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## **The Implementation of Project-Based Learning through Merdeka Curriculum to Improve Speaking Skills at SMP Swasta Santo Xaverius 1 Kabanjahe**

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# The Implementation of Project-Based Learning through Merdeka Curriculum to Improve Speaking Skills at SMP Swasta Santo Xaverius 1 Kabanjahe

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**Abstract:** This study is done to find out the effectiveness of Project-Based Learning through the Merdeka Curriculum at SMP Swasta Santo Xaverius 1 Kabanjahe in speaking ability enhancement. Moved by a gap in the application of practical abilities pertaining to language education, this study was conducted with the quasi-experimental method to compare the speaking abilities of the experimental class using the Project-Based Learning process with a control class using traditional methods. The data were sourced from 30 seventh-grade students, both from pre- and post-tests and questionnaires. The results show that there is a high appreciation in the enhancement of speaking skills by the PBL group, wherein the post-test scores improved by an average of 19.46 %, against 14.6 % in the control group. The qualitative feedback also witnessed an increased engagement and confidence in speaking English among the students. These results underline the potential of PBL language learning and suggest its wider applicability within the framework of the Merdeka Curriculum.

**Key words:** Project-Based Learning, Merdeka Curriculum, and Speaking Skills

**Abstrak:** Penelitian ini dilakukan untuk mengetahui efektivitas Pembelajaran Berbasis Proyek melalui Kurikulum Merdeka di SMP Swasta Santo Xaverius 1 Kabanjahe dalam peningkatan kemampuan berbicara. Dipicu oleh kesenjangan dalam penerapan kemampuan praktis terkait pendidikan bahasa, studi ini dilakukan dengan metode kuasi-eksperimental untuk membandingkan kemampuan berbicara kelas eksperimental yang menggunakan proses Pembelajaran Berbasis Proyek dengan kelas kontrol yang menggunakan metode tradisional. Data diperoleh dari 30 siswa kelas tujuh, baik dari pre-test maupun post-test serta kuesioner. Hasilnya menunjukkan apresiasi tinggi dalam peningkatan keterampilan berbicara oleh kelompok PBL, di mana skor post-test meningkat rata-rata sebesar 19,46 %, dibandingkan dengan 14,6 % di kelompok kontrol. Umpan balik kualitatif juga mencatat peningkatan keterlibatan dan kepercayaan diri dalam berbicara bahasa Inggris di antara siswa. Hasil-hasil ini menekankan potensi pembelajaran bahasa dengan PBL dan menyarankan aplikabilitasnya yang lebih luas dalam kerangka Kurikulum Merdeka.

**Kata kunci:** pembelajaran berbasis proyek, Kurikulum Merdeka, keterampilan berbicara

## INTRODUCTION

The new generation has really impacted many aspects of our lives, especially in education. With the changing world of education, comes changing curricula. Curriculum is one of the most

crucial tools of education; it involves implementations that are upgrading versions and better than those preceding them (Mutale, 2018). This is because a curriculum embodies the intentions of education. It also carries the beliefs, values, attitudes, skills, knowledge and all that education is about. One would wonder how especially formal education can take place without a curriculum.

The problems and challenges of education are now more and more demanding to having a curriculum that is flexible towards technological changes and globalization. More practical methods of teaching in English education are also highly needed, especially to create students' innovation and creativity in speaking, either formal or informal communication. The new Merdeka Curriculum is proposed in Indonesia, and it presents Project-Based Learning (PBL) to increase the education quality by using active learning and practical approaches. Project-based learning is gaining popularity as a student-centered approach to education. It provides a multitude of benefits, especially compared to the practices surrounding standardized testing. the value of project-based learning and the opportunities this method provides to differentiate instruction and allow all students to access the curriculum at their individual levels and abilities. PBL allows teachers to work with struggling students and, at the same time, provide opportunities for higher achieving students to challenge themselves (Bergeron, 2016).

In the tertiary level, good communication skills are vital for EFL undergraduates to be successful in their studies and later on in their careers. English learners should be motivated and given opportunities in using English for effective communication. Good speaking ability is crucial for the learners' progress at the university, and it is also regarded as a requisite for obtaining good jobs out in the labor market. Consequently, it important to have effective English-speaking skills that has, led many schools and educational institutions to focus on training their learners to be effective English-speaking individuals. This is needed for them to survive in the employment market (Sirisrimangkorn, 2021). Therefore, PBL is an important educational approach due to its emphasis in hands-on, inquiry-based learning, that has been inherently constructivist in nature. It allowed students to engage with real-world problems, collaborate with peers, and construct their knowledge through exploration and problem-solving (Almulla, 2020).

