

Effects of problem-based learning approach on enhancement the listening practice

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Abstract

The utilisation of the problem-based learning (PBL) approach serves as a pedagogy that enables students to acquire knowledge on genuine concerns and subsequently apply them in practical settings. This particular methodology allows for the incorporation of experiences to facilitate adaptability through the process of learning. Students in the tourism programme are able to support aspects of issues through their last experiences with tourism and it is posited that students engage in collaborative discussions with peers to discuss the issue and acquire knowledge through experiential learning. This study focused mainly on the listening ability of students to apply the PBL approach to enhance their listening ability based on tourism issues. Additionally, the study seeks to explore the opportunities, advantages, and challenges associated with its use. The study was conducted over a period of eight weeks and comprised a sample of thirty-nine students. The data analysis entailed the utilisation of paired sample t-tests for the purpose of testing and thematic analysis for group interviews. The findings on listening ability indicated that the post-test score was higher than the pre-test score. Furthermore, the students acknowledge that the PBL approach is useful for future application and daily life while also having the potential to augment vocabulary acquisition. Conversely, the PBL methodology suggests that extensive engagement in activities is more efficacious for students who possess prior experience with the issues being discussed.

Keywords: Problem-based learning approach, Thai students, tourism program, listening ability

Introduction

The acquisition of English language skills in Thailand pertains to the outer circle of second language acquisition, where the focus is on studying at institutions and using it as an unofficial language. English is considered a foreign language for teaching, and its importance lies mostly in the professional skills it provides to students for their future careers. As a result, the teaching method has been modified to encourage the students' active self-study skills and confidence. One effective teaching approach is problem-based learning (PBL), which integrates theory and practice through real-life scenarios that enhance students' higher-order thinking skills, such as critical thinking, problem-solving, and logical reasoning, and promote achievement through active learning methods. PBL also encompasses interpersonal communication and work-related skills, as noted by Pu et al. (2019). It was observed that students may encounter challenges in their future work that require them to think critically and devise solutions. When discussing workplace achievements, the focus is on students' affective factors in implementing solutions that are based on problem-based learning in real-life situations.

Several scholars have emphasized the need for language skills and problem-solving abilities in students to succeed in the workplace. Lebnark (2018) and Namtapi (2022) have highlighted employers have a strong preference for candidates who possess two crucial professional skills - the ability to solve problems in a timely manner and proficiency in language that enables them to provide information effectively, including their listening skills. According to Thai tourism staff, they encountered difficulties in comprehending different accents during conversations, which impeded their ability to respond efficiently. This challenge was not limited to non-native English speakers, as even native speakers were found to have similar difficulties. This study concentrates on the process of teaching and learning in a southern university in Yala province, where language issues and insufficient skills hinder the effective use of English in the future, such as listening skills. Although there are differences in teaching methods and English courses, teachers strive to help students improve their language abilities to excel in their careers. Teaching is a crucial aspect of language acquisition, where students acquire skills that enable them to succeed in their learning and daily lives. It is worth noting that the variation in teaching method in Thai

universities is significant because students cannot simply rely on rote memorization to acquire listening skills, which are crucial for real-life situations such as jobs and daily communication.

Problem-based learning approach

Problem-based learning (PBL) is an instructional method that involves presenting students with real-world problems or situations that they must solve or address. Instead of simply memorizing data or following a predetermined curriculum, students are encouraged to explore the problem, ask questions, and work collaboratively to develop solutions (Moallem et al., 2019).

Palupi et al. (2020) state that PBL also supports teachers to instruct students by formulating questions that is the learning process of students and they study with authentic problems, and they pick up information by selecting the best solutions. Moreover, the PBL model provides directions of teaching students based on reality in their fields and it supports learning problem solving (Sari et al., 2021). According to Moust et al. (2021), they believe that the PBL approach provides students with work they have done on their own and with peers. Moallem et al. (2019) mentioned that this method organizes interactive and collaborative aspects of learning based on students' abilities in producing current ideas for providing data through explaining, asking questions, sharing ideas, and arguing. Therefore, the students who are studying in higher education are mostly expected to have good acquisition of cognitive and affective skills (Getie, 2020). According to Moust et al., (2021), it is believed that the PBL method helps students develop critical thinking and analytical skills, as well as the ability to work effectively in teams and a good conducting learning environment. It also allows them to gain experiences for presentation in their learning. Thus, teaching method selected by a teacher may serve as tutors or facilitator roles when they are teaching the students 'processing skills in lessons by using their thinking skills and by giving feedback after the students have attempted to find solutions (Ansarian & Teoh, 2018).

