

Project-Based Learning on Teaching Methods: Student Teachers' Reflection

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Abstract

The new curriculum for tertiary education promotes independent learning and strongly encourages teacher educators to make the instruction more learner-centered by employing learning activities such as project-based learning (PBL). In PBL, student teachers collaborate in solving a problem to achieve a particular goal, resulting in a product as the outcome. To evaluate their learning, student teachers need to reflect on the process of collaboration so they can improve their performance in the future. The present study describes the reflection of EFL student teachers after they completed a project of making posters about English language teaching methods. Thirty student teachers participated voluntarily in this study. They worked in groups to devise a poster about a teaching method, such as the Audio-lingual Method, Communicative Language Teaching, Direct Method, and others. Afterwards, they reflected individually and in groups about their learning experience in the project, writing what they did well and what they needed to improve in a reflective journal. The findings showed the student teachers believed PBL not only increased various aspects of their cognitive abilities but also provided opportunities to gain social skills. Based on these findings, the implications were recommended for the content courses in teacher training.

Keywords: *reflective practice, project-based learning, EFL, student teachers*

INTRODUCTION

Learner-centered instruction is one of the essential features that characterizes tertiary education in Indonesia, as stated in the National Standards of Higher Education (Exec. Order no. 3, 2020). This also applies to teacher training programs in universities, where EFL student teachers learn to improve their pedagogical knowledge and skills. The student teachers should become the focus of learning rather than the teacher educators, and have ample opportunity to mobilize their abilities, proficiency, and good character to gain knowledge independently. To provide such an opportunity, teacher educators need to facilitate learning by using various language teaching methods that encourage the student teachers to take an active part in learning. The Independent Curriculum (*Kurikulum Merdeka*) for tertiary education specifically mentions that teaching methods include group discussions, simulations, case studies, collaborative learning, cooperative learning, project-based learning, case-based learning, and many others (Junaidi et al., 2020). This paper, however, focuses on project-based learning (PBL) only, and the other teaching methods are beyond the scope of this study.

Dooly (2016, p. 78) argued that PBL "... is founded on contextualized, learner-centered outcomes and social practices that emerge as the participants collaboratively

move toward shared goals and output.” Because it is contextualized, the student teachers work on real problems. They collaborate to solve these problems with their peers by asking questions, investigating the problems, collecting and analyzing the data, and finally reporting the results (Kokotsaki et al., 2016). Through these activities and interactions, the student teachers not only construct content knowledge but also improve their English proficiency (Alan & Stoller, 2005). To gain maximum benefits from the problem-solving task, they are strongly recommended to reflect on it and find out what they have and have not done well (Krogstie, 2009; Larmer et al., 2015).

Reflection means examining their own performance, using their experience and knowledge to identify their own strengths and weaknesses (Farrell, 2013; Ghaye, 2011). Understanding the good sides of their performance is essential so they can decide what they should continue doing in the future. Knowing what they lack doing is even more important because they can improve these specific areas of performance in the next project (Wallace, 2001). Thus, student teachers need to constantly reflect on their practice to ensure betterment as a part of professional development at the pre-service stage of their teaching career (Zwozdiak-Myers, 2012). By the time they enter the in-service stage and teach their students at school, reflective practice will be an activity that they do on a regular basis.

The present paper reports the EFL student teachers' reflections on PBL, in which they made a poster about a particular teaching method as the outcome. The methodology of the study will be elaborated in the next section, followed by the findings and the discussion. The paper will end with a concluding remark and the implications of the findings for the use of PBL in content courses of teacher training.

METHOD

The current study was interpretive research conducted to gain an in-depth understanding about the student teachers' performance in PBL from the perspective of the student teachers themselves through reflection (Ary et al., 2014). Thirty student teachers were taking the *ELT Methods* course where they worked in groups and presented the theoretical aspects of such language teaching methods as Grammar Translation Method, Direct Method, Audio Lingual Method, Communicative Language Teaching, and others in the first half of the semester. Then in the second half of the semester, they applied the theory into practice by teaching language skills and language components in mini-lessons, where their peers pretended to be their pupils. After they took the mid-term exam, the results indicated insufficient mastery of the concepts of language teaching methods. Anecdotal evidence revealed the student teachers still had difficulties distinguishing twelve teaching methods, so the teacher educator attempted to boost their understanding by asking them to devise a poster containing the basic principles of the language teaching method they had presented. The posters were then posted in the class blog to enable all student teachers to access them anytime and grasp the gist of each teaching method. After completing the project, the student teachers wrote reflective journals in three phases. In the first phase, they individually reflected on how well they performed in the project and reported it in a journal. They brought the individual reflective journal to the next phase, where they reflected about their performance as a group. Finally, they did reflection again

with the teacher educator as the mentor. The individual, group, and supervised reflective journals became the instruments of the study.

