

The Implementation Of Project-Based Learning In Developing Students' English Skills: A Qualitative Study In Science Class

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Abstrak

This study aims to describe the implementation of Project-Based Learning in developing science education students' English skills and to know their perception toward the implementation of PjBL. A qualitative approach is applied in this study. The data were gathered from six science students of a private university in Tulungagung, Indonesia, during the second semester in the academic year 2024-2025. The result of the study revealed that PjBL positively develop students' English skills and allows them to explore their competence. They also have better self-confidence in performing their English, especially in speaking. Project-based learning provides beneficial effects for English as Foreign Language (EFL) learners, particularly for university students since they are now demanded to be able to master communication skill both in written and spoken text since they are now demanded to be able to master communication skill both in written and spoken text.

Keywords: *English skills development, Project-based learning*

INTRODUCTION

Inappropriate teaching approach could be barrier for students in developing their English skills since it could affect their learning process and outcomes. English plays an important role as a language of communication in this globalization era. Unfortunately there are still many students believe that mastering English is something difficult since they are not able to practice their English in daily life and they have difficulties in mastering English skills such as listening and speaking (Meladina & Putra, 2020), as well as speaking and writing even though they have spent their time to learn (Sirisrimangkorn, 2021). Having good learning motivation is not enough for developing English skills, the students still need more practice to improve their English skills (Santosa, 2017). These phenomenon show that the teaching method or approach

plays important role in developing students' English skills as well as the role of teacher as facilitator (Utami et al., 2020).

The burgeoning necessity for effective English language proficiency among non-English department students has highlighted the limitations of traditional teaching approach, encouraging teachers as facilitator to explore alternative approaches such as PjBL to better equip students in real-world communication. Some previous studies showed that PjBL was effective in developing students' English skills, especially speaking and listening (Sirisrimangkorn, 2021), and enhancing communication (Sedubun & Nurhayati, 2024) as well as oral and written communication (Kovalyova, Y. Y., Soboleva, A. V., & Kerimkulov, 2016)

With the pedagogical objective of students' English skills development through PjBL, this study intends to answer the

following questions: 1. How is the implementation of PjBL in English as Foreign Language (EFL) classroom? 2. How do students perceive the implementation of PjBL especially in developing their speaking skill?

METHOD

A qualitative approach was used in this study to unpack students' English skill through PjBL. This project was implemented in English class for science students at a private university in Tulungagung, East Java, Indonesia, during the second semester in the academic year 2024-2025. The participant of this study were six students majoring in science education program. The classes were conducted once a week for 90 minutes over approximately 16 weeks. The project deals with creating a presentation video related to a simple science research. Observation on students' process learning during the classes was conducted to answer the first objective of this study, while to answer second objective of this study the author used questionnaires that must be answered by all of the participants that will be triangulated using interview. The interview results then were using thematic analysis framework. Thematic analysis is a famous method for analyzing qualitative data that involves some patterns as a result of identification and reporting process. These results are then interpreted to have inherent meaning (Braun & Clarke, 2006; Naeem et al., 2023) There were 16 meetings conducted in this study to collect research data related to implementation of the project. The first meeting is introduction part where the lecturer conducted observation as pre-test as early

information related to the students' background knowledge about English for science. This activity was continued by explaining the learning objective of the English class including how the class will be conducted during one semester. In this meeting, the students as research participants were informed as well that they were going to create presentation video as their final project. The second, third and fourth meeting were conducted to drill students' vocabulary and comprehension of English for science experiment. The instruction medium used here were some simple science videos from social media and the learning focused on listening and speaking skills. The fifth, sixth and seventh meeting were focused on drilling students' comprehension on reading and writing paragraph related to simple science experiment. The eight meeting was used to evaluate students' achievement during seven meetings. The next meetings were conducted to prepare students in choosing their own topic for creating simple science experiment using English language. It took two meetings: ninth and tenth, to choose topic and started writing narration completed with procedure text. The eleventh to fifteenth meetings were used by students to discuss and do exercise how to do presentation. Here they were drilled to speak English, to pronounce the words and the sentences, and how to show their expression when they were doing presentation. The last meeting was conducted to record their presentation, then edit and upload the video to their own social media.

