

The Effects of Problem-Based Language Learning on the Listening Comprehension Skills of Malaysian Undergraduate Students

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Introduction

Listening plays a significant role in English as a second language (ESL) and English as a foreign language (EFL) courses to the extent that not only do most language learning tests entail a listening section, but also most language learning books have listening comprehension activities. Gilakjani and Sabouri (2016) posit that ESL and EFL learners need to be skillful listeners to be able to take part in lectures, use audio files on DVDs and the Internet, and to communicate with native and non-native speakers of English. To other scholars such as Kurita (2012) listening comprehension is even more vital. She believes that listening comprehension can distinguish between a successful language learner and an unsuccessful one.

Despite the crucial role of listening comprehension in communication in a second language, research on listening comprehension shows a number of problems. Lynch (2011) who extensively studied the research conducted on listening comprehension between 2000 and 2010 notes that ESL students encounter difficulties with various forms of listening including reciprocal types such as conversations and interactive lectures and one-way forms of listening such as listening to lectures. This problem is associated with a lack of vocabulary, insufficient practice of listening, and the unfamiliarity of the listeners with accurate pronunciation. Another problem with many listening courses is that the teachers and education systems are not sensitive to the learners listening problems. Day (2017) notes that many listening tasks and practices have remained the same even after they have proved to be ineffective. Bano (2017) points out that many students are not motivated to enhance their listening skills, they do not consider themselves good listeners and do not rely on themselves as skillful listeners.

Aside from the abovementioned problems, we had a different problem at the Faculty of Languages and Linguistics in the University of Malay. The students who attend the classes from various countries

(usually East Asian countries) have varying degrees of listening ability. This makes it challenging for the lecturers at the faculty to practice fixed listening practices which target students at specific proficiency levels. This problem was negotiated at the faculty level and problem-based language learning (PBL) was suggested as a solution to the problem. The main reason for selecting PBL was that as stated by Ansarian and Teoh (2018) the learners are not obliged to study fixed content and can take part in selecting the content. The approach is also learner-centered, and collaborative so the students can benefit from each other's help and knowledge.

The main objective of this study was then to enhance listening comprehension among Malaysian first year undergraduate students who were expected to pass an obligatory listening course at the faculty. The researchers believed that if PBL proved to be an effective approach to listening comprehension, it could be suggested to the faculty as a possible alternative to the conventional approach. This issue was the main motivation for this study. The following research questions were used to direct this research:

- Q1:** Does PBL have any effects on the listening comprehension of Malaysian undergraduate students?
- Q2:** What are the views of the Malaysian undergraduate students about the implementation of PBL in the listening course?

Literature Review

Theoretical Framework

PBL, as a learner-centered, cognitive, and collaborative approach to learning (Ansarian, Adlipour, Saber, & Shafiei, 2016) is heavily based on a number of theories in education. According to Vygotsky's (1987) Zone of Proximal Development (ZPD), learning is more effective when the learners can benefit from each other's knowledge known as the proximal zone. Thus, the collaborative feature of PBL is based on ZPD. On the other hand, according to the higher order thinking model as suggested by Bloom (2001, as cited in Kelly, 2017), the learner should have the chance to evaluate the learning content and decode it to possibly understand it. Therefore, PBL does not rely on the teachers as the classroom's orchestra conductor; it relies on the learners who develop and use their cognitive abilities to enhance their understanding.

Problem-Based Language Learning (PBL)

PBL is a new approach to language learning. It is basically problem-based learning (PBL) with the addition of some intricacies of language learning (Ansarian & Teoh, 2018). PBL, per se, has been defined as an innovative, collaborative, cognitive, and self-directed approach to learning (Savery, 2006), which relies on the active role of the learners in the learning process rather than the teachers. Learning in PBL and similarly in PBL begins by presenting an ill-structured problem to the learners, asking them to think about the problem, decode it, and to identify their knowledge deficiencies in finding a solution to the problem (Ansarian & Teoh, 2018). The learners will then conduct a search and collect data, discuss their findings, shortlist them, and propose a solution to the problem. This approach has been more or less suggested in various PBL models by Hmelo-Silver (2004), Savery and Duffy (1995), and Hung (2006).

