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PROJECT-BASED LEARNING IN ENGLISH FOR SPECIFIC PURPOSES: ENHANCING STUDENTS' SPEAKING SKILL THROUGH VIDEO TUTORIAL PROJECT

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ABSTRACT

This article presents the results of the study on the impact of project-based learning on students' speaking achievement particularly their presentation skills. The project-based learning was designed through several stages with video tutorial as its final product. Students were required to upload their video tutorial to their YouTube channel in order to invite wider audience. Participants were 34 fourth-semester students enrolled in a four-year undergraduate program in Informatics Engineering (Computer System). The goal of this project was to drive students' engagement in speaking activities and enhance students' creativity in the context of English of Specific Purposes. This classroom action research was conducted in two cycles in which the quantitative data, i.e., three set of data including (pre-test and post-test1), (pre-test and post-test2) and (post-test1 and post-test2) were analyzed using SPSS statistic 21. The finding showed that the correlation coefficient (r) of the first data set was 0,902, the second data set was 0,712 and the third data set was 0,786. Based on the interpretation scale of correlation coefficient by Guilford (1965), the range of all the correlation coefficients implies that there is a strong relationship between before and after the treatment of PBL. Based on the result of analysis using SPSS statistics 21 with 95% level of confidence, it was revealed that $-t_{count} < -t_{table}$ (-12,085 < -2,01669, -16,352 <-2,01669 and -11,711<-2,01669) for all data set and the significance value of 2-tailed was less than 0,05 (0,000 < 0,05). It can be concluded that H1 was accepted and H0 was rejected signifying that there was a significant effect of PBL implementation in improving students' speaking achievement. In other words, the results showed a significant effect of PBL on students' presentation skills in accordance with their background knowledge in IT. Considering the positive result of this study, PBL is recommended to be applied in teaching speaking for students in the context of English for Specific Purposes as it can improve students' achievement.

Keywords: Project-based learning, English for Specific Purposes, presentation skill, video tutorial

ABSTRAK

Artikel ini menyajikan hasil studi tentang dampak pembelajaran berbasis proyek pada prestasi berbicara siswa terutama keterampilan presentasi mereka. Pembelajaran berbasis proyek dirancang melalui beberapa tahap dengan video tutorial sebagai produk akhirnya. Siswa diminta untuk mengunggah tutorial video mereka ke saluran YouTube mereka untuk mengundang audiens yang lebih luas. Partisipan adalah 34 mahasiswa semester empat yang terdaftar dalam program sarjana empat tahun di Teknik Informatika (Sistem Komputer). Tujuan dari proyek ini adalah untuk mendorong keterlibatan siswa

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dalam kegiatan berbicara dan meningkatkan kreativitas siswa dalam konteks Bahasa Inggris untuk Tujuan Khusus. Penelitian tindakan kelas ini dilakukan dalam dua siklus di mana data kuantitatif, yaitu, tiga set data termasuk (pre-test dan post-test1), (pre-test dan post-test2) dan (post-test1 dan post-test2) dianalisis menggunakan statistik SPSS 21. Temuan menunjukkan bahwa koefisien korelasi (r) dari set data pertama adalah 0,902, set data kedua adalah 0,712 dan set data ketiga adalah 0,786. Berdasarkan skala interpretasi koefisien korelasi oleh Guilford (1965), kisaran semua koefisien korelasi menyiratkan bahwa ada hubungan yang kuat antara sebelum dan sesudah pengobatan PBL. Berdasarkan hasil analisis menggunakan statistik SPSS 21 dengan tingkat kepercayaan 95%, terungkap bahwa -hitung <-tabel (-12.085 <-2.01669, -16.352 <-2.01669 dan -11.711 <-2.01669) untuk semua set data dan nilai signifikansi 2-tailed kurang dari 0,05 (0,000 <0,05). Dapat disimpulkan bahwa H1 diterima dan H0 ditolak menandakan bahwa ada pengaruh yang signifikan dari implementasi PBL dalam meningkatkan prestasi berbicara siswa. Dengan kata lain, hasil menunjukkan efek signifikan PBL pada keterampilan presentasi siswa sesuai dengan latar belakang pengetahuan mereka di bidang TI. Mempertimbangkan hasil positif dari penelitian ini, PBL direkomendasikan untuk diterapkan dalam pengajaran berbicara untuk siswa dalam konteks Bahasa Inggris untuk Tujuan Tertentu karena dapat meningkatkan prestasi siswa.