The above instruments yielded qualitative data, which were analyzed by constantly comparing the three sets of data. The data obtained from the individual reflective journal were classified into categories, and a code was assigned to each category. The same procedures applied to the data from the group reflective journals. Afterwards, the researcher sought the patterns in both and identified the areas of reflection which had not been addressed yet but potentially revealed compelling insights about how the student teachers viewed their own performance in PBL. Later, the researcher met with student teachers to facilitate the reflection about the unexplored areas in groups. The data from this reflection were then compared to the data from the individual and group reflections so the researcher understood not only what the student teachers examined about themselves while completing the project, but also how and why they did it. Finally, the categories in the previous coding were integrated into two core categories that became the umbrella concepts.

RESULTS AND DISCUSSION

The student teachers reflected on various aspects of PBL, which could be classified into two categories, namely cognitive and social aspects. According to the student teachers, PBL improved their cognitive abilities by providing opportunities to make good use of their creativity, practice higher-order thinking skills, and gain a deeper understanding of the learning materials. Firstly, many student teachers found designing the posters challenging, but at the same time, they derived pleasure from using their creativity in accomplishing this task. Although they employed poster templates available on the internet, they still needed to select the most appropriate color combination, pictures, and fonts to make the posters look more attractive and motivating. One of the participants, Fifi, reflected on this challenge and how she felt about it.

Fifi: While editing the first challenge is choosing the theme or looking for references to make an eye-catching poster. Next is how to balance the theme, the fonts, and the icons that I picked. ... I like to make something with Canva and enjoy the process of making it in this project: looking for the template, changing the inside, putting the icons that must suit the theme I chose, and deciding what points I had to include there. I knew the main point of doing a great task was that I enjoyed the process and did not make this a burden. This task made me understand more about what Direct Method is.

Despite the challenges, she maintained positive feelings about them, paving the way for her to overcome the hurdles. She searched for examples of posters on the internet and studied the details, then mobilized her creativity to devise a poster with her partners. This finding was consistent with the results of the study conducted by Chen and colleagues (2022), who found that PBL significantly improved the learners' creative thinking. Basically, PBL enables the learners to make good use of their creativity to produce a novel, original work in completing the project (Krauss & Boss, 2013; Larmer et al., 2015).

Additionally, the project also encouraged higher-order thinking abilities, such as synthesizing. In her reflection, a participant named Endah reported that she improved her ability to synthesize information about the teaching method: "Presenting the ideas related to the Participatory Approach is important and noteworthy. All principles needed to be presented briefly and clearly. I did it by searching for references from various sources and drawing only the important points. In this way, I practiced summarizing in interesting and creative ways." She admitted that she found it difficult to distinguish the pivotal information from the peripheral one at first, but working on it with her partners in this project sharpened her skills in selecting the most important concepts and arranging them into a good summary. This supported the previous study which demonstrated the significant effect of PBL on the learners' higher-order thinking skills (Loyens et al., 2023), which made sense because PBL was applied in learner-centered classes. The learners take charge of their own learning and make an effort to construct knowledge by performing more complex cognitive activities in Bloom's Taxonomy (applying, analyzing, synthesizing, and evaluating); consequently, PBL positively affects their thinking skills (Steenhuis & Rowland, 2018).

The last cognitive ability that improved due to PBL was grasping the concepts they had learned. For about eight weeks they studied language teaching methods and negotiated meaning with their peers in the classroom, then this project required them to revisit the teaching methods, resulting in deeper insight. Devising a poster provided them with opportunities to read more sources and negotiate meaning further with the group members, hence a better understanding of the materials. Jujuk, one of the participants, considered making the poster "a creative, interesting way of reviewing the materials." For her peer, Desy, the project even promoted learning by not only boosting their understanding but also conveying what they understand to others, as shown below.

