ismail, L., Luo, S. & Sun, Z. (2024). Effects of problem-based learning on EFL learning: A systematic review. *PloS One*, 19(12), pp. e0307819. doi: <https://doi.org/10.1371/journal.pone.0307819>
- Havenga, M. & Drevin, L. (2020). *Problem-Based Projects: A Catalyst for Enhancing Students' Self-Directed Learning in an Information Security Course*. International Association for Development of the Information Society. Retrieved from <https://files.eric.ed.gov/fulltext/ED626739.pdf>
- Hidayati, N., Zubaidah, S. & Amnah, S. (2023). Effective learning model bases problem based learning and digital mind maps to improve student's collaboration skills. *International Journal of Evaluation and Research in Education (IJERE)*, 12(3), pp. 1307–1314. doi: <https://doi.org/10.11591/ijere.v12i3.22654>
- Jiao, S. & Liang, F. (2022). Sustainable Development of High School English Learners in China: Motivation and Its Impact on Their English Achievement. *Sustainability*, 14(19), pp. 12619. doi: <https://doi.org/10.3390/su141912619>
- Khotimah, S. (2014). The Use of Problem Based Learning to Improve Students' Speaking Ability. *ELT Forum: Journal of English Language Teaching*, 3(1), pp. 50–56. doi: <https://doi.org/10.15294/elt.v3i1.4011>
- Kök, F. Z. & Duman, B. (2023). The Effect of Problem-Based Learning on Problem-Solving Skills in English Language Teaching. *Journal of Pedagogical Research*, 7(1), pp. 154–173. doi: <https://doi.org/10.33902/JPR.202318642>
- Koşer, G. (2022). Problem Based Learning; Teacher and Student Roles. *The Online Journal of New Horizons in Education*, 12(3), pp. 197–200. Retrieved from <https://www.tojned.net/journals/tojned/articles/v12i03/v12i03-02.pdf>

- Legg, S. & Hutter, M. (2007). A Collection of Definitions of Intelligence. In *Advances in Artificial General Intelligence: Concepts, Architectures and Algorithms* (pp. 17–24). IOS Press. Retrieved from <https://ebooks.iospress.nl/volumearticle/3471>
- Lou, Y., Abrami, P. C. & d'Apollonia, S. (2001). Small Group and Individual Learning with Technology: A Meta-Analysis. *Review of Educational Research*, 71(3), pp. 449–521. doi: <https://doi.org/10.3102/00346543071003449>
- Martins, A. C., Falbo Neto, G. & Silva, F. A. M. d. (2018). Características do tutor efetivo em ABP—uma revisão de literatura. *Revista Brasileira de Educação Médica*, 42(1), pp. 105–114. doi: <https://doi.org/10.1590/1981-52712018v42n1RB20160100>
- Mei, Z. & Wang, A. (2023). Exploring the Characteristics of PBL Teaching Mode Analysis in Primary Education in China. *SHS Web of Conferences*, 174, pp. 01009. doi: <https://doi.org/10.1051/shsconf/202317401009>
- Meiste, R., Lankauskiene, A. & Arbidane, I. (2019). Conceptual Students' Perception of Problem-based and Project-based Learning in a Higher Education Institution. *Latgale National Economy Research*, 1(11), pp. 67–77. doi: <https://doi.org/10.17770/lner2019vol1.11.4229>
- Munawaroh, Setyani, N. S., Susilowati, L. & Rukminingsih. (2022). The Effect of E-Problem Based Learning on Students' Interest, Motivation and Achievement. *International Journal of Instruction*, 15(3), pp. 503–518. Retrieved from <https://e-iji.net/ats/index.php/pub/article/view/333>
- Murray-Harvey, R., Pourshafie, T. & Reyes, W. S. (2013). What teacher education students learn about collaboration from problem-based learning. *Journal of Problem Based Learning in Higher Education*, 1(1), pp. 114–134. doi: <https://doi.org/10.5278/ojs.jpblhe.v1i1.278>
- Romantsova, Y. (2018). *Problem-Based Learning (PBL): Advantages and Disadvantages*. Academia. Retrieved from https://www.academia.edu/90184163/Problem_Based_Learning_PBL_Advantages_and_Disadvantages
- Saputra, M. D., Joyoatmojo, S., Wardani, D. K. & Sangka, K. B. (2019). Developing Critical-Thinking Skills through the Collaboration of Jigsaw Model with Problem-Based Learning Model. *International Journal of Instruction*, 12(1), pp. 1077–1094. doi: <https://doi.org/10.29333/iji.2019.12169a>
- Schneider, M. J. (2023). Teaching Racial Reckoning: The CRT Panic as a Challenge and an Answer. *Radical Teacher*, 127, pp. 73–76. doi: <https://doi.org/10.5195/rt.2023.1139>
- Shah, S. H., Syed, A., Othman, R. Q. A., Chatha, W. A., Rasool, G. & Agarwal, A. (2024). Problem Based Learning (PBL): An Analysis of Medical Students' Reflection. *Gomal Journal of Medical Sciences*, 22(3), pp. 188–192. doi: <https://doi.org/10.46903/gjms/22.03.1486>
- Simmons, M., McDermott, M., Eaton, S. E., Brown, B. & Jacobsen, M. (2021). Reflection as pedagogy in action research. *Educational Action Research*, 29(2), pp. 245–258. doi: <https://doi.org/10.1080/09650792.2021.1886960>

- Suwastini, N. K. A., Puspawati, N. W. N., Adnyani, N. L. P. S., Dantes, G. R. & Rusnalasari, Z. D. (2021). Problem-based learning and 21st-century skills: Are they compatible. *EduLite: Journal of English Education, Literature and Culture*, 6(2), pp. 326–340. doi: <https://doi.org/10.30659/e.6.2.326-340>
- Suyuti. (2024). Challenges in Implementing Problem Based Learning in Madrasah Aliyah. *International Journal of Teaching and Learning (INJOTEL)*, 2(5), pp. 2210–2221. Retrieved from <https://injotel.org/index.php/12/article/view/244>
- Wei, Y. & Wei, J. (2023). A Study on the Application of the PBL Teaching Method in English Majors' Reading Teaching. In *2023 4th International Conference on Artificial Intelligence and Education (ICAIE 2023)* (pp. 241–249). Atlantis Press. doi: https://doi.org/10.2991/978-94-6463-242-2_30
- Wendt Mischiatti, J. A., Palermo Pupo, F., Gomes de Menezes, G., Fukumi Tsunoda, D. & Nunes Silva, H. d. F. (2019). Advantages and Disadvantages of Using the Problem Based Learning Method-PBL for Upper Level Students in Business Areas. *International Journal for Innovation Education and Research*, 7(11), pp. 850–860. doi: <https://doi.org/10.31686/ijier.Vol7.Iss11.1941>
- Wilang, J. D. (2021). Mindsets of High School Students in English Language Learning. *TESOL International Journal*, 16(2), pp. 86–105. Retrieved from <https://files.eric.ed.gov/fulltext/EJ1329706.pdf>
- Yin, Q., Yang, W. & Li, H. (2020). Blending Constructivism and Instructivism: A Study of Classroom Dialogue in Singapore Kindergartens. *Journal of Research in Childhood Education*, 34(4), pp. 583–600. doi: <https://doi.org/10.1080/02568543.2019.1709926>