PBL is younger than many other instructional approaches. The first speculations about using PBL to enhance language learning were made by Larsson (2001) who found PBL to be a possible approach to language learning, as an increase in the students' communicative skills while experiencing PBL was observed in the literature. Yet, unique features of language education, such as learning language through the language, and learning in a different linguistic system from the mother tongue, were among the serious difficulties which could affect PBL's success (Larsson, 2001). Undoubtedly without collecting

empirical evidence, researchers and language teachers could not be convinced about the effectiveness of this approach. Ansarian and Mohammadi (2018), who reviewed the studies conducted on PBL, highlighted the studies conducted in Malaysia, Taiwan, Singapore, Pakistan, Iran, and Nigeria. They note that many of the studies are not truly PBL, as they a) decode the learning content for the learners, b) are teacher-centered rather than learner-centered, and 3) lack a problem at the beginning of the learning process. However, the consensus among many of the researchers who have implemented PBL in their classes in the last few years is that PBL can be a possible approach to language learning (Aliyue, 2017; Fonseca-Martínez, 2017; Kassem, 2018; Lin, 2017; Shin & Azman, 2014).

Still, PBL has not been extensively subject to investigation with regard to the listening skill, the reading skill, and the writing skill, as most studies have focused on the effects of PBL and the speaking skill. The passive nature of some language skills such as listening and the fact that PBL is easier to implement with productive language skills (Shin & Azman, 2014) may be the main reason why PBL has not yet been used in listening classes. This gap in the literature was targeted by the researchers in the current study.

Method

Design

This study includes both a quantitative part and a qualitative part. Through the findings of each part are discussed separately, this study has a mixed-methods design. The mixed-methods design was selected, as the findings of quantitative studies, per se, may not be adequate to justify a change in the learners' results. The non-random selection of the participants for this study makes the quantitative section of the study quasi-experiment.

Participants and Respondents

Thirty-seven first-year undergraduate students had attended the listening-speaking course at the faculty. These students were selected as the main participants for the study. Purposive sampling can best describe the sampling method in this study, as the participants were selected based on the criterion that they had a purpose to take the course. Table 1 shows the demographics of the participants.

TABLE 1
Demographics of the Participants

Group	N	Age	Gender	Ethnicity	Educational Background
Experimental	19	17-20	Female: 12 Male: 7	Chinese: 4 Indian Malay: 2 Chinese Malay: 5 Malaysian Malay: 7 Japanese: 1	High School Diploma
Control	18	18-20	Female: 13 Male: 5	Chinese: 3 Chinese Malay: 4 Indian Malay: 3 Malaysian Malay: 6 Indonesian Malay: 2	High School Diploma

These students had recently taken The Malaysian University English Test known as MUET; however, the researchers made sure that there was no statistical difference in the groups' listening comprehension skills prior to the study. Thus, a Mock IELTS listening test was given to the participants as a homogeneity test. Using the results of the test, the participants were distributed to two groups of 20 students who experienced a total of 21 hours of PBL in 14 sessions of listening classes. Initially, the distribution of

the scores was checked to find out what kind of statistical tool should be used. As ratios of skewness and kurtosis for all tests were within the range of +/-1.96, and considering Strevens (2009) explanation of a normal distribution, it was assumed that the scores were distributed normally, and a parametric analysis could be conducted. Thus, a between subject test (independent samples t-test) was run. Table 2 shows the results of independent samples t-test for the homogeneity test.

TABLE 2.
Independent Samples t-Test; Homogeneity Scores

Levene's Test for Equality of Variances		t-test for Equality of Means								
F	Sig.	t	df	Mean Score		Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
				EXP	CON				Lower	Upper
.009	.92	-.38	35	26.31	27.33	.701	-1.01	2.62	-6.354	4.319

As observed in Table 2, ($t(35) = -.38, p = .701$) [-6.354, 4.319], the difference between the control group and the experimental group was not significant prior to the main study. It should also be noted that the reliability of scores in all tests was measured using Cronbach alpha test. As the ratios fell between .8 and 1.00 for all tests, it was assumed that the scores were reliable.

Having distributed the participants into the control group and the experimental group, the treatment phase of the study began. The control group participants practiced the listening tasks from the book “21st Century Communication 3: Listening, Speaking, and Critical Thinking” by Bastian (2018). The participants covered 1 lesson in 2 weeks and followed the exercises suggested in the book. Most exercises in the book focus on the listening skill and subskills related to listening such as vocabulary learning. In the experimental group, the PBL model as suggested by Ansarian and Teoh (2018) was used. Figure 1 shows the PBL model.

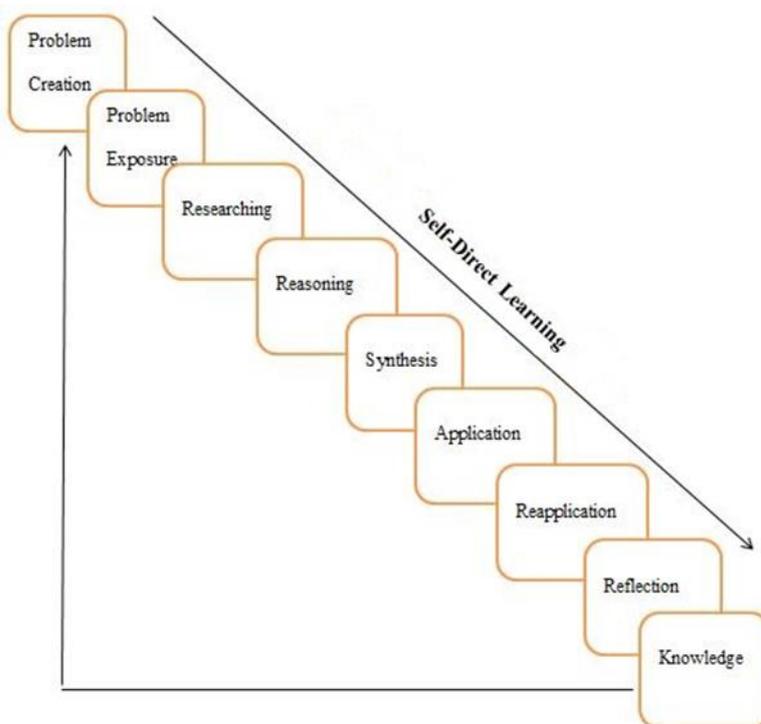


Figure 1. PBL model. (adopted from Ansarian & Teoh, 2018)

A number of ill-structured problem scenarios were prepared for the class. Each PBL scenario was discussed in one session. As every two PBL scenarios referred to two themes in one lesson from the book used in the control group, equal treatment in terms of time and lesson themes was given to the experimental group and the control group. After presenting the problem to the participants who had already formed their groups with 2 or 3 peers, the participants were asked to think about the problem, decode it and identify the search queries. Based on the search queries, they were asked to conduct a search (either online or paper-based) and collect data with regard to the problems. As the focus of the course was on the listening skill, they were asked to mostly search for audio or audio-video materials. The data were then presented to other group members and discussed. The members shortlisted the solutions and suggested the most practical one to solve the problem. The solutions were then presented to the class and the participants received feedback on their performance.

Both groups received the same listening test as a post-test after 4 months of treatment. The results of the posttest indicated that the experimental group had a higher increase in their listening comprehension scores as compared to the control group participants (Table 3).

TABLE 3
Independent Samples t-test; Posttest of Listening

Levene's Test for Equality of Variances		t-test for Equality of Means								
F	Sig.	t	df	Mean Score		Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
				Exp	Con				Lower	Upper
1.554	.221	3.68	35	34.10	28.61	.001	5.49	1.49	2.46	8.52

As observed in Table 3 ($t(35) = 3.68, p = .001$)[2.46, 8.52], the groups showed significance differences in their mean scores. As the experimental groups mean score on the post-test ($M = 34.10$) was higher than the control group ($M = 28.61$), it can be assumed that the experimental group learners had significantly outperformed those of the control group.

In addition to that, a semi structured interview was conducted with the respondents from the experimental group. Having interviewed 11 respondents who were selected randomly, the researcher conducted a thematic analysis of qualitative data using Hsieh and Shannon's (2005) steps in qualitative content analysis which begins with the preparation of the data and ends with the interpretation of the results. The themes extracted from the interviews were sent back to the respondents for the purpose of confirmation. Finally, six themes were extracted about PBLL tutorship from the respondents' speech. Table 4 shows these themes.

As observed in Table 4, in almost all cases the respondents noted that the PBLL course helped them with the listening skill, mutual understanding, pronunciation, the retention of knowledge, and active and incidental learning.