To answer second research question of this study, the participants were interviewed

in order to get information and to comprehend their thoughts about the implementation of the project-based learning related to their English skills development as well as to have data triangulation. The interview guide questions were tabulated in Table 1

Table 1. Interview guides questions on the implementation of PjBL on students' English Skills Development

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| 1. Are you familiar with project-based learning? |
| 2. What is your opinion about project-based learning implementation in our class? |
| 3. What is your opinion on project-based learning to develop your listening skill? |
| 4. What is your opinion on project-based learning to develop your listening and speaking skill? |
| 5. What is your opinion on project-based learning to develop your reading and writing skill? |

RESULT AND DISCUSSION

In this section, the findings of this study were described into two sections to ease the readers' understanding related to findings based on research questions. The first sub heading discussed about the implementation of project-based learning in English class for science students, and the second sub heading will be divided into five sub-heading that discussed about the students' perceptions toward the implementation of project-based learning.

The implementation of project-based learning in English class for science students

As stated previously, there were 16 meetings conducted in implementing project steps. At the first meeting, the lecturer observed the students' prior knowledge related to their English skills and their learning style. This need analysis step is important to do to decide the appropriate teaching method. The

lecturer finally chose project-based learning as method to focus on students-centered learning and determined presentation video as the final product. Since it was not the first time for students to have project in their class, they were already familiar that there would be a project they must executed as final task for their course. The problem occurred when they knew that the final project was to create presentation video in English. They felt that English was difficult for them so they worried that they could not do it well since they were not used to use English in daily life, they have limited vocabulary, poor grammar and pronunciation so they did not have good self-confidence to speak in English and create video recording. The lecturer then explained that there will be some meetings they should join. Each meeting would discuss about the steps how to learn English so they could prepare the steps to finish the project well. In this phase, the students were motivated and excited to join next meetings. The way the lecturer taught and explained the plan and learning goal was effective to encourage the students' learning motivation. It is also supported by other studies that the teacher's leadership and teaching strategies play important role in motivating students (Naz, Farah; Rasyid, 2021; Tulyakul, Singha; Werathummo, Amonwan; Khun-inkeeree, Hareesol; Rotsuwan, Witsanu; Reudhabibadh, 2022)

The second, third and fourth meetings were conducted to drill students' vocabulary and comprehension of English for science experiment and focused on drilling listening and speaking skills. In second and third

meeting the students were asked to watch and listen video played by the lecturer related to science experiment. When they were watching the videos, they had to make note related to the material played in the video. Here the lecturer taught the students how to make a note by mapping the steps of the experiment. The video was played repeated to ensure that students were able to make a note and remember how to pronounce the words and sentences they had written in their notes. As a result, the students still mispronouncing many English words in their notes. In fourth meeting, the students were asked to watch the video again but this time they had to focus on their pronunciations. In the end of the fourth meeting, the students were better in pronouncing the words and sentences. It showed that drilling method by watching video and listening to English expressions help students to develop their listening and speaking skills, as in line with the study conducted by (Halitopo, Manase, 2025; Pardede, 2018)

The fifth and sixth meetings were conducted to teach students how to write procedure text related to the video they had been watching since some previous meetings. In this phase, the students were divided into three groups, each group consisted of two students. Each groups had to prepare the text based on the video they have watched. This strategy made students were easier to learn how to read and write procedure text since they have familiar with the materials presented in the video. Seventh meeting was conducted to present students' procedure text. Each group had to present their works in front

of the class and when one group was presenting, the other groups became participants. The discussion run well; all of the students were active participating in the discussion because they have enough background knowledge related to the materials. In this phase, they discussed not only the procedure text of science experiment but also expression or narration for introduction and closing the video. They were actively giving correction and suggestion each other. They were so excited in doing discussion. This result are in line with study conducted by (Pospelova, 2021) stated that collaboration in writing engaged students to learn more related to the content of the text as well as language used.

The eighth meeting was used to asses and evaluate students' English skills development during previous meetings. It showed that there was positive development in four major skills; listening, speaking, reading and writing.