Kata kunci: pembelajaran berbasis proyek, Bahasa Inggris untuk Tujuan Khusus, keterampilan presentasi, video tutorial

I. INTRODUCTION

The process of teaching English for Specific Purposes posts a challenge as a result of its main goal which needs to be placed as the method to improve students' content learning and complementary part to students' soft ability development and characteristics related to the workplace. The schoolroom activities needs to be designed to fulfill the goal of aiding students to accumulate productive skills and impute the generic characteristics related to skilled ethics in professional career. Previous studies on the implementation of teacher-centered learning or standard teaching strategy stress on the very fact that it hardly contributes to students' collaboration, creativity, communication, and high order thinking. Cristillo (2010) alluded that teacher-centered pedagogy is related to top-down, stratified pedagogy and for reinforcing passive learning, and clogging the event of higher-level psychological feature skills. During this context, lecturers act as the main supply of knowledge and supply direct instruction in transferring knowledge to students. Direct instruction as a teacher-centered technique, sets the teacher as the one that has main power within the teaching and learning method, during which he/she alleged to encourage the scholars to construct their own learning. Rather than having discussion and communication with the students to develop their concepts, the students are assumed to own very little helpful information (Astawa, Artini, and Nitiasih, 2017).

In project-based learning, learners pursue information by asking queries that have piqued their natural curiosity (Bell, 2010: 39). Praba, Artini, and Ramendra (2018) highlighted that project-based learning provides the chance to form productive and pleasant schoolroom atmosphere through the combination of students' information, attitude, and skills. Student-centered approach like project-based learning is taken into account as helpful and relevant to the characteristics

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and goals of English for Specific Purposes (ESP). In detail, ESP aims at developing learners' not solely language however conjointly skilled understanding, that is analogous to the principles of PBL (Foss et al, 2007; Petersen & Nassaji, 2017). PBL will facilitate learners to explore in-depth the topics that interest them or are associated with their careers.

Some researchers have examined the effectiveness of the student-centered approach utilized in teaching speaking as well as the implementation of project-based learning that provides a chance for students to expertise self-reliant learning as seen in Maulany (2013), Dewi (2018), Permatasari (2013), Ichsan et.al (2017), Zare-Behtash and Sarlak (2017), Abubakar (2015), Bolsunovskaya et. al (2015), and Noom-ura (2013). Besides the benefits mentioned, project-based learning may be enforced in self-study activities, that is particularly necessary in relation to the reduced range of educational hours assigned for foreign language courses. Although those studies highlighted the utilization of PBL in speaking ability and ESP, this study differs from those previous researches as this study uses video tutorial as the final project uploaded to students' YouTube channels in order to facilitate students with media to express their digital creativity and as a platform to reach wider audience.

