

THE IMPACTS OF PROJECT BASED LEARNING MODEL ON STUDENTS' LEARNING OUTCOMES IN ENGLISH LECTURES

Aswadi Jaya¹⁾, Rudi Hartono²⁾, Sri Wahyuni³⁾, Henrikus Joko Yulianto⁴⁾

^{1, 2, 3, 4)} English Language Education

Universitas Negeri Semarang

Semarang, Indonesia

E-mail: rudi.hartono@mail.unnes.ac.id

Abstract

The lack of education that inspires students to apply what they have learned to meaningfully and purposefully handle real-world problems is one of the problems of studying English. The aim of this study is to investigate the effects of the Project Based Learning model on learning outcomes in class system English lectures. Data from the experimental and control groups were gathered for this quasi-experimental study using pre- and post-test questionnaires and tests. One method of data analysis is descriptive analysis. The average posttest experimental value using the PBL model is 80.00, while the average posttest control using the conventional approach is 86.78. Thus, project-based learning has an impact on students' learning outcomes in English-related subjects. Furthermore, there are differences in the learning outcomes of students using the Project Based Learning Model compared to the traditional method.

Keywords : PjBL, English, Learning Outcomes, Project Based Learning

Introduction

English lectures play a crucial role in education as they help students develop their language skills, critical thinking abilities, and communication techniques. Through lectures, students are exposed to a wide range of literary works, language structures, and cultural perspectives that broaden their understanding of the world around them. Additionally, English lectures provide students with the opportunity to analyze and interpret complex texts, fostering their analytical and interpretive skills. Laz (2020), overall, English lectures serve as a cornerstone in the educational process, equipping students with the tools they need to succeed in academia and beyond.

Speaking is the crucial aspect of acquiring English language proficiency. For numerous students, the ability to verbally communicate in a foreign language is more essential than the ability to comprehend written text or produce written content. What distinguishes the Revolution 5.0 age is the utilization of digital technology in educational activities. This enables learning to take place without any constraints of time

or space, allowing for the development of productive skills (Baha, 2017). The advent of the fifth industrial revolution necessitates the need for the modern educational method to be pertinent and applicable (Laz, 2020; Sulastris et al., 2021). Learning actions performed by pupils are commonly known as learning. It must be employed in the classroom by applying the paradigm. Fitrah et al. (2022) and Komara (2018) assert that students in this novel educational paradigm adopt a constructivist approach and actively generate and utilize information in innovative ways. The essential abilities that education must excel in during the 21st century include creativity and innovation, critical thinking and problem-solving, communication, and teamwork (Santyasa, 2020). The government is striving to improve Indonesian education in order to better conform to the requirements of the twenty-first century (Noviyanti et al., 2019; Pitt et al., 2015; Yudha et al., 2018). The government aims to enhance the 2013 curriculum and standards for the learning process (Isnaeni et al., 2021; Syawaludin et al., 2019).

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In the current era following the Covid19 pandemic, most learning takes place both online and offline, however some offline, in-person meetings or mixed learning still take place. Because of this, instructors have to use a variety of techniques to share their knowledge and aid students in understanding the lectures that the course instructor is giving. The leadership policy at UPGRIP for Personality Development to transform the courses that were previously scattered across each study program into courses is the proper policy in terms of budget and space efficiency as well as diversity; nonetheless, the impacts that frequently appear in the policy. Diversity allows us to view this from the perspective that student skills range widely and are diverse. These differences arise in the course of learning; whereas some students pick up information rapidly, others require more time to understand what the lecturer is trying to teach them. Consequently, there may be a comprehension gap amongst students in the same group. General English used to be offered as a course at UPGRIP Palembang across all degree programs. Today, however, students from all academic programs at UPGRIP Palembang, chosen at random, are taught it in groups. A portion of the student body is drawn from programs in social sciences, law, language and arts, engineering, educational sciences, and medicine. Each student's perception of what it takes to learn a language is unique, which makes this condition very vulnerable to each student's success in learning. In fact, learning difficulties are still present in Indonesia, especially when it comes to courses including English. One problem with English studies in higher education is that little emphasis is placed on having students apply what they've learned to real-world problems or personal fulfillment. Awan (2020). Students have previously been required to complete tasks that are relevant to their education in order to practice problem solving on their own at home through homework. With homework,