According to Wongdaeng & Hajihama, (2018), PBL increases learners' interest in learning English by actively engaging them in the learning process. PBL, therefore, is bound to have more energetic and motivated students with improved speaking abilities. Zhang & Ma (2023) state PBL can significantly improve the academic achievement, motivation and high-level thinking ability of students. English is an international language used in business, science, politics, and the media. Thus, having it integrated into education means equipping learners with the skills in using English effectively. Speaking is the major element in the acquisition of English since it perfects the ability of students to express themselves confidently in their normal daily lives and big communities. However, low confidence and few opportunities for practice make speaking in English still difficult for Indonesian students (Zoghbor & Al-alam, 2018). Research indicates that PBL significantly enhances student learning compared to traditional educational methods, which view students as passive recipients of knowledge. PBL not only enhances critical skills like critical thinking, communication, time management, and group work but also empowers students by valuing their voice and authenticity. It also helps bridge the gap between the skills valued by employers, such as social skills, and those emphasized by academic institutions, which often prioritize academic knowledge. We (2020) reveals that PBL was a method which could improve students English speaking skills effectively. The students are encouraged to think actively by the projects and apply it through English communication with their peers. The students also

feels enthusiastic while participating in any presentations and discussions. In addition, PBL is an active methodology with significant benefits in the teaching-learning process of students of the Pedagogy in Experimental Sciences career, among which it stands out to promote the understanding of scientific concepts, the development of research and problem-solving skills, the collaboration and teamwork skills (Quinapallo-quintana & Quinapallo-quintana, 2024; Sulong et al., 2023; Tempera & Tinoca, 2023). PBL will moreover play a significant role in developing English language skills.

In a Quasi-experimental design PBL not only develops language skills in reading, listening, writing, and vocabulary but also fosters very important academic competencies, which include creativity, critical thinking, and problem-solving (Mislana et al., 2021; Sultana & Musavi, 2022); Hakimah, 2023; Pramesti et al., 2023). The evidence suggests that if students work on real-word challenging yet relevant tasks, this can lead to high-order academic success in language learning contexts. Such findings give great meaning to PBL and the change to create more engaging and effective learning environments with regard to encouraging deeper understanding and practice in using English language skills. PBL can, therefore, tactically be infused into an English language teaching curriculum as a means to achieve higher levels of student engagement and improved language skills. This discrepancy is highlighted by both historical anecdotes and studies, suggesting a mismatch between educational outcomes and workplace expectations. Although the benefit of PBL to enhance students' speaking skill is recognized, there is still be a huge gap in terms of the systematic application and empirical evaluation of its practices within Indonesia's Merdeka Curriculum, particularly at the secondary school level.

While a number of existing studies have pointed out that PBL can be an effective approach in enhancing engagement and learning outcomes, little research has actually been done to develop speaking skills in English among Indonesian students. Indeed, this dearth of studies is further compounded by the fact that few available studies assess the long-term impact of PBL on the development of speaking proficiency and how such skills acquired by learners translate into actual effectiveness in the real world. Moreover, the way PBL allows addressing, by being combined with the Merdeka Curriculum, a number of the specific challenges observed in Indonesian students related to low confidence and few chances for practice in English communication, is not well understood (Zoghbor & Al-alam, n.d.). It is in light of these critical gaps that this research will be designed to assess whether it is effective to apply PBL within the Merdeka Curriculum for enhancing English speaking skills at SMP Swasta Santo Xaverius 1 Kabanjahe to provide a model replicable across similar educational settings.

## LITERATURE REVIEW

### A. Definition of Curriculum

The word curriculum is obtained from the Latin word and essentially refers to the backbone of any educational system that dictates the processes of teaching and learning in an institution. It involves the total experiences that students go through in attaining approved standards of competence. According to Mulenga (2018), the curriculum does not only offer theoretical approaches but facilitates students' experience and psychological development by encouraging them to make efforts towards perfecting their skills. The Department of State Education defines it as a plan containing educational tools intended to achieve well-established standards on learning materials, methods, techniques, and infrastructure in the curriculum. In this regard,

curriculum formulation is essential for the betterment of education quality and to promote equal opportunities for students at large (Fonseka, 2024). In ELT literature, the *curriculum* is defined by different authors in different ways, and still there is room for improving the definitions already developed and used widely. An understanding of what the curriculum is would be important for the decision makers as well as the teachers and the students who are concerned with the development and implementation of a curriculum. This is due to the right conceptualization of the curriculum that only guarantees a reasonable adherence to it by the teachers and students, and because the success of a course lies in the successful implementation of the curriculum.