TABLE 4
Qualitative Analysis of the Semi-Structured Interviews

N	Core Theme	Frequency	Type of Idea	Sample Quotes
1	Active learning	9	Positive	I was so involved in learning I lost the track of the time in class. Searching, thinking, discussing, these were many of the activities I experienced for the first time.
2	Incidental learning	8	Positive	I learned so many good words' though I was not even looking for words.
3	retention	8	Positive	I don't have to repeat what I learn in the class. it is like it sticks to my mind now.
4	pronunciation	4	Positive	The good thing was that we had to find audio files first. Then listen and then speak. It means we could listen to good pronunciation and then use that to speak.
5	Understanding within the group	5	Positive	I should admit that my groupmate helped me so much. This was actually mutual, but she helped me a lot.
6	Affects listening	3	Positive	If I was supposed to teach a listening course, I would choose this again because now it is easier for me to listen to lectures. It had effects on my listening, but searching for audio files were sometimes difficult.

Discussion

The review of the previous literature shows that the findings of this study are mostly in line with previous research. Fard and Vakili (2018), for example, studied the effects of PBL on the vocabulary learning of Iranian EFL learners and realized that PBL can significantly increase the learners' knowledge of vocabulary. They also noted that the language learners become more motivated when they practice in a PBL curriculum and can learn incidentally. The PBL tasks implemented by Fard and Vakili (2018) were similar to the tasks used in this study, as they also began their PBL tutorship with presentation of an ill-structured problem. Elsewhere, Mohammadi (2017) states that the reason PBL tasks are more effective for learning L2 is that not only do they increase the cognitive engagement of the language learners, but also the learners have the chance to adjust the tasks to their cognitive abilities, meaning that they conduct the learning tasks based on their own understanding of the task.

Ansarian and Mohammadi (2018) state that one of the problems of the current education is that the learners' performance is below the scores they gain on exams. However, PBL confronts the learners with authentic tasks the learners encounter in day-to-day life. This means that the score the learners gain on PBL exams indicates the practicality of their knowledge. In the case of the current study, this can indicate that the listening comprehension scores gained by the learners shows that their practical listening ability has increased.

Previous research on PBL had extensively focused on implementation of PBL in speaking classes (e.g., Kassem, 2018; Othman & Shah, 2013; Shin & Azman, 2014; Sy, Adnan, & Ardi, 2013) and on the reading skill (Huang & Sun, 2012; Lin, 2017). Indeed, research dealing with PBL and the listening skill is very scant. Contrary to the assumption by Larsson (2001) who speculated that PBL can be effective with productive language skills, this study proved that PBL can also be effective in terms of receptive language skills such as listening comprehension. Indeed, listening is a communicative language skill and in congruence with Abdullah (1998) who believed that PBL can affect communication, it yielded significant positive effects on the listening comprehension of the learners.

Conclusion

In an attempt to enhance the quality of the listening course presented at the Faculty of the Languages and Linguistics (UM), a PBL course was designed and implemented for first-year undergraduate students. However, there are some limitations, one of which is that the course is not solely focused on listening because there is a speaking component. It is not easy to isolate the listening skill just for PBL to be conducted. This is why the experiment was carried out for only 7 sessions and not the full semester of 14 weeks. Another challenge in implementing PBL is that the search for audio materials online can be tedious and time consuming, and the same audio resources were selected by the learners. However, the fact the learners were doing their own searches, mostly at their own pace and in their own time has enhanced learner autonomy. It is noted that PBL can be more effective than conventional listening courses which uses prescribed texts as the listening tasks are more authentic and meaningful. As mentioned above, through the semi-structured interviews the learners indicated that there was a higher chance of gaining knowledge, active learning and involvement with the learning content, incidental learning, ability to practice the newly learned pronunciation, and mutual understanding within the PBL groups.

To sum up, the findings of this study reveal that PBL has made an impact on the listening skills of the learners and this could lead to some pedagogical implications for such courses which aim at improving listening abilities. Instead of using prescribed texts, perhaps PBL scenarios could be used to encourage learners to look for audio materials themselves and chart their own learning in line with the syllabus requirement. Another crucial implication is the training of language instructors, who would need to understand the principles of PBL, taking on the roles of facilitators rather than “teachers” who are of the view that they are the source of all knowledge. This would require a change of mindset and also implies that some change must be made in teacher training as well.

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