students just have to finish or work on questions that have been provided by the teacher. This is in contrast to projects, where students can increase their own knowledge via creativity and innovation. The solution to this problem is to apply a learning model. The chosen learning model must consider the characteristics of learning English, including the spiral method, tiered English learning, emphasizing a rational mindset, and maintaining consistent truth. (Harni, 2021; Ismail, 2018). Furthermore, the learning model must optimize the students' learning outcomes. Among the several learning approaches that can be employed is project-based learning. The project-based learning model is an instructional approach that involves students in meaningful tasks like problem-solving and allows them to work autonomously to produce their own learning products. Muskania et al. (2017); Setyowati et al. (2018). Project-based learning, sometimes referred to as project basis learning, emphasizes students' ability to learn independently by addressing problems (Krismawati, 2019; Sa'dulloh, 2021). A more beneficial and engaging learning experience for students can be provided by the project-based learning strategy, according to Mutakinati et al. (2018) and Yamin et al. (2020). To improve students' learning outcomes, project work in project-based learning looks at their learning activities, creativity, and process (Fitri et al., 2018; Ramadhani et al., 2021; Tasci, 2015). Prior research indicates that in science education, project-based learning can enhance students' scientific literacy (Sakti et al., 2021). Use the project-based learning (Pjbl) learning technique to improve writing skills (Sunarsih, 2016). Enhancing learning outcomes by combining PowerPoint content with problem-based learning (Sa'dulloh, 2021). The purpose of this study is to analyze the effects of the Project Base Learning-based learning model on learning outcomes in group system English lectures.

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Methodology

This study's quasi-experimental research methodology utilizes pre- and post-test questions to collect data from both the experimental and control groups. The experimental class employs a project-based learning approach, while the control class follows a traditional learning paradigm. Using this data collection method, we gathered information for both the experimental and control groups in the form of pre- and post-test results. Descriptive analysis is a data analysis method that involves doing tests for homogeneity, normality, independent sample t test, Wilcoxon test, paired sample test, and Man Whitney test (if the data is not normally distributed). This study is classified as experimental research as it incorporates quantitative descriptive data analysis alongside experimental and control models. Students enrolled in GE English classes were divided into two groups and each group was given the experimental and control models. There are 100 pupils in the total population, with a sample of 50 students for each model or group.

Results and Discussion

Results

The study results indicate that descriptive analysis can provide the following information: the total number of respondents (N), the average value (Mean), the standard deviation (Std Deviation), the minimum value (Min), the maximum value (Max), the sum, and the mean. The Kolmogorov normality test is used to determine if the residual value follows a normal distribution. If the residual value is predicted to follow a normal distribution with a significance level greater than 0.05, it is said to be normally distributed. Conversely, if the significance level is less than 0.05, it is considered to be non-normally distributed. The first pair of the Paired Sample test shows a statistically

significant difference between the experimental class groups before and after the test, with a two-tailed significance level. The obtained value of 0.000 is smaller than the threshold of 0.05, indicating a significant result. The control class group's pre- and post-test results indicate a statistically significant difference in Pair 2, as determined by the Paired Sample test. The obtained value of 0.000 is lower than the significance level of 0.05. The Paired Samples Correlations analysis demonstrates that the experiment had a significant impact on the study's findings, resulting in a notable increase in student scores between Pairs 1 and 2. The control group experienced a gain of approximately 1.24 points, whereas the experimental class saw a rise of around 1.38 points. The homogeneity test aims to determine whether the variance (diversity) of data from two or more groups is uniform (same) or varied (not the same). In contrast to this investigation, the test is utilized to ascertain the homogeneity of the variance between the experimental class posttest data (PjBL) and the control class posttest data (conventional). The average experimental posttest score for the PBL model is 80.00, while the average control posttest score for the traditional model is 86.78. This suggests that there is minimal distinction between the PBL model and the conventional strategy, maybe due to the experimental class receiving a greater amount of therapy within a shorter duration.

Therefore, the Project-Based Learning instructional approach has a significant influence on students' academic achievements in subjects connected to the English language. Moreover, there exist disparities in the learning outcomes of students between the Project Based Learning model and the traditional approach.