The ninth meeting was conducted to choose the topic. In this phase the student should choose a simple science experiment that will be presented in their videos. Simple here means that the ingredients they will use for experiment is low-cost and easy to get around the place they live. They should present the topic including the reason why the topic is chosen. In tenth meeting each student had to start writing narration completed with procedure text based on the chosen topic. In this phase they had to discuss and give feedback to their classmates' work. The lecturer's role was as facilitator to ensure the activity run well. Based on the question and

answer in the class, the students were motivated more to join next meetings.

The eleventh to thirteenth meetings were used by students to discuss and do exercise how to do presentation. In this phase, the students had to do presentation in the front of the class and they had feedback from both lecturer and other students. Here they were drilled to speak English, to pronounce the words and the sentences and how to show their expression when they were doing presentation. The students were exercised and motivated to do the presentation because they wanted to show their best performance when they do video recording of their presentation. In the fourth and fifteenth meeting, the students were ready to record their presentation and did some necessary video editing to create more interesting video.

The last meeting was conducted to record final students' presentation. It was done since there was one student who had not record his presentation due to technical errors on his camera. Finally, all of the students could record, edit and upload the video to their own social media.

The students' perceptions toward the implementation of project-based learning

The interview result showed that students are familiar with the project-based learning since their first semester.

I am familiar with this project-based learning since last semester. It is about how student create a project dealt with real activity in our daily life and have to do it to have final score (participant 1)

They are familiar with the project-based learning method since they became a university student. It means that they already

knew that in the end of the semester they should finish the project as their final task in order to pass the second semester. They know that they have to focus not only on the process but also on the result.

The students' opinion related to the implementation of project-based learning in their class was positive.

It is challenging, push me to spend more time to learn so I can understand the material and finish the project (participant 2)

At first it is hard for me, but the lecturer and classmates support me by giving advice and suggestion so I can finish my project (participant 3)

This project method allowed me to have courage to ask to the teacher about the materials that I do not understand. The teacher explained well by giving the example (participant 6)

The data showed that the implementation of PjBL motivated the students to learn more to acquire knowledge related to the material given by the lecturer. They were motivated to get deeper understanding by asking and discussing with the lecturer and other students. This atmosphere support them to engage themselves in learning English.

The students' opinion on project-based learning to develop their listening and speaking skills.

It is not easy to listen to native speakers speaking English but the teacher taught us how to listen and understand the spoken sentenced. I learn how to do it slowly but surely (participant 4).

I learn how to pronounce and show my expression when I am speaking English

sentences. It is really useful for me because it helps me finish my project (participant 5)

The students believe that they acquired more tips to listen English text that pronounced by foreigners and even native speakers through the audio recording played by the lecturer. It makes them know various accents from the speakers as well as they know how to pronounce the English words correctly. They also know how to show expression when they are speaking English in their presentation. This project-based learning motivates the students to learn English since they find benefits in it. It is in line with the study conducted by (Santosa, 2017; Tulyakul, Singha; Werathummo, Amonwan; Khun-inkeeree, Hareesol; Rotsuwan, Witsanu; Reudhabibadh, 2022)

The students' opinion on project-based learning to develop their reading and writing skills.

Reading and writing is a complicated work for me because of my limited vocabulary and poor grammar. Since the lecturer teach me how to write English procedure text, I find reading and writing is not difficult anymore. The text I wrote is based on my understanding about the steps of doing my simple science experience. It helps me to express my idea in writing and speaking. (Participant 6)

The students had positive opinion related to the project-based learning. The way the lecturer teaches play important role in engaging student's learning motivation as well as the topic and materials chosen. When the students have to read and write something familiar with their daily life, it is easier for them to express their idea in spoken and written English.

CONCLUSION

The study result revealed that, according to the observation and the science students' perception, Project-based Learning is an effective and motivating strategy for developing their major English skills; listening, speaking, reading and writing. Having the final project allows them to explore and implement their competence those four skills. They have better self-confidence in performing their English, especially in speaking. Project-based learning provides beneficial effects for EFL learners, particularly for university students since they are now demanded to be able to master communication skill both in written and spoken text

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