II. METHODS

This classroom action research employed quantitative design to analyze the impact of PBL on students' speaking achievement. The data was taken from pre-test and post-test of students' presentation before and after the implementation of PBL in the learning process. Thirty four students majoring in Computer System took part as subjects of this research. According to Creswell and Clark (2006:60), the quantitative data collection involves several steps: (i) Administration of a pre-test measuring the dependent variable (speaking skill) based on speaking rubric (ii) Application of the experimental treatment to the subjects, (iii) Administration of a post-test measuring the dependent variable (speaking skill) based on speaking rubric. This study applied the SPSS (Statistical Package for Social Sciences) statistics 21 to analyze the quantitative data. Paired samples statistics were used to determine the mean score in the pre-test and post-test in order to see if there was an improvement in students' achievement. Meanwhile, paired samples correlations were used to obtain the correlation coefficient (R). This analysis was used to analyze the relationship between before and after project-based learning was implemented in the learning process. A hypothesis in the process of analyzing data using SPSS was formulated, i.e., H0 means there was no significant impact of PBL on students' achievement during the implementation while H1 means there was a significant impact of PBL in improving students' speaking competence. The analysis was made based on the comparison of t_{count} and t_{table} and probability value. If $t_{count} < t_{table}$ or $-t_{count} > -t_{table}$ then H0 was accepted, if $t_{count} > t_{table}$ or $-t_{count} < -t_{table}$ then H0 was rejected. The level of significance was determined using level of confidence 95% or level of error 5% ($\alpha = 0.05$). If sig. value (α) < 0.05 then H0 was rejected and if sig. value (α) > 0.05 then H0 was accepted.

III. RESULT AND DISCUSSION

In this study, PBL was conducted in two cycles after the students got the material and did the assignment using the conventional lecture type approach.

ISSN 2442-6865
E-ISSN 2548-7639

Before PBL, students were given material on how to deliver an impressive presentation then they were asked to complete the task of making individual video tutorials on the topic 'software and hardware'. After the assignments were collected, PBL was implemented. The implementation of PBL in English III course consisted of several steps including modeling and project agreement, constructing a script outline, constructing a draft on video tutorial script, peer-review process, final revision and making a video tutorial, and presenting the final product to the wider audience. Students in the class were divided into groups of four or five so students could work collaboratively. Students worked together in teams, especially in the outline phase and the peer-review process then shifts their role to be responsible for developing the draft for their script individually. In this context, students developed self-confidence and self-management as they changed their role from from team-based work processes and work on scripts on individual basis.

The results of the pre-test and post-test assessments were analyzed using the SPSS 21 statistical program to analyze the effect of project-based learning on improving students' learning achievement in the field of speaking after going through two cycles. Paired samples statistics were used to find out the mean score in the pre-test and post-test and to see the difference between the two so that it can be used to determine the gain score. Meanwhile, paired samples correlations were used to obtain the correlation coefficient (R). This analysis was used to determine the strength of the relationship between before and after PBL was implemented in the learning process. Paired sample t-test was used to analyze whether there were significant differences in students' speaking achievement before and after the implementation of project-based learning.

The following table shows the results of the analysis of the pre-test scores with the post-tests in the first cycle, the pre-test scores with the second cycle post-tests, as well as the comparison between the results of the first cycle post-tests with the second cycle. The analysis shows that the average score of student pre-tests is 78.16 while the average value of speaking students after implementing PBL in the first cycle is 81.07. Meanwhile, the comparison of the average scores of pre-test students was 78.16 while the average value of writing students after the implementation of PBL in the second cycle is 84.57. The comparison between the average post-test scores in the first and second cycles also showed an increase from 81.07 to 84.57.

Tabel 1 Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pre_Test	78.16	34	3.672	.554
	Post_Test_I	81.07	34	3.106	.468
Pair 2	Pre_Test	78.16	34	3.672	.554
	Post_Test_II	84.57	34	2.937	.443
Pair 3	Post_Test_I	81.07	34	3.106	.468
	Post_Test_II	84.57	34	2.937	.443

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E-ISSN 2548-7639

Standard Deviation is a measure that shows the standard deviation of the data against its average value. If the standard deviation is small, then this shows the sample value of the population gathered or clustered around the average value. Because the value is almost the same as the average, it can be concluded that each sample member or population has similarities. A large standard deviation indicates a large difference between members of the population, therefore a high standard deviation is considered unfavorable.