Discussion

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Research analysis indicates that the implementation of the Project Based Learning instructional approach has a significant impact on students' academic performance in English courses. The project-based learning paradigm enhances students' engagement in problem-solving, independent decision-making, and strategic decision-making. Given the difficulties that have arisen, students formulate a strategy to identify resolutions for the issues. In order to surmount the challenges they encounter, students engage in collaboration to arrange and acquire information. Students are encouraged to prioritize group projects that involve student accountability and participation while using the project-based learning method in the classroom. These projects should also be relevant to their local environment and involve experiments to fulfill the assigned tasks. The references cited are Laz et al., 2020 and Marzuki, 2017. Consequently, the learning process becomes focused on the student, and they actively participate in both individual and collaborative initiatives.

The second observation reveals that there are variations in student learning outcomes between the conventional approach and the Project Based Learning paradigm. Theoretically, disparities in learning outcomes arise from the lack of significant findings among students who study using normal learning models. Conventional learning models mostly include students passively listening to the teacher's lectures, resulting in a teaching approach that is more focused on the teacher. (Siswinarti, 2019; Faraniza, 2021; Houseal et al., 2014). Project-based learning is a more effective paradigm compared to traditional teaching methodologies. Research indicates that a significant proportion of students who participate in project-based learning are more likely to attain excellent scores in scientific learning objectives. (Dewi et al., 2020; Pratiwi et al., 2018;

Rati et al., 2017). Nevertheless, the execution of a plan based on learning is a time-consuming process. The study's findings are expected to facilitate the enhancement of learning outcomes for both teachers and students.

Conclusions

Due to the experimental character of this study, the experimental class was given additional attention. The Project Based Learning model was suitable model or approach for the experimental class, distinguishing it from the control group that followed the usual model. The data suggest that there were differences in student learning outcomes between the Project Based Learning model and the traditional model. Additionally, the Project Based Learning model had an impact on student learning outcomes in English subjects.

References

- Awan, A. (2020). Problems of Online Learning during the Covid-19 Pandemic and Solution. *The solution. Journal of Pedagogy*, 7(4), 281. <https://doi.org/10.33394/jp.v7i4.2941>.
- Baha, M., Azeem, M., & Dogar, A. H. (2017). Factors affecting students' English speaking skills. *British Journal of Arts and Social Science*, 2(1), 34–50.
- Che-Aron, Z., & Matcha, W. (2023). Project-Based Learning with Gallery Walk: The Association with the Learning Motivation and Achievement. *International Journal of Modern Education and Computer Science*, 15(5), 1–13. <https://doi.org/10.5815/ijmecs.2023.05.01>
- Dewi, MSA, & Lestari, NAP (2020). Project-Based Interactive E-Modules on Student Learning Outcomes. *Scientific Journal of Education and Learning*, 4(3), 433–441. <https://doi.org/10.23887/jipp.v4i3.28035>.
- Dewi, NSN, Supriyono, Y., & Saputra, Y.