Desy: Making this poster really helped me learn the Audio-lingual method. During the creation process, I had to understand the main concepts and principles of the method and how to communicate them visually. I also had to simplify complex information into a form that was easy for the audience to understand.

Evidence showed that teaching others could be an effective method of learning (Fiorella & Mayer, 2013; Jackson & Bruegmann, 2009; Roscoe, 2014). As shown in Desy's words above, learning the concepts with the readers of the posters in mind required more sophisticated cognitive processes, such as simplifying ideas and presenting them visually. Thus, learning by teaching others can produce better outcomes than learning for themselves because the learners expend more attempts to select the pivotal concepts and organize them for easier apprehension by others (Duran, 2017).

In addition to the above cognitive aspects, the student teachers also reflected on the social issues of PBL, which was understandable because PBL required them to collaborate with their peers in completing the project. The first one was developing a sense of responsibility due to the collaboration. Each group distributed equal tasks to the members so the completion of the project depended on their commitment to accomplish the tasks on time. One of the student teachers said she became more responsible and avoided procrastination to ensure her group could finish the poster by the due date. She tried to manage her time well and was satisfied with her self-discipline. This was in line with the

previous studies which found that the learners perceived an improved sense of responsibility (Ayish & Deveci, 2019; Rolina, 2014). Being responsible is indeed a personal quality that frequently develops in PBL due to the learner-centered nature of PBL (Wurdinger, 2016). They drive their own learning with guidance from the educator and are fully aware that the success of learning mainly depends on them, hence developing responsibility.

Another social aspect the student teachers gained from PBL was interpersonal skills, which refer to the skills involved in dealing with others. Working with the members of the group who possessed different opinions and characters potentially caused various conflicts. In his reflection, a student teacher expressed his exasperation due to a 'free-rider' in his group. Still, he succeeded in embracing this member so she took an active part in the group work eventually. Another student teacher had disagreements with the rest of the group about what information to include and how it would be presented in the poster. She introspected a lot during the conflicts and made strong efforts to have an open mind. As a result, she could settle the differences with her peers by a compromise. Because collaboration with peers is an important feature of PBL, conflicts among members of the groups commonly occur and can be task-related or personal (Lee et al., 2015). Occasionally the educator needs to teach strategies of conflict management to assist the members of the groups in resolving the conflict (Boss, 2015); however, the student teachers in this study managed to find the best solutions to the conflicts by themselves.

Finally, many student teachers reflected on the betterment of their communicative competence due to PBL. As EFL student teachers, they spoke in English when discussing the project outside the classroom, consulting the draft of the poster with the teacher educator, and presenting the poster in front of the other groups in class. One of them reported English as the language she preferred to use in the three situations above because she not only completed the project but also practiced speaking in English. She utilized the proverb 'killing two birds with one stone' to describe this, and was pleased with her improved speaking skills. Another student teacher felt that he knew what to say and how to say it in supportive academic fora such as discussions and presentations, partly due to the aforementioned conflicts. After participating in the discussions and presentations, he learned that making his statements and opinions as indirect as possible could save others' face and create a conducive atmosphere in the fora. He thought he made good progress concerning his communicative skills. Laverick (2019) argued that PBL could be used as a tool to improve EFL learners' fluency and critical thinking skills. Moreover, for the last two decades PBL has tended to integrate projects in content courses and language learning (Beckett et al. 2020) so EFL learners derive content and linguistic benefits from PBL. The present study supported this stance as it showed that student teachers gained both knowledge about teaching methods and communicative competence from the project of making posters about teaching methods.

CONCLUSION

Reflecting on PBL was beneficial for EFL student teachers because they became aware of their strengths and weaknesses in devising posters about ELT methods, as well as what they should do for betterment. The reflections revealed that PBL benefitted their cognition because they used their creativity, practiced higher-order thinking, and mastered the

materials better. In addition, by working collaboratively with their peers they developed a sense of responsibility, their interpersonal skills, and their communicative competence.

The implication of these findings is the integration of reflection into PBL because improvement occurs only after the student teachers understand what they have and have not done well. PBL is not merely completing a project with a product as the outcome, but rather it is an excellent means for the student teachers to improve their cognitive abilities and social skills. It is strongly recommended to encourage them to perform reflection while and after doing the tasks in PBL.

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