The Implementation of Project Based Learning in Blended Learning System to Improve English Speaking Skill of Polytechnic Students

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Abstract. This Classroom Action Research aims to determine the improvement in students' English speaking skill by implementing Project Based Learning in a Blended Learning system. This model of learning was conducted in two cycles consisting of four meetings in each of the cycle. The research began with a pre-test to determine initial speaking skills and language aspects which became the weaknesses of Polytechnic students in speaking English. The results of the pre-test then became the basis for implementing the Project Based Learning model. Online learning was conducted by using online media to observe the process of projects making and to submit those speaking projects which were regarded as post-test at the same time. Face-to-face learning, on the other hand, was carried out to discuss the learning topics before the speaking project assignment. The results of the study showed an improvement in students' English speaking skills after the implementation of Project Based learning. In the pre-test, the average score of students' speaking skills was only 58.7. In post-test 1 of cycle 1, the average increased to 63.5 and in post-test 2 of cycle 2 it increased to 70.1. In addition, the study revealed that Project Based Learning also succeeded in changing the students' learning attitude and in promoting students' creativity.

Keywords: Project Based Learning, Blended Learning, Online Media, Polytechnic

Introduction

Learning English at Raflesia Polytechnic, especially at the Electrical Engineering Study Program, focuses on efforts to improve students' communicative competence. The learning provides the students with the skills necessary to communicate in English in their future careers. Therefore, the learning activities are mostly in the form of speaking practice emphasized to several aspects; enriching English vocabulary especially related to Electrical Engineering, pronuncing the vocabulary correctly, selecting and using the vocabulary appropriately according to context, and speaking fluently. However, the practice of speaking, which is frequently done in groups, is still carried out in a simple way where students are assigned a certain topic and they practice the speaking task in front of the class. This learning method seems to need updating because based on student scores in the past semester and the result of interview with several students, students' speaking skills are still unsatisfactory with several indications; limited vocabulary, incorrect pronunciation, and lack of self-confidence. Students' weakness on those aspects above is in line to the previous research done in Electrical Engineering Study Program. The research reveals some students' problems in speaking English. First is in the term of pronunciation. Some technical vocabularies that the students admitted are not familiar with are mispronounced by the students during the presentation that hence requires them to clarify the meaning. Second is the problem of vocabulary. Students are lack of both common and technical vocabularies. As the result, their speaking frequently ends in long pause or silence. Third is the problem of anxiety which is reflected by the trembling voice the students made and by the students' avoidance on classmates' and lecturer's attention during speaking. This anxiety is resulted from the feeling of nervous as well as the fear of making mistake and getting negative

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evaluation from both classmates and lecturer. Those problems above then lead to condition in which students tend to postpone even avoid their turn in doing speaking task (Ariani, 2019).

In regard to the unsatisfactory of students' English speaking skill of the Electrical Engineering students, it is necessary to apply a more effective learning model. This learning model is expected to increase students' learning motivation which will ultimately affect their English speaking skill. One of the appropriate learning models according to the researchers is Project Based Learning. Project-Based Learning is considered as an appropriate learning to help students to improve their speaking skill (Kusumawati, 2019). This learning model has attracted a lot of interest from researchers recently due to its benefits and has been defined in various ways. Riswandi (2018) proposes that Project Based Learning is a learning that allows students to learn through a project which is decided and conducted by the students themselves associated by the teacher's help. Handrianto and Rahman (2018) suggest that Project Based Learning is one of experience-based learning presenting a meaningful experience for the students since the students go through every stage of project making started from planning, preparing, and completing project assignment. Project Based Learning is a student-centered learning involving students actively in the process of project making as the learning outcomes.

Due to the ongoing of Covid 19 pandemic and face-to-face learning restriction, Project Based Learning can be implemented by taking the advantage of technology development. Technology-based learning is well known as online learning or e-learning. This learning is at first intended for higher education by utilizing various online media available to achieve high quality and efficient learning (Simamora, 2020). Online learning offers flexible learning by the help of internet that can be access by students anywhere and anytime (Dhawan, 2020). Therefore, students' involvement in the learning process will increase for the online learning is not limited by time and space. It is clear then that online learning can be regarded as distance learning where both educators and students are not in one particular location, so they need technology, especially the internet as the learning media. Learning media can be said as tool used to convey material in the learning process (Boove as cited in Simamora, 2020). Learning media is claimed to greatly affect the effectiveness of learning if it is selected and designed according to the right instructional method.