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- (2020). Development of Gamification-Based Language Learning Media for Teachers in the Al Amin Sindangkasih-Ciamis Islamic Boarding School Environment. *E-Dimas: Journal of Community Service*, 11(3), 382–387. <https://doi.org/10.26877/e-dimas.v11i3.5146>.
- Faraniza, Z. (2021). Blended learning best practice to answer 21 st century demands. *Journal of Physics: Conference Series*, 1940(1), 012122. <https://doi.org/10.1088/17426596/1940/1/012122>.
- Fitrah, A., Yantoro, Y., & Hayati, S. (2022). Teacher Strategies in Active Learning Through a Scientific Approach in Realizing 21st Century Learning. *Basicedu Journal*, 6(2), 29432952. <https://doi.org/10.31004/basicedu.v6i2.2511>.
- Fitri, H., Dasna, IW, & Suharjo, S. (2018). The Influence of the Project Based Learning (PjBL) Model on Higher Level Thinking Abilities in View of the Achievement Motivation of Grade IV Elementary School Students. *Brilliant: Research and Conceptual Journal*, 3(2), 201. <https://doi.org/10.28926/brilliant.v3i2.187>.
- Harni. (2021). Application of the Inquiry Learning Model to Increase Student Motivation and Learning Outcomes on the Material of Light and Its Properties at SD Negeri 2 Uebone. *Journal of Pedagogy*, 8(2), 181–189. <https://doi.org/10.33394/jp.v8i2.3481>.
- Hughes, R. (2013). *Teaching and Researching: Speaking*. Routledge. <https://doi.org/https://doi.org/10.4324/9781315833736>
- Houseal, A. K., Abd-El-Khalick, F., & Destefano, L. (2014). Impact of a student-teacher-scientist partnership on students' and teachers' content knowledge, attitudes toward science, and pedagogical practices. *Journal of Research in Science Teaching*, 51(1), 84–115. <https://doi.org/10.1002/tea.21126>.
- Ismail, R. (2018). Comparison of the Effectiveness of Project-Based Learning and Problem-Based Learning in View of the Achievement of Learning Goals. *Pythagoras: Journal of Mathematics Education*, 13(2), 181–188. <https://doi.org/10.21831/pg.v13i2.23595>.
- Isnaeni, W., Sujatmiko, YA, & Pujiasih, P. (2021). Analysis Of The Role Of Android-Based Learning Media In Learning Critical Thinking Skills And Scientific Attitude. *Indonesian Science Education Journal*, 10(4), 607-617. <https://doi.org/10.15294/jpii.v10i4.27597>.
- Komara, E. (2018). Strengthening Character Education and 21st Century Learning. *SIPATAHOENAN: South-East Asian Journal for Youth, Sports & Health Education*, 4(1), 17–26. <https://doi.org/10.2121/sip.v4i1.991>.
- Krismawati, NU (2019). Development of Teaching Materials for Historical Writing Based on the Project Base Learning Model. *Indonesian Journal of Social Science Education (IJSSE)*, 1(2), 156–170. <https://doi.org/10.29300/ijssse.v1i2.1905>.
- Laz, I., Ganefri, & Usmeldi. (2020). Effectiveness of Project Based Learning E-Module Development in Electric Motor Installation Subjects. *Scientific Journal of Education and Learning*, 3(3), 306–315. <https://doi.org/10.23887/jipp.v3i3.21840>.
- Laz, D. (2020). Education in the Era of Industrial Revolution 4.0. *Sundermaan Journal*, 1(1). <https://doi.org/10.36588/sundermann.v1i1.18>.
- Lin, E., Shi, Q., Wang, J., Zhang, S., & Hui, L. (2012). Initial motivations for teaching: Comparison between pre-service teachers in the United States and China. *Asia Pacific Journal of Teacher Education*, 40(3), 227–248.
- Mark, F. (2006). Promoting discussion in the science classroom using gallery walks. *Journal of College Science Teaching*; Washington, 36(1), 27-31
- Marzuki, & B. (2017). The Influence Of

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- Problem-Based Learning And Project Citizen Model In The Civic Education Learning On Student's Critical Thinking Ability And Self Discipline. *Educational Horizons*, 36(3). <https://doi.org/10.21831/cp.v36i3.14675>.
- Muskania, RT, & Wilujeng, I. (2017). Development of Project Base Learning Learning Tools to Provide Foundational Knowledge and Improve Scientific Literacy. *Journal of Educational Horizons*, 36(1), 34–43. <https://doi.org/10.21831/cp.v36i1.8830>.
- Mutakinati, & Anwari. (2018). Analysis Of Students' Critical Thinking Skill Of Middle School Through Stem Education Project Base Learning. *Indonesian Journal of Science Education*, 7(1), 54–65. <https://doi.org/10.15294/jpii.v7i1.10495>.
- Noviyanti, E., Rusdi, R., & Ristanto, RH (2019). Guided Discovery Learning Based on Internet and Self Concept: Enhancing Student's Critical Thinking in Biology. *Indonesian Journal of Biology Education*, 2(1), 7–14. <https://doi.org/10.31002/ijobe.v2i1.1196>.
- Pitt, V., Powis, D., Levett-Jones, T., & Hunter, S. (2015). The influence of critical thinking skills on performance and progression in a pre-registration nursing program. *Nurse Education Today*, 35(1), 125–131. <https://doi.org/10.1016/j.nedt.2014.08.006>.
- Pratiwi, NPEY, Pudjawan, K., & Sukmana, AIWIY (2018). Development of Project-Based Interactive Learning Multimedia in Indonesian Language Subjects for Class V students. *Edutech Ganesha Education University*, 6, 123–133. <https://doi.org/10.23887/jeu.v6i1.20277>.
- Ramadhani, SP, MS, Z., & Fahrurrozi. (2021). Analysis of Design Needs for Development of a Project Based Learning Science Model to Improve Students' Critical Thinking in Elementary Schools. *BASICEDU Journal*, 5(4), 1819–1824. <https://doi.org/10.31004/basicedu.v5i4.1047>.
- Rati, NW, Kusmaryatni, N., & Rediani, N. (2017). Project-based learning model, creativity and student learning outcomes. *JPI (Indonesian Education Journal)*, 6(1), 60–71. <https://doi.org/10.23887/jpiUPGRIPalembang.v6i1.9059>.
- Rifa Hanifa Mardhiyah, Sekar Nurul Fajriyah Aldriani, Febyana Chitta, & Muhamad Rizal Zulfikar. (2021). The Importance of Learning Skills in the 21st Century as a Demand for Human Resource Development. *Lectura : Journal of Education*, 12(1), 29–40. <https://doi.org/10.31849/lectura.v12i1.5813>.
- Sa'dulloh, M. (2021). Implementation of Problem Based Learning assisted by Power Point Media to Improve Learning Outcomes about Rights and Obligations towards Plants. *Educative Journal of Educational Research*, 3(1), 90–99. <https://doi.org/10.36653/educatif.v3i1.40>.
- Sakti, I., Nirwana, & Swistoro, E. (2021). Application of the Project Based Learning Model to Increase the Scientific Literacy of Science Education Students. *Journal of Coil Physics*, 4(1), 35–42. <https://doi.org/10.33369/jkf.4.1.35-42>.
- Setyowati, N., & Mawardi, M. (2018). Synergy of Project Based Learning and Meaningful Learning to Improve Mathematics Learning Outcomes. *Scholaria: Journal Education and culture*, 8(3), 253–263. <https://doi.org/10.24246/j.js.2018.v8.i3.p253-263>.
- Siswinarti, PR (2019). The Influence of the Value Clarification Technique Learning Model Using Video on Civics Learning Outcomes. *Scientific Journal of Teacher Professional Education*, 2(1), 41–49. <https://doi.org/10.23887/jippg.v2i1.18084>.
- Sulastri, GKA, & Mahadewi, LPP (2021). Learning in the Era of Industrial Revolution 4.0: E-Learning in Citizenship Education Subjects for Class X Students. *UPGRI Palembang Edutech Journal*, 10(1), 135–145. <https://doi.org/10.23887/jeu.v10i1.43397>.

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- Sunarsih, E. (2016). Application of the Project Based Learning (Pjbl) Learning Model to Improve News Text Writing Skills in Class VIII Students of SMP Negeri 16 Singkawang. *JP-BSI (Journal of Indonesian Language and Literature Education*, 1(2), 65 – 67. <https://doi.org/10.26737/jp-bsi.v1i2.92>.
- Syawaludin, A., Gunarhadi, & Rintayati, P. (2019). Development of augmented reality-based interactive multimedia to improve critical thinking skills in science learning. *International Journal of Instruction*, 12(4), 331–344. <https://doi.org/10.29333/iji.2019.12421a>.
- Tasci, B.G. (2015). Project Based Learning from Elementary School to College, Tool: Architecture. *Procedia - Social and Behavioral Sciences*, 186, 770–775. <https://doi.org/10.1016/j.sbspro.2015.04.130>.
- Yamin, Y., Permanasari, A., Redjeki, S., & Sopandi, W. (2020). Project Based Learning to Enhance Creative Thinking Skills of Non-Science Students. *JHSS*, 4(2), 107–111. <https://doi.org/10.33751/jhss.v4i2.2450>.
- Yudha, F., Dafik, D., & Yuliati, N. (2018). The Analysis of Creative and Innovative Thinking Skills of the 21st Century Students in Solving the Problems of "Locating Dominating Set" in Research Based Learning. *International Journal of Advanced Engineering Research and Science*, 5(3), 163–176. <https://doi.org/10.22161/ijaers.5.3.21>.