Problem-based learning approach with English language learners

The process of learning English through PBL engages students to help them enhance vocabulary acquisition, and the students are motivated to relate it to their future careers (Cheng et al., 2021). Considering this, the adaptation of English language teaching methods to better meet the needs of students and prepare them for increasingly complex environments such as the workplace is crucial (Yusoff et al., 2023) Therefore, this method has been shown to support students' active and dynamic learning skills while enhancing their abilities to engage in critical thinking and have cognitive learning strategies (Montafej et al., 2022). By immersing students in real-world problems or situations that require English communication, such as reading comprehension, will help students think critically, analyse, and solve problems in real working places to better prepare them (Syahfutra & Niah, 2019).

The use of PBL in English language learning is deemed appropriate when the issues or situations presented are relevant to the students' interests, needs, and experiences. This may involve providing students with vocabulary lists, sentence frames, or graphic organizers to facilitate their expression of ideas. PBL also encourages ELLs to work collaboratively and communicate with one another (Ali, 2019), making it a highly social approach to learning. As a result, students benefit from sharing ideas and working together to solve problems. Additionally, PBL affords opportunities for ELLs to reflect on feedback, which can help them develop their metacognitive skills and improve their language use over time. Overall, PBL represents a promising method for supporting English language learning by providing a meaningful context for language use and fostering collaboration and communication among students. Drawing from constructivist learning theory, this approach emphasizes the pivotal role of students in constructing their comprehension of their experiences and knowledge for conducting the process of learning (Schmidt & Rotgans, 2019). Its pedagogical value is manifested in both English language learning (ELL) and problem-based learning (PBL), where constructivist principles can be leveraged to foster a more immersive and efficacious learning experience. Thus, learning a language using this method may pave the way for students in interacting effectively with society to do activities such as discussion or dialogue, as well as exchanging opinions or showing openness in thinking so that they can further improve their understandings and show reasonableness in debating to solve problems (Hadayah et al., 2021).

Research objectives

This study was collected through mixed-methods research for two main purposes.

1. to investigate students' proficiency in listening ability through the PBL approach based on pre-test and post-test scores.
2. to investigate students' opinions towards opportunities, benefits, and challenges in learning with PBL approach.

Research methodology

Participant

The sample for this study was the undergraduate students who were studying in the years. The participants passed the general English course and business English. The study was collected by a single group and there were 39 participants and eight weeks of intervention. They are studying at a government university in a part of southern Thailand that is near the border with Malaysia. The design of this study used language learning strategies that were independent variables to support students' writing ability on topics based on the tourism sectors.

The participants selected for the purposive sampling method this research were students who had registered for an English language course pertaining to tourism and they are studying in a tourism program at a government university in part of southern Thailand, which is located near the border with Malaysia. The participants studied about a general English and Business English before they enrolled in the current course on English for tourism. The investigation employed a single group, and there were 39 students and eight weeks of intervention and all participants were asked by group discussion who are studying in a tourism program.

Data collection method

Mixed methods were employed in data collection, including both quantitative and qualitative approaches. Specifically, pre-tests and post-tests were conducted to gather quantitative data, while interviews were conducted to gather qualitative data. The hypothesis tested in this study posited that there would be no significant difference in students' scores between the pre-test and post-test after utilizing the PBL method. The data analysis entailed paired T-tests to compare the students' pre-test and post-test scores and thematic analysis for the students' interview responses, and the qualitative data was applied to the seven-step framework of Creswell & Creswell (2013). Once the data were collected, the researcher and three experts had verified the results to make sure the validity. The present study involved an eight-week intervention program with four hours dedicated to the program per week. The intervention program's topics pertained to tourism, recreation, and sport management.