Comparison 1 (pre-test and post-test first cycle):
In this case, the standard deviation value in the post-test I data (3.106) is smaller than the pre-test (3.672), which shows the post-test I data is better than the pre-test.

Comparison 2 (pre-test and post-test second cycle):
In this case, the standard deviation value of the post-test II data (2,937) is smaller than the pre-test (3,672), which shows the post-test II data is better than the pre-test.

Comparison 3 (first cycle post-test and second cycle post-test):
In this case, the standard deviation value in the post-test II data (2,937) is smaller than the post-test I (3,106), which shows the second cycle post-test data is better than the first cycle post-test.

Tabel 2 Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	Pre_Test & Post_Test_I	34	.902	.000
Pair 2	Pre_Test & Post_Test_II	34	.712	.000
Pair 3	Post_Test_I & Post_Test_II	34	.786	.000

This analysis is used to determine the strength of the weak relationship between before and after the flipped learning method was applied. Exposure to this correlation is divided into three sections according to the comparison of value analyzes made.

Comparison I:
Based on the analysis results obtained by the correlation coefficient (R) = 0.902. Furthermore, based on the high or low relationship, the correlation coefficient (R) of = 0.902 lies between 0.901-0.100 which means the correlation is strong. The probability value also shows that it is still below 0.05 (Data shows the significance value of the output is 0.00). This means that there is a strong or high positive relationship between before participating in project based learning and after participating in project based learning.

Comparison II:
Based on the analysis results obtained by the correlation coefficient (R) = 0.712. Furthermore, based on the high or low of the relationship, the correlation coefficient (R) of = 0.712 lies between 0.701-0.900 which means the correlation is strong. The probability value also shows that it is still below 0.05 (Data shows the significance value of the output is 0.00). This means that there is a strong or high positive relationship between

ISSN 2442-6865
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before participating in project based learning and after participating in project based learning.

Comparison III:

Based on the analysis results obtained by the correlation coefficient (R) = 0.786. Furthermore, based on the high or low of the relationship, the correlation coefficient (R) of = 0.786 lies between 0.701-0.900 which means the correlation is strong. The probability value also shows that it is still below 0.05 (Data shows the significance value of the output is 0.00). This means that there is a strong or high positive relationship between before participating in project based learning and after participating in project based learning.

Tabel 3 Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Pre_Test - Post_Test_I	-2.909	1.597	.241	-3.395	-2.424	-12.085	43	.000
Pair 2	Pre_Test - Post_Test_II	-6.409	2.600	.392	-7.200	-5.619	-16.352	43	.000
Pair 3	Post_Test_I - Post_Test_II	-3.500	1.982	.299	-4.103	-2.897	-11.711	43	.000

This test is used to determine whether there is an average difference between two sample groups that are paired. The hypothesis formulated in this statistical test is H0, which means there is no significant influence between before participating in project based learning and after participating in project based learning and H1, which means there is a significant influence between beforeand after the implementation of project based learning. Based on the comparison of t_{value} and t_{table}, if $t_{value}<t_{table}$ or $-t_{value}> -t_{table}$ then H0 is accepted, whereas if $t_{value}> t_{table}$ or $-t_{value}<-t_{table}$ then H0 is rejected. Level of Significance is determined using a degree of confidence of 95% or an error rate of 5% ($\alpha = 0.05$). Where the 95% confidence level and sig. (α) = 0.05, then the value of df (degree of freedom) or degree of freedom = (nk) = 44 - 1 = 43 is obtained. With a two-tailed test, each side is of $\alpha / 2 = 0.05 / 2 = 0.025$ to determine the value of t_{table}. The value of t_{table} (0.025.43) is ± 2.01669.

The elaboration of the analysis results on three data sets can be seen as follows:

Comparison I:

The results of the study using the SPSS 21 statistical program at 95% confidence level showed that t_{count} was -12.085, smaller than t_{table} which was -2.01669 then H0 was rejected, meaning there was a significant influence between

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before and after the implementation of project based learning.