In this study, however, Project Based Learning was not fully applied in online learning but in blended. Thus, the learning was conducted both offline and online. Researchers conducted offline learning which emphasized to the explanation of subject matter by having face to face interaction with the students in the classroom. Online learning, on the other hand, emphasized more to the students' learning outcome in the form of speaking project video. In this online learning, researchers and students utilized three online learning media; WhatsApp (WA), Zoom Meeting, and Google Classroom. These learning platforms were chosen with the consideration that all students own and master the use of each of them.

Theoritical Framework
Project Based Learning

Project Based Learning refers to one of the student-oriented learning models (student centered). This learning model involves students actively in learning activities in the form of project assignment (Praba, Artini, & Ramendra, 2018). Students have more opportunities to explore their talent since the learning process is dominated by the students and the teachers just take part to facilitate, motivate and help the students whenever they face problems during the project making. Hugerat (in Kholis and Aziz, 2019) defines Project Based Learning as a method that enables students to carry out a project producing a product, publication, or presentation as the learning outcome. In the same tone, Trisyagil, Ahmad & Kustiono (2020) propose Project Based Learning as innovative learning involving the project creating done independently by the students.

Specifically in language learning class, the implementation of Project Based Learning is believed to bring positive effects to students' learning progress. Lubis, Lubis & Ashadi (2018) point out that Project Based Learning significantly develops not only students' interpersonal

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communication but also their creativity. Torres and Rodriques (as cited in Kurniawati, Susanto & Munir, 2019) propose that Project Based Learning may improve students' oral production through the development of their lexical competence. At last but not least, Simbolon, Haryudin, & Efransyah (2019) state that Project Based Learning is beneficial to improve students' speaking skill for the students have the same speaking opportunity in presenting their project.

According to Kusumawati (2019), Project-based learning implementation involves some steps. The first is speculation. At this step, teacher and students may discuss about the project which is suitable to the learning objectives and students' need and condition. The second is designing the project activities including forming group, assigning role of group members, and planning how the project will be done. The third is conducting the project. In this step, the students do the project based on what has been planned before. They work in group, gather information, discuss with the members of their groups, and consult with their teacher whenever they encounter problems. The last step is performing and evaluating the project. These sequential steps are expected to enhance students' interest, motivation, and engagement as well as to provide meaningful and contextual learning for the students to practice their English speaking. In this study, those steps mentioned above were applied by researchers.

Blended Learning System

The development of technology, nowadays, plays a significant role in shifting the models of learning process. Thus, technology development has provided many online media that can be used for learning and may offers a different and an interesting circumstance for the students. One of learning models that takes the benefit of online media and frequently conducted by educaters especially on the going of Covid 19 is Blended Learning. Thorne (as cited in Ali and Sofa, 2018) defines Blended Learning as the strategy in combining the innovative and technological advancements of online learning with the interaction and participation of traditional learning, to meet the challenge of connecting learning and development to students' needs. Almost in the same tone, Simbolon, et all (2021) proposes Blended Learning in the term of hybrid mode of learning in which the learning process is the combination of conventional face to face interaction and online mode. These two ideas above clearly highlight that blended learning is the learning that takes the advantages of technology development by combining traditional face to face interaction with the online to support an interactive learning process.

Marsh (as cited in Gumartifa, Larasati, & Aurelia, 2020) points out some benefits of Blended Learning; it offers a more individualized learning experience, encourages independent and group learning, boosts students' engagement, accommodates a variety of learning styles, and offers an adaptable learning to meet the needs of students. From some opinions above, it can be inferred that Blended Learning can be one of alternative to provide a meaningful learning not only for the students but also for the teachers. On one side, it helps the students to have a better achievement through the combining face to face and online learning. On other side, it also helps the teachers to conduct the process of the learning itself. Blended Learning may solve the problem of distance and learning costs since the learning is not only held in the classroom but can be done elsewhere using online media. In fact, learning which is done only in the classroom limits the students' space to explore their potential. However, learning by using online media has proven succeed in gaining students' involvement and in avoiding the students' boredom during the process of learning.