The results of the study

The results of pre-test and post-test' scores

Based on the findings presented in Table 1, it can be discerned that the listening ability exhibited a notable difference between the mean scores of the pre-test, which were recorded as $M = 7.79$ and SD (Standard Deviation) = 1.85, and the post-test, which demonstrated mean scores of $M = 9.15$ and $SD = 2.32$. Considering the statistical significance set at 0.05 ($p = 0.00$), the results suggest that a significant difference was obtained. The t-test conducted to ascertain the post-test scores and the pre-test scores indicated a noteworthy increase in the former, thereby, the hypothesis was rejected.

Table 1

The comparison between the means, standard deviation (SD) of pretest and post-test before and after using the

Test	Mean	SD
Pre-test	7.79	1.85
Post-test	9.15	2.32

PBL method on listening ability

Based on the administered assessments, the listening capacity of the subjects was gauged through two distinct testing formats, namely statements and dialogues and understanding talks. Upon analysing the findings presented in Table 2, it was determined that the pre-test results for statements and dialogues demonstrated a mean of $M = 4.30$ and standard deviation of $SD = 1.36$, whereas the post-test results exhibited a mean of $M = 5.35$ and standard deviation of $SD = 1.93$. Similarly, for the understanding talk format, the results indicated a mean of $M = 3.48$ and standard deviation of $SD = 1.04$ for the pre-test, whereas the post-test results showed a mean of $M = 3.79$ and standard deviation of $SD = 1.19$. The pre-test outcomes also revealed that the mean values of both testing formats were significantly different across all testing types.

Table 2

The comparison of results on testing types of listening ability

Types	Test	Mean	Std.Deviation
Statements and dialogs	Pre-test	4.30	1.36
	Post-test	5.35	1.93
Understanding talk	Pre-test	3.48	1.04
	Post-test	3.79	1.19

Table 3

The Paired Samples T-Test for Listening Ability Tests

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Listening (Pre-test) – Listening (Post-test)	-1.35	2.05	.329	-2.02	-.691	-4.123	38	.000

Note. *Value. 0.05

Based on Table 3, the listening ability indicated that students had an increase in their scores for the pre-test 7.79 (M), 1.85 (SD) and for the post-test 9.15 (M), 2.32 (SD), $t = -4.123$, $df = 38$, $p = .000 (< .005)$. The mean increase in the test scores was 1.35, with a 95 % confidence interval ranging from -2.02 to -.691.

The results of responded interview

The qualitative data was analyzed using the thematic analysis method and there were three experts to verify students' responses in the interview. It was discovered that the primary themes that emerged were related to the opportunities and advantages that arose because of applying the PBL methodology and the data was collected through an unbounded approach. The interview questions consisted of three themes: opportunities, advantages, and challenges.

Opportunity

The data collected from the students' engagement with the PBL methodology demonstrate that it improves their ability to listen in real-life situations. Furthermore, the students articulated that such a pedagogical technique can be applied in their future professional pursuits.

"...by listening in activities class, I believed that I could perform my speaking and listening in my internship or work the next time."(TSS_8)

"I believed that around our lives, we face issues about communication and solutions, so the PBL method can help me communicate and solve problems better in life." (TSS_28)

The significance of listening skills soon has been unequivocally established by TSS_8. Furthermore, TSS_28 has expressed that the PBL approach is highly beneficial in one's daily routine as it facilitates the resolution of technical issues that may arise while traveling.

Benefits

The acquisition of new vocabulary by students through exposure to authentic materials and diverse speech patterns from multiple speakers enables them to effectively tackle challenges that may arise when collaborating with individuals from different countries.

“By engaging in authentic dialogue, I have amassed a wealth of lexical items that I have diligently transcribed and subsequently translated into Thai.” TSS_7

“I like to study in a group with my peers, and they are so active in learning, and I also talked and talked, even though I do not know a lot of words and could not speak English.” (TSS_18)

As per the findings of TSS_7, it is imperative for students to enhance their vocabulary through the means of dialogues. The PBL approach has been found to be a crucial factor in helping students acquire new terminologies and demonstrate significant improvements. The PBL technique has demonstrated an unparalleled ability to enhance students' learning activation. TSS_18 corroborates this view, indicating that peers in groups also served as catalysts for learning activation by engaging in discussions and posing questions. Despite language barriers and particular lexical limitations, students in groups exhibited a collaborative endeavour to respond to their peers.