Comparison II:

The results of the study using the SPSS 21 statistical program at 95% confidence level showed that t_{count} was -16,352, smaller than t_{table} which was -2,01669 then H0 was rejected, meaning there was a significant influence between before and after the implementation of project based learning.

Comparison III:

The results of the study using the SPSS 21 statistical program at 95% confidence level showed that t_{count} was -11.711, smaller than t_{table} which was -2.01669 then H0 was rejected, meaning there was a significant influence between before and after the implementation of project based learning.

Analysis on the probability value is based on a two-tailed test. Test criteria is done by looking at the value of sig (α) where if the value of sig (α) <0.05 then H0 is rejected, and if the value of sig (α)> 0.05 then H0 is accepted. According to the output, the significant level shows that 0,000 <0.05 then H0 is rejected and H1 is accepted. This means that there is a significant influence between before and after the implementation of project based learning. Based on these two decision makings, it can be concluded that project based learning is effective in improving students' speaking abilities.

In spite of the distinction in the kind of conclusive items and stage utilized in publishing the final product, the aftereffect of information examination in this investigation is like the findings detailed by other EFL researchers in Indonesia. Astawa, Artini and Nitiasih (2017) announced the huge impact of students profitable aptitudes when being educated by utilizing PBL. In addition, PBL upgraded students' learning quality in term of excitement, certainty, imagination, self-coordinated and synergistic learning capacity, while from the teachers' part, PBL advanced teachers' inspiration and fulfillment in educating.

Alluding to the factual investigation on students' pre-test and post-test, a study led by Dewi (2018) likewise indicated comparative outcome in which the researcher has presumed that the utilization of the PBL strategy could improve the students' speaking accomplishment. Permatasari (2013) uncovered that expressing feedbacks or comments helped students to improve their speaking expertise on the grounds that the conversation urged them to associate with their companions in small group before they started to talk in a bigger group. Students with low competence in speaking could improve their aptitude through task based discovering that was demonstrated by the expansion in students' group cooperation. Finally, students' scores were improved in light of the fact that they collaborated well in group discussion.

Improvement in students' scores in this present examination additionally bolstered by the research findings in Ichsan, et. al (2017) which demonstrated that there was an enhancement for students' speaking ability through task based especially in precision and vocabulary. Abubakar (2015) further underlined through project completion, the students were empowered to be effectively associated with group discussion and sharing ideas.

The findings in this present study was also supported by the results from past researches, unmistakably the implementation of PBL has demonstrated to be a powerful training technique in improving students' speaking capability contrasted with the traditional strategy. Past studies including Praba, et.al Artini

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and Ramendra (2018:6) and Sukerti and Yuliantini (2018:7) mentioned that constructive outcomes on content learning, pragmatic aptitudes and learning self-sufficiency. Students chose how to approach an issue and what exercises to seek after. Their learning was intrinsically profitable in light of the fact that it was associated with something genuine and included grown-up aptitudes, for example, joint effort and reflection.

IV. CONCLUSION

Based on the discussion and finding, it can be concluded that project-based learning can be one of effective ways in teaching ESP course. The result of this study emphasizes on the positive impact of project-based learning on students' speaking achievement. The quantitative analysis using SPSS statistics 21 revealed a significant difference in students' speaking achievement before and after PBL was implemented. In other words, the speaking competency of the students' taught with PBL was better than those taught with the traditional teaching method. PBL could assist students to gain not only exposures on the language content but also learned how to work in groups. Furthermore, being able to explore the material based on their major, PBL was able to engage students in the course since students spent their classroom activities to focus on material on IT. Referring to these findings, it is recommended that PBL should be considered as a strategy for teaching English in higher education, especially in the context of teaching a productive skill including speaking because it can also improve the soft skills required in the workplace.

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