Online Learning Media

Media selection greatly affects the learning process. Media help students to have better understanding on the lesson so the objective of the learning would be better achieved (Trisyagil, Ahmadi, & Kustiono, 2020). For online learning, various learning media are available in the internet nowadays. Both of teachers and students may access them anytime and anywhere to carry out the learning process. Some of those which are popular recently are Zoom Meeting, WhatsApp, and Google Classroom. Zoom Meeting is the platform provides video conferencing services that can be accessed from mobile devices, PCs or laptops. Zoom Meeting is basically

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an application for communicating via video. This application is provided free of charge for video conferences of up to 100 participants with a time limited of around 45 minutes. Meanwhile, for an extension of time, users of this application must pay a monthly subscription fee. Apart from being able to conduct meetings online, Zoom Meeting also provides a chat service that allows meeting participants to discuss as well as a share screen feature that can be used to display and share material.

Another application that is also popular today is WhatsApp. Due to students' familiarity with its use, WhatsApp has emerged as a popular online tool for educational purposes (Ristanti, 2020). WhatsApp is not only used for communication but also as a learning medium for it provides many features to facilitate the learning process include Group Chat, Share Documents, and Dropbox (Prajana, 2017). WhatsApp is an open source based online learning application by which teachers can provide materials, communicate, take attendance, and evaluate students. In English teaching class, WhatsApp is considered giving more opportunities for students to practice their English language skills for free. Besides, learning via WhatsApp allows for stronger bonds between teachers and students so that students may become sociable persons (Jasrial, 2018).

Next media which was introduced by Google in 2014 and often used for online leaning is Google Classroom. Google Classroom is a web-friendly application-based online learning program that can be used to support learning by providing actual learning activities and tasks. Furthermore, it makes the transferring and receiving knowledge simpler and grading tests paperless (Islam, 2018). Mafa (2018) mentions the benefits of using Google Classroom to support learning activities from the aspect of classroom management, flexibility, safety and security, and also collaboration. Google Classroom helps teachers create and manage classes easily, provide assignments and feedback to students more efficiently, and improve the quality of communication with students. The principal goal of Google Classroom is to streamline the process of sharing documents between educators and students. Google Classroom combines Google Drive to create and to submit assignment, Google Docs, Sheets, and Slides for writing, Gmail for communication, and Google Calendar for scheduling (Gumartifa, Larasati, & Aurelia, 2020). In this study, those three online media above are used to implement Project Based Learning.

Material and Method

This classroom action research was conducted at Electrical Engineering Study Program of Raflesia Polytechnic and involved the first semester students of the Odd Academic Year 2021/2022. Considering the problems in speaking English that the students had, the researchers initiated to choose Project Based Learning model to be implemented on "Bahasa Inggris Teknik I" subject. This learning was carried out in a blended system; the combination of online and offline learning. Online media was used in online learning observe students' activities during the project making and to submit students' speaking project which at the same time functioned as post-test. While face-to-face learning was conducted at the classroom to discuss the topics before the speaking project assignment. The Project Based Learning itself was conducted in two cycles with four meetings in each cycle. Each cycle consisted of the stages of planning, action, observation, and also reflection.