Challenges

A study conducted collaboratively pertains to the utilization of Problem-Based Learning methodology in the enhancement of listening skills. The presence of an uninterested student within the group poses a significant challenge.

“One of my colleagues did not express support for the proposed concept and failed to contribute any ideas while we were collaborating on a project.” (TTS_22)

“During our discussions, this individual remained silent when other members needed suggestions.” (TSS_12)

“As for myself, I refrained from speaking up as I did not encounter any of the difficulties.” (TSS_30)

As evidenced by TTS_22, TTS_12, and TSS_30, these challenges are further exacerbated by instances where a peer fails to contribute ideas or chooses to remain silent during discussions. In such cases, individuals with limited experience on the subject matter are unable to engage in meaningful discourse with their peers.

Discussion and conclusion

The present research is consistent with prior studies as revealed by an analysis of previous literature. For instance, Lin et al. (2019) demonstrated that students acquired numerous words via listening skills when utilizing the PBL approach. Likewise, Mumtaz and Latif (2017) observed that the employment of the PBL approach in classroom debates aided students in comprehending the importance of considering diverse perspectives, acquiring innovative communication techniques, and being motivated to listen to various strategies to persuade others. Additionally, Mardina et al. (2022) verified that the PBL method of teaching listening could enhance ability more effectively than traditional instruction. Esen et al. (2014) mentioned how the PBL method effect students critical thinking on higher educational level. It can indicate that the PBL method can improve students' creative thinking skills and help them having higher order thinking skills. This observation aligns with findings by Chowdhury & Ara (2021), who noted that priming background knowledge effectively encourages students to evaluate their existing understanding of subjects. This phase of learning is experience-driven and enhances peer interaction. Without prior group communication experience, students might struggle with this learning approach, potentially hindering the overall success of the process. Therefore, it can be inferred that the problem-based learning approach, coupled with experiential learning, enhances students' motivation to communicate and interact. This conclusion is consistent with another study by Graaff & Kolmos (2003), which highlighted those hands-on experiences can significantly bolster student success when using the PBL method. The PBL methodology was an instructional strategy that significantly enhanced Thai students' listening abilities, and it also facilitated collaborative learning among groups and peers. Furthermore, the PBL approach offered students genuine situations that they can apply in future careers. Notably, it boosted their motivation to learn, and the PBL technique contributed to their critical thinking and confidence in language usage, such as vocabulary. However, it is worth noting that the disadvantages of PBL in this study pertained to the considerable time invested in learning, and some pupils did not collaborate in learning with peers due to a lack of experience with certain issues.

Certain students highlighted potential challenges in adapting to the PBL approach. Those unfamiliar with this method may find it intimidating initially, given its divergence from conventional teaching styles. Moreover, specific "learning issues" linked with PBL suggest that it may not universally suit every student. The study highlighted that the classroom's learning environment is shaped by students' perspectives. However, students often

do not reflect on their experiences before engaging in peer discussions. This lack of reflection can be attributed to their unfamiliarity with the discussion topic. Moreover, the study posited that successful learning via PBL often hinges on students' prior experiences. An absence of such experiences can hinder fruitful discussions, limiting idea-sharing and collaborative discourse. These findings are in line with research by Fahmi et al. (2021) and Daeli (2022), emphasizing that the PBL environment can foster positive motivations in students when implemented correctly, such as using humor as a pedagogical tool. While collaborative learning is a cornerstone of the PBL approach, it became evident that not all students are enthusiastic about group work. This sentiment is supported by Ghufron & Ermawati (2018), who pointed out that PBL can be perplexing for certain students, making them reluctant to share their thoughts openly. Such hesitancy indicates a lack of active participation in peer-based collaborative learning. Another issue highlighted was the absence of clear criteria for group formation, such as considering ability levels and gender balance. This observation concurs with Wijaya (2021), who posited that combining collaborative and problem-based learning in second language classrooms yields better learning outcomes when tailored to align with students' real-world experiences. Given these findings, future research could delve deeper into identifying the specific aspects of PBL that bolster abilities of speaking, reading writing skills. Additionally, experiments focusing on tailoring PBL for various learning strategies, or blending it with other pedagogies, might yield fruitful outcomes.

Ethical statement

In this study, the researcher collected data that was approved by the faculty, and the consent forms contain all relevant information.

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