## **B. Merdeka Curriculum**

The Merdeka Curriculum is another national curriculum reform conducted to face today's challenges in education, introduced in Indonesia since 2021. It prioritizes character education, life skill education, active learning, and technology utilization in the production of intelligent and skilled human resources. Among the key indicators of the Merdeka Curriculum are independence, development of character, life skills, active learning, and putting technology into education. The *Merdeka Curriculum* is an update motivated by the advancement of existing technology and its usage has been highly emphasized during the Covid-19 pandemic. However, this requires various elements of education to adapt to this, giving birth to the New Curriculum, namely the Merdeka Curriculum. The Merdeka Curriculum acts as a recovery option for learning launched by the Ministry of Education, Culture, Research and Technology (*Kemdikbudristek*) to announce a regulation on the development of the *Merdeka Curriculum* (Prisca, 2023; Bastian et al., 2023).

There is an essential need to conduct comparative studies that evaluate the effectiveness of the Merdeka Curriculum compared to the traditional teaching method in enhancing speaking skills. According to Hartono (2022) due to the fact that the Merdeka Curriculum is relatively new, there exists a huge vacuum in empirical studies concerning its implementation and how effective it has been in improving some educational outcomes, including speaking skills in English.

## **C. Project-Based Learning (PBL)**

PBL is an active teaching and learning process focused around student engagement and participation (Neches et al., 2020). It includes practical applications, comprehensive exercises, and the use of technology in enhancing learning outcomes (Cole, 2024). PBL sharpens students' speaking skills through much practice and real-world application. Some of the greatest challenges to students in developing speaking skills are very well covered, as the pedagogy encourages collaborative learning, critical thinking, and creativity. The integration of PBL is also meant for problem-solving skills, creativity, and critical thinking of the students. Related to the above context, Markula and Aksela (2022) note that there exist five major differences in PBL: driving questions, learning objectives, practical practices, team collaboration, and use of technology. These guide the practice of PBL for the realization of productive and engaged learning processes. According to Weller (2023), the key principles of PBL are authenticity, student-centeredness, use of technology, collaborative work, integral learning, inquiry-based learning, reflection, focus on basic knowledge and major skills, feedback and revision, and public product presentation. These principles underline the way PBL is being practiced effectively in educational settings.



## METHOD

### A. Research Type

This is a two-variable research approach that could be used to evaluate the effect of project-based learning intervention as a treatment since it compared results between the experimental and control groups. This design uses a quasi-method in assessing the impact of project-based learning interventions. The quasi-method makes it possible to compare the method of the control and experiment groups and assess their effectiveness in modeling phenomenon in an education setting.

### B. Research Subjects

The focus of this study is the seventh-grade students of SMP Swasta Santo Xaverius 1 Kabanjahe, consisting of 30 students. They are from two classes. They are divided into one experimental group and one control group. The classes used were chosen after obtaining permission to conduct this research from the school administration.

### C. Research Procedure

As explained by Zubair (2023) quasi-experimental research involves the settings or backgrounds of education and underscores the need for control and experimental groups in the testing of educational interventions. The procedure under this methodology is to carry out a pretest to obtain a baseline for speaking ability, to intervene in the treatment group with the PBL, while the comparison group would continue with its natural progression, and to integrate posttests to assess the intervention's effectiveness. Besides, questionnaires are used to generate qualitative data on an account of students' attitudes towards the PBL approach. Data collected from tests and questionnaires are, in turn, statistically analyzed to measure improvements in speaking skills as well as attitudes of the students towards the learning process. This abstracted framework helps to connect how the concept of PBL can be implemented thorough practices in line with the educational reforms in Indonesia. The steps taken for a Quasi-Experimental Research is as follows:

#### 1. Pretest

First, both of the groups, the experimental and the control group, are applied with an equal pre-test to identify the ability to speak before the experiment.

#### 2. PBL Treatment

The class experiment is taught by the project-based learning method, focusing on speaking skills via media Canva and YouTube on the topic "Greetings," whereas the control group was treated using the expository method.