The data of the research were collected by doing test and observation. Pre-test was given to students to see their initial English speaking skill. It was carried out by conducting a simple direct speaking test regarding "student self-introduction" and "reasons for students to enter the Electrical Engineering Study Program". The aspects assessed in the test were pronunciation, vocabulary, fluency and grammar. Observation on the implementation of Project Based Learning was carried out by using online learning media. This media were used in the process of determining the project, planning the schedule, facilitating and monitoring the process of project making, and sending the project. At last post-test was used to evaluate students' learning outcomes after the implementation of Project Based Learning. The post-test was carried out 2 times, namely post-test 1 in cycle 1 and post-test 2 in cycle 2. The post-test

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was in the form of video recording speaking project. The aspects seen in post-tests were the same with pre-test; pronunciation, vocabulary, fluency, and grammar. Those aspects were assessed by using scoring rubric and the results were written in the assessment sheet. The scoring rubric used is as follow:

Table 1

Rubric to assess Speaking Skill (Scoring Rubric)

Aspect	Description	Score
Pronunciation	➢ Very clear and easy to understand	4
	➢ Easy to understand although the influence of mother tongue can be detected	3
	➢ There is a pronunciation problem so it is difficult to understand	2
	➢ There is a serious pronunciation problem so it can't be understood	1
Vocabulary	➢ Using vocabulary like native speakers and rich in vocabulary	4
	➢ Sometimes using inappropriate vocabulary so that the speaker has to explain again	3
	➢ Having limited vocabulary and often use vocabulary incorrectly so it is difficult to understand	2
	➢ Vocabulary is very limited and is not used properly so it is very difficult to understand	1
Fluency	➢ Fluent as a native speaker	4
	➢ Fairly fluent but a little disturbed by language problems	3
	➢ Less fluent due to language limitation and often hesitate	2
	➢ Not fluent and often stop for a long time	1
Grammar	➢ No or few grammatical errors	4
	➢ Sometimes make grammatical errors but does not affect meaning	3
	➢ Make many grammatical errors that affect the meaning	2
	➢ Make grammatical errors so often that make it difficult to understand	1

After giving the score for each aspects of speaking, the researchers calculated the total score and the final value that each student obtained. The final value of the students' speaking skill was then categorized into very good, good, enough, and low, with the following guidelines:

Table 2

Students' Speaking Skill Category

No.	Range of Value	Category
1	85-100	Very Good
2	70-84	Good
3	55-69	Enough

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4	0-54	Low

Results and Discussion
Results
Preliminary Observation and Pre-Test

Preliminary observations of students' learning conditions in the classroom showed that students' motivation in learning English was still low. Only a few students were willing and able to answer spoken questions given by the lecturer. Students tended to be passive and dominant in accepting what was presented by the lecturer so that the learning atmosphere seemed monotonous and uninteractive.

The above learning conditions affected students' skill, especially in communicating orally. Based on the pre-test result, the average score of students' speaking skills was only 58.7, where the lowest score was 50 and the highest score was 75. Furthermore, only 2 students (8.3%) got the good category. The pre-test revealed that students had very limited technical English vocabularies that resulted in very short time of presentation. The students also had problem in pronouncing the technical English vocabularies, especially those they were not accustomed to use and were not familiar with. In addition, students tended to neglect the use of appropriate grammar in their speaking. Thus, the students' speaking skill can be seen in the following table:

Table 3
Pre-Test Result

N	Lowest Score	Highest Score	Total Value	Average
24	50	75	1409.3	58.7

Table 4
The Category of Students' Speaking Skill

No.	Speaking Skill Category	Frequency	Percentage
1.	Very Good	0	0 %
2.	Good	2	8.3 %
3.	Enough	16	66.7%
4.	Low	6	25%
	Total	24	100%

From the results of this pre-test, the researchers then took action to implement Project Based Learning using online media in blended learning system with learning targets:
1) Students are able to pronounce English vocabulary especially technical vocabulary related to Electrical Engineering correctly.
2) Students are able to use appropriate and varied technical English vocabulary according to context.
3) Students are able to apply correct grammar when speaking English.
4) Students are able to communicate verbally in English more fluently.

Learning with this Project Based Learning model was carried out in two cycles; cycle 1 cycle 2.

