

Adopting a PBL Approach to Empower EFL Learners

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Abstract: Although the Problem-Based Learning (PBL) approach has been explored in diverse academic disciplines and has proven to have an impact on both learning outcomes and other academic-related life skills, such as problem-solving and critical thinking, very few studies have been conducted in language courses, let alone among English as a Foreign Language (EFL) learners. In view of this, and with Social Constructivist Theory in mind, the researchers of this study redesigned the curriculum of an English Business Communication course in order to create a more genuine and interactive learner-centered environment, with the goal of fostering critical thinking and problem solving skills. In the study, 51 English-majored juniors at a four-year comprehensive university in Central Taiwan engaged actively in team-based discussion of business-related scenarios/cases to grapple with problems and find solutions. The participants were divided into nine groups, with each consisting of six to seven members, and each was assigned one professionally-trained tutor. They were required to tackle two real-life case studies with each case spanning three weeks. Each member in the group was assigned a major individual duty as well as collective responsibility to work in both online and physical classroom environments. The quantitative findings of pre- and post-surveys revealed that social interaction and problem solving skills did improve significantly as a result of this PBL instruction. Qualitative findings also found that learners preferred learning via active discussion and interaction with their peers to learning via traditional teacher-centered lecture-based instruction. Detailed descriptions on the curriculum design and the implementation of the study are also provided as a guideline for language instructors who wish to re-design the curriculum for their future language courses.

Keywords: Problem-Based Learning (PBL), English as a Foreign Language (EFL), Social Constructivist Learning Environment (SCLE), problem solving, critical thinking

1. Introduction

Over the past two decades, Problem-Based Learning (PBL) has been widely practiced in various academic disciplines with extreme popularity in the areas of medical and nursing related studies (Lin, 2015). PBL is an instructional approach in which learners are encouraged to employ critical thinking, problem solving skills, and content knowledge to solve real-life problems or issues in the provided scenarios. The PBL approach centers on problem solving where learners start with identifying problems existing in the given scenarios/cases, proceed to active discussion with their peers, and wrap up with the ultimate goal of seeking optimal solutions to the identified problems (Evensen, Hmelo, & Hmelo-Silver, 2000). Professional knowledge that learners are expected to acquire is attained through, and built on, social interactions and active discussions with their peers. Therefore, the Social Constructivist Learning Environment (SCLE) is a genuine learning environment situated in social constructivism theory, which describes a way of knowing/knowledge building in which students or learners construct their new understanding and knowledge during the process of social interaction with others (Sthapornnanon et al., 2009). In a word, PBL and social constructivism are the two essential components needed to build SCLE.

In Taiwan, the research site, most EFL instructors still practice the teacher-centered lecture-based teaching approach instead of adopting a more active student-centered PBL orientation. Very few EFL classes provide learners with opportunities to challenge and activate their higher order thinking skills and problem solving ability, which are considered as essential skills in their future lives. Therefore, there is an urgent call for innovative instructors to review and redesign their language course curricula to respond to the needs of learners and society.

In view of the aforementioned drawbacks existing in current EFL courses, the instructor and second researcher of this study redesigned the curriculum of her Business Communication class, based on the PBL approach. The main goal of the instructor was to enhance problem-solving skills as well as to foster critical thinking ability of the EFL majors via building a social constructivist learning environment. Considering PBL studies are under researched in the language field, the contribution of this empirical study lies in filling the gap in the existing literature PBL research. The three research questions guiding the study were: 1) Did the learners make significant improvement in problem-solving ability? 2) Did the learners achieve a significant difference in social interactivity? 3) What are the perceptions of the learners with regard to this PBL approach?

2. Methods

2.1 Participants

The participants were 51 English-majored juniors enrolled in a Business Communication course at a four-year comprehensive university in Central Taiwan. They had learned English for around nine years at high schools and the university, and their English proficiency was at the Intermediate level or above, capable of using English for daily conversation and for interpersonal communication.

2.2 Research design

The research spanned 12 weeks, including the pre-task stage (taking the pre-survey in Week 1), the main-task stage (implementing the PBL curriculum during Week 2 through Week 9), and the post-task stage (completing the post-survey, and the interview during Week 10 through Week 12). Specifically, the implementation of the PBL curriculum spanned eight weeks (100 minutes a week). The orientation lasted for two weeks, which allowed the learners to become familiar with the diverse learning platforms (ZUVIO, Kahoot, LINE, Moodle, and YouTube) and to equip themselves with the core concepts of PBL. In addition, the instructor trained nine tutors to monitor group interaction and to provide timely help if they deemed necessary. The main instruction consisted of two three-week problem-based collaborations, in which the students worked in groups of six to solve designated case-related problems. During collaboration, the students engaged in multiple tasks, including taking on responsibilities in group discussion, defining the problem, discussing with partners, reaching joint group decisions, preparing a group report, and providing peer feedback.

2.3 Instruments & Data analysis

To answer the three research questions of the study, multiple sources of data were collected, including a survey on problem-solving, one questionnaire concerning social interactivity, and in-depth interviews. To examine whether the learners made significant improvement in problem-solving ability as the result of the PBL instruction, a 41-item problem-solving survey adapted from Wong Yang, Sha, and Wang (2015) (<http://www.mysurvey.tw/s/PxbW3MXM>) was employed. With regard to the probe into the learners' social interactivity, a 27-item social constructivism questionnaire adapted from the Constructivist On-Line Learning Environment Survey developed by Peter Charles Taylor and Dorit Maor was used (<https://surveylearning.moodle.com/colles/>). A pilot test on the adapted survey was conducted, with the reliability reaching 0.91. Statistical analyses, including descriptive statistics and a Paired-Samples t-Test, were conducted to determine if significant differences existed in problem-solving and social interactivity between the pre-survey and the post-survey. Finally, in

terms of learner perceptions about the PBL approach, in-depth interviews were carried out with 10 students. The interview data were transcribed and read repeatedly. Recurring themes were then identified by the researchers.

3. Results

The major findings of the study indicated that the social-constructivist PBL approach effectively enhanced the students' problem-solving abilities and social interaction skills. Most of the students were positive about learning via active peer discussion and interaction over learning in conventional teacher-centered lecture-based instruction.

3.1 RQ1. Did the learners make significant improvement in problem-solving ability?

The results from the 41-item problem-solving survey revealed that the learners significantly enhanced their problem-solving abilities as the result of PBL approach (shown in Table 1), echoing the findings from previous research (Lin, 2017; Savery, 2015). The mean score of the post-survey was significantly higher than that of the pre-survey ($p < .05$). In other words, the PBL approach was significant in helping the students to (1) apply different strategies in the face of problems, (2) organize multiple resources and information, (3) think about reasons, all possible solutions, and consequences of problems, and (4) come up with effective solutions to problems, if granted sufficient time and preparation.

Table 1

Statistical analysis of the problem-solving survey

	Mean	N	SD
Pre-survey	3.85	47	.56
Post-survey	4.23	47	.59

3.2 RQ2. Did the learners achieve a significant difference in social interactivity?

With regard to the results related to social interactivity, the results suggested that the learners made a significant improvement, as the result of the given PBL instruction ($p < .001$). Such results are in line with those found in previous studies (see Yew & Goh, 2016). More specifically, the social constructivism embedded in the team-based discussion of business-related cases boosted knowledge development, social interaction, critical thinking, peer support, and collaboration.

4. Conclusions

Applying the PBL approach to this Business Communication was carefully designed and implemented based on social constructivism. The PBL instruction promoted a social constructivist learning environment in which various learning tasks enabled the learners to exchange and negotiate their experiences with their peers, and construct knowledge in English business communication.

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