#### 3. Posttest

After intervention, a posttest is taken on the two groups to determine the impact of PBL intervention.

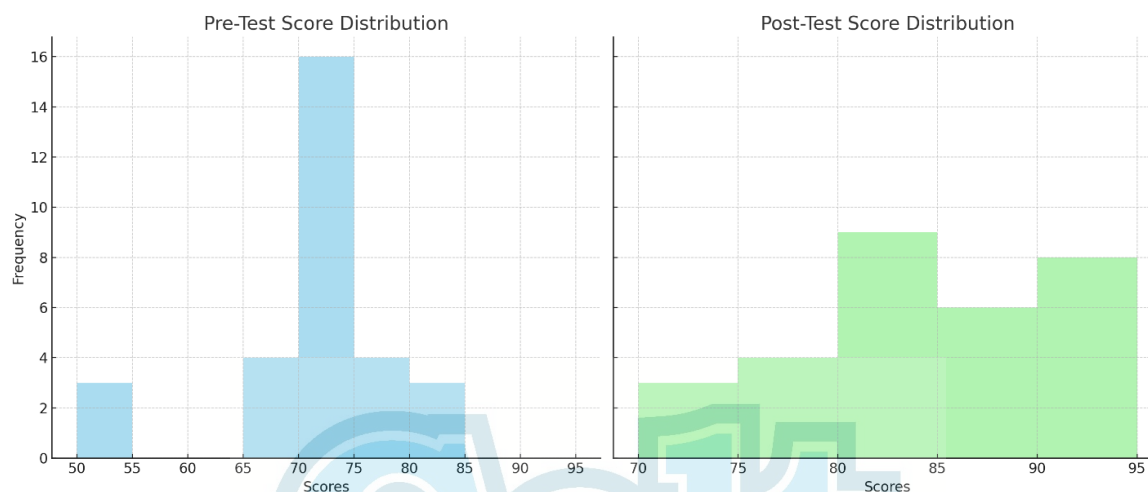
#### 4. Questionnaire

After the posttest, a questionnaire was distributed to the participants to get their opinions on the learning process, the efficacy of PBL, and their recommendations for improving any implementation flaws they had noticed.

## RESULTS AND DISCUSSIONS

### A. Results

These results have been obtained in relation to a comparative study between PBL and traditional lecture methods in enhancing seventh-grade speaking at SMP Swasta Santo Xaverius 1 Kabanjahe. It was aimed at establishing whether these teaching methodologies are effective or not. Looking at both the quantitative scores and the qualitative feedback, this study gives the maximum assessment of how different educational strategies are affecting the learning outcomes among students.



**Figure 1:**  
**The Score Distributions for The Pre-Test and Post-Test**

The pre-test and post-test scores have been graphically presented in the histograms (see Figure 1), which show distributions of the effect of teaching methods on student performances. The pre-test histogram presents the majority of scores clustered around the 70 mark, ranging from 50 to 80. Such distribution of scores suggests that performance levels among the students were varied before the implementation of the intervention of PBL methods and the traditional lecture methods. In sharp contrast, the post-test histogram shows a significant shift of scores towards high scores, although primarily clustered between 80 and 90. This, again clearly indicates much better enhancement of student performance post-intervention. A clustered higher range of scores post-intervention may sometimes reflect the good teaching practices followed, especially using the PBL approach, as in this study, which has found to be a tool in active learning and found to be more applied in nature.

A comparison of the pre-test and post-test histograms clearly illustrates the development in student competencies. In other words, this score distribution that has moved upwards in the post-test not only indicates effectiveness but also clearly registers that educational strategies applied have influenced it. This means that the frequency of scores above 80 did post-intervention significantly increase after the adoption of engaging teaching methodologies, resulting in significantly more improved student outcomes. It, therefore, follows from the visual data that new interactive methods of teaching, such as PBL, have greatly increased student performance, especially in the development of practical skills, such as speaking, without which language learning cannot be complete.