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Cycle 1

In cycle 1, the Project Based Learning focused on "English Sentence Patterns: Nominal and Verbal Sentence". The first and the second meeting were conducted to give the better understanding on how Nominal Sentence and Verbal Sentence can be used to describe or explaining something. Written and spoken exercises were also given during the meetings to assure that the students had understood about the topics. Written exercises given in the first meeting were aimed at enriching students' vocabulary on Verb, Adjective, Adverb, and Noun related to Electrical Engineering and correcting their grammar. Some vocabularies intended to be memorized by the students were "repair, fix, operate, work, loyal, hardworking, discipline, able, on time, technician, manual instruction, workshop", etc. Thus, the written exercises were in the form of creating sentences using vocabularies provided and answering questions based on the texts. Spoken exercises conducted in the second meeting, on the other hand, were aimed at correcting students' mispronunciation on those vocabularies found in the written exercises. The exercises were "repeat after me" and "reading aloud". At the end of the second meeting, the researchers divided the students into several groups, explained about task 1 (speaking project 1), and assigned students to submit the project on topic "Describing the Electrical Engineering Study Program of the Polytechnic of Raflesia" which was in the form of video recording in Google Classroom.

The third meeting was an online learning focused on the project making. Observation on the process of speaking project 1 making was done through WA Group and Zoom Meeting. At this point, the researchers observed and discussed with students the process of doing project including confirmation of changes in group members, duration of video, technical and deadline for submitting project, and also solution to overcome the obstacles in sending the video, for an instance, the video could not be sent because the capacity was quite large.

In the forth meeting, each of students' speaking projects regarded as Post-test 1 was shown in the classroom by using projector and was also scored in terms of pronunciation, vocabulary, fluency and grammar. The results of the Post-test 1 show an improvement in students' speaking skill. The average of students' speaking skill increases from 58.7 to 63.5. Moreover, 4 students have achieved "good" speaking skill category.

Post-test 1 result is as follow:

Table 5
Post-test Result of Cycle 1

N	Lowest Score	Highest Score	Total Value	Average
24	50	81.3	1523.2	63.5

Table 6
The Category of Students' Speaking Skill

No.	Speaking Skill Category	Frequency	Percentage
1.	Very Good	0	0%
2.	Good	4	16.7%
3.	Enough	15	62.5%
4.	Low	5	20.8
	Total	24	100%

The improvement in students' speaking skill, although not significant, can be seen in the table above. After implementing the Project Based Learning in cycle 1, the average score of students' speaking skill increases from 58.7 to 63.5. In addition, 4 students (16.7%) have

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reached "good" speaking skill category. However, none of the students is able to be in "very" good category yet.

Analyzing post-test 1 served as the reflection of the implementation of Project Based Learning at cycle 1. The results of post-test 1 were written on the assessment sheet and became the consideration in preparing learning at cycle 2. Besides, the researchers also highlighted some problems that the students faced during the project and discussed those problems with the students as a continuation of reflection at cycle 1. Some problems noticed from the video recording of students speaking project 1 were:

1) Some students were still not able to pronounce the technical English vocabulary correctly and fluently.
2) The quality of the audio or sound produced in the video recording was not good in which the sound of video background was louder than the student's voice when presenting their speaking.
3) The speaking turn between one student and another student in the same group was not equal.
4) The duration of video recording was too short.

Cycle 2

At the beginning of cycle 2, the researchers created a blended learning scenario and designed a lesson plan for topic 2 "Describing Tools/ Electrical Appliances". After that, researchers prepared scoring, assessment sheet, and observation sheet which were the same as those used in cycle 1. Researchers carried out face-to-face learning in accordance with the Lesson Plan that had been designed (conducted 2 meetings). At meeting 1, the researchers gave explanation about English Sentence Patterns which can be used to describe the physical characteristics of an object by using adjectives (Describing Physical Features). Written exercise was conducted to see how far the students understood the topic. The exercise was in the form of rearrange words to create meaningful sentences. At meeting 2, the researchers explained about English Sentence Patterns used to describe non-physical characteristics of an object (its function or use) by using certain verbs (Describing Non-Physical Features). Written exercises were given along these meetings in the form of matching vocabularies to pictures provided and finding the synonym of words given. From these exercises, students could identify some vocabularies that they rarely used in speaking, such as "bulb" instead of "lamp", "appliances" instead of "equipment", "switch on/off" instead of "turn on/off", "permit" instead of "enable" and some others.

At the end of this meeting, speaking exercise was conducted to correct the mispronunciation of some vocabularies that the students' learned in topic 2 or experienced in cycle 1. Researchers played video of native speaker consisting of how those vocabularies should be correctly pronounced. After that, the students should do spoken exercise in the form of questions and answers related to the video. The researchers then divided the students into several groups and assigned speaking project 2 in Google Classroom. The researchers announced the division of groups and discussed the problems students faced in making speaking project 1 and the solutions in the WA Group and Zoom Meeting.

The researchers observed how students discussed speaking project 2 at the third meeting using WA Group and Zoom Meeting. Questions about how the process of making and sending speaking project 2 no longer existed because students already had experience going through the process in speaking project 1. The main discussion was only the determination of the tools/appliances to be presented in which there were different opinion among students of the same group.

Post-test 2 was conducted after the implementation of Project Based Learning with several revisions of learning activities. Post –test 2 was also in the form of speaking project video submitted to Google Classroom on topic "Describing Tool/ Electrical Appliances". The results of the speaking project then were scored and shown in the classroom at the forth meeting. All video recordings submitted then were also shown in the classroom at the forth

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meeting in order that the students could compare the previous with the recent one and take the lesson from it. Based on the results of speaking project 2, students' speaking skill once again shows an improvement. In cycle 1 the average student score is only 63.5 but in cycle 2 the average score rise to 70.1. In addition, there are 5 students reaching "very good" speaking skill category. The result of Post-test 2 is clearly seen in the table below:

Table 7
Post-test Result of Cycle 2

N	Min Score	Max Score	Total Value	Average
24	50	93.8	1682.2	70.1

Table 8
The Category of Students' Speaking Skill

No.	*Speaking Skill Category*	Frequency	Percentage
1.	Very Good	5	20.8%
2.	Good	7	29.2%
3.	Enough	7	29.2%
4.	Low	5	20.8%
	Total	24	100%

After revising the actions in cycle 2, the students' speaking skills again showed an improvement. In cycle 1 the average student score was only 63.5 but in cycle 2 the average score rose to 70.1. In this cycle, there were 5 students (20.8%) reached "very good" speaking skill category. While 7 students (29.2%) are in the "good category", 7 students (29.2%) are in "enough" category and 5 students (20.8%) are in the "low" category.

The comparison of students' speaking skill from the beginning to the end is illustrated in the following table and figure:

Table 9
The Comparison of Students' Speaking Skill

	Pre-test	Post-test 1	Post-test 2
Max Score	50	50	50
Min Scorel	75	81.3	93.8
Average	58.7	63.5	70.1
Speaking Skill Category:			
Very Good	0 %	0%	20.8%
Good	8.3 %	16.7%	29.2%
Enough	66.7%	62.5%	29.2%
Low	25%	20.8	20.8%

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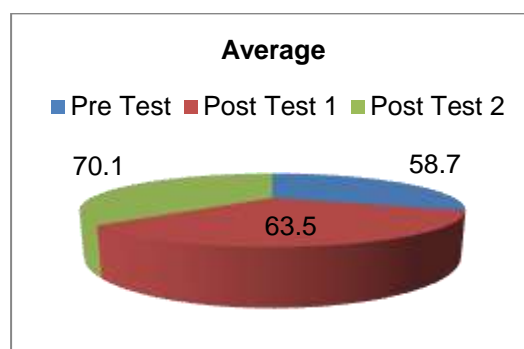
Figure 1. *The Comparison of Students' Speaking Skill*

Reflection in cycle 2 was carried out by observing the students' speaking post-test results. According to the post-test results, the students had achieved the improvement in every aspect of speaking. Therefore, it can be concluded that the implementation of Project Based Learning in Blended Learning System was effective and succeeded in improving English Speaking Skill of Polytechnic Students.

Discussion

In this study, Project based Learning was implemented in four meetings in each cycle 1 and cycle 2. The first and the second meeting were direct face to face learning in the classroom intended to give the understanding on the learning topics. The third was online learning purposed to provide the students opportunity to apply knowledge from the previous meetings into a speaking project. The forth, in addition, was also conducted in the classroom to observe and to discuss the results of the speaking projects done in the previous meeting.

The explanation of the implementation of Project Based Learning in each cycle in the results section above indicates that this model of learning proves to bring an improvement in students' speaking skill which can be seen by the increasing of average score from the pre-test, post-test 1 and post-test 2. Among four aspects scored in students speaking (pronunciation, vocabulary, fluency, and grammar), vocabulary and fluency was found to have higher improvement in every cycle than two others. The numbers of common and technical vocabularies used by the students in their speaking projects were increased although some of those were repetition. In spite of the grammar which was found to be neglected by the students, these varied vocabularies in fact affected the students' fluency in positive way in which the students were able to anticipate the long pause and even silence during their speaking. The result of this research is in line to Riswandi's research (2018). The implementation of PBL in teaching speaking may help the students to fulfill the criteria of speaking success. Since the students work in group, they are less afraid and have a higher motivation to get involved in the learning. Furthermore, working in group can help the students to train their pronunciation, enrich their vocabulary, and make them easier to find an idea in producing sentences while speaking. In addition, working on the project provides the students an authentic environment to practice their speaking skill (Sirisrimangkorn, 2021).

Another remarkable point of this study is that this learning model succeeds in changing students' learning attitudes. Direct observations which were done in the classroom during the written and spoken exercises shows that student were interested and actively involved in the process of learning. The students were no longer afraid to answer the questions given by the researchers and they even had more confidence to ask something which they were still confused about. Observation through WA Group and Zoom Meeting during the speaking project making also shows the same thing in which the students looked excited in discussing, making, and submitting the project as well as solving the problems encountered during those processes. This condition, from students' point of view, is resulted from some factors. First, students' feel

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more interested in learning the topic chosen by themselves. Second, students' prefer doing the speaking assignments in group so they can help each other whenever they have problems. At last, doing speaking project using online learning media is more challenging for the students than having common assignment usually done in the classroom. The changing in students' learning attitude according to Kusumawati (2019) was resulted from the learning designed appropriately to the students' idea and need. Therefore, students feel comfortable and interested during the learning process. In simple words, getting actively involved in all processes make the students not only get a good speaking achievement but also have extra skills which further contribute to the speaking achievement itself. Simbolon (2019) proposed that Project Based learning is not only help the students to achieve better speaking skill but also make the students building their self-confidence and having critical thinking as well as good presentation skill.

The project making is also found helping students to enlarge students' creativity. Encountering some problem appeared during the project encouraged and challenged the students to be more creative in finding the solution. As it is seen, the result of the video recording in speaking project 2 was presented so much better than the first video in speaking project 1 in terms of quality of the sound and the picture. Related to this finding, Lubis, Lubis, & Ashadi (2018) reported that Project Based Learning combined with Experiential Learning is proven to improve their students' interpersonal communication skill and their creativity in which the students successfully create creative video containing English persuasive text. Similar result is exposed by Praba, Artini, & Ramendra (2018). Project Based Learning promotes students' critical thinking and creativity that leads to improvement in stating ideas, constructing sentences, exhibiting various vocabularies, maintaining good structure, and making less error in spelling and pronunciation.

Conclusion

From the description of the research data and discussion above, it can be concluded that the Project Based Learning in a Blended Learning System by using online media can be applied in English learning class. This learning method is proven to improve the speaking skills of the first semester students of the Electrical Engineering Study Program of Raflesia Polytechnic. The improvement is especially noticeable in the aspects of enriching technical vocabulary in the field of Electrical Engineering and speaking fluently. Through Project Based Learning, students were able to use more varieties of vocabulary and to memorize them to be presented in their next project. Thus the improvement can be seen in the increase of the average score of student speaking skills obtained in pre-test, post-test 1, and post-test 2.

Besides improving student speaking skills, this Project Based Learning model is proven to increase students' creativity as well which can be seen from the results of audio visual recordings of students' speaking project 1 and speaking project 2. In addition, students engage actively and have high interest and motivation during the learning process through Project Based Learning. This is due to the fact that the students involve in determining the project based on their interest, designing the project, conducting the project, and presenting it by the support of their classmates of the same group.

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