**Table 1:**  
**The Summary of Scores**

| Class        | Pre-Test Mean | Post-Test Mean | Standard Deviation (Pre-Test) | Standard Deviation (Post-Test) |
|--------------|---------------|----------------|-------------------------------|--------------------------------|
| Experimental | 74.00         | 88.40          | 4.14                          | 4.24                           |
| Control      | 65.73         | 80.33          | 7.68                          | 4.95                           |

Quantitative data analysis showed from Table 1 that there was a significant improvement in the speaking ability of the students in the experimental class. Their average increased from 74.00 in the pre-test to 88.40 in the post-test. However, the control group's average increased from 65.73 to 80.33. This, therefore, indicates that while there was an improvement with both approaches, there were more significant gains with the PBL approach. On the other hand, qualitative feedback supported these findings, in which students in the PBL class claimed to increase their vocabulary, fluency, and confidence. This more active and hands-on approach of PBL enabled students to become more fully engaged and strengthened their capacity with regard to the application of language skills in practical contexts.

**Table 2:**  
**The summary table of the T-Test Calculations and Results for both the experimental (PBL) and control (lecture) groups**

| Group              | Pre-Test Mean | Post-Test Mean | Standard Deviation (Pre-Test) | Percentage Improvement |
|--------------------|---------------|----------------|-------------------------------|------------------------|
| Experimental (PBL) | 14.4          | 3.87           | 14.41                         | 19.46%                 |
| Control (Lecture)  | 14.6          | 3.68           | 15.37                         | 22.23%                 |

The results from Table 2 imply there are clear improvements in both groups, since the p-values are far below the conventional limit of 0.05, clearly showing a high degree of statistical significance in the change from pre-test to post-test scores in both research groups. The effectiveness of the experimental group, where PBL was applied, was very high, according to the t-value and very small p-value, thus underscoring the effect of PBL in enhancing speaking skills.

PBL Experimental Group: The decrease in the p-value, along with a large mean increase from pre-test to post-test scores, supports that PBL effectively enhances speaking skills, evidenced by the rejection of the null hypothesis. Control Teacher Group: One cannot discount that, in contrast to this, the traditional method also puts on an effective improvement of statistical significance; however, the context and pedagogy of the experimental group place PBL as potentially more powerful in its learning experiences. Both hypotheses were rejected, so improvements for both groups are significant; however, likely, the method of the experimental group, PBL, offers a more dynamic and interactive learning environment.

## B. Discussion

PBL seems to provide an environment, wherein students themselves become the main participants and act as owners of their learning—an efficient strategy in teaching complex skills



such as speaking. This would mean collaboration, critical thinking in the application of knowledge, higher retention rates, and more meaningful learning experiences. In a structured study conducted at SMP Swasta Santo Xaverius 1 Kabanjahe, it is proven that PBL vastly improves the speaking ability of students. Results from this study showed that the experimental class using the PBL method had great improvement in the students' speaking ability. The average scores of this group increased from 74.00 in the pre-test to 88.40 in the post-test, gaining 14.4 points higher, or about 19.5%. This change does not merely emphasize the effectiveness of PBL in enhancing speaking ability; it also proves to be superior in comparison with the traditional teaching method.

This conclusion is further supported by the results of statistical analysis. The result for the p-value using the t-test was around 0.0000000861, hence, showing that the improvement was highly significant and would be unlikely to occur by chance. That level of significance suggests strong support for PBL's effects on learning outcomes among students. In contrast, although there was improvement with the traditional lecture-based teaching and learning approach taken by the control group, the qualitative and quantitative gains for the PBL group were much greater. The level of engagement is generally relatively higher under PBL settings compared to traditional lectures. PBL is compelling in having students work together and solve real problems, engage actively with the subject matter for the benefit of the latter in terms of understanding the material and developing strong communication skills, unlike traditional lectures where students passively absorb information. In learning languages and speaking, it plays a major role because learners are given an opportunity to put theory into practice, make attempts in practical contexts, and learn communicating.

## CONCLUSION

In relation to increasing students' speaking ability, this study at SMP Swasta Santo Xaverius 1 Kabanjahe proves that PBL is superior to traditional classes. Quantitative data analyses showed that students in the experimental group, instructed via PBL, significantly improved in speaking skills from a mean score of 74.00 in the pre-test to 88.40 in the post-test, an increase of 14.4 points or approximately 19.46 percent. Also supporting this marked improvement is a very high level of significance in the p-value of approximately 0.0000000861, which indicates a very small likelihood that these gains were randomly realized.

The control group also improved, with gains from a pre-test mean of 65.73 to a post-test mean of 80.33; however, this was less in comparison to the former. More importantly, this difference vividly brings into light the efficacy of PBL in accomplishing a more significant enhancement in the student's outcome and further demonstrates that PBL provides a dynamic, interactive learning environment for students. Such an environment would allow for active participation, student collaboration, and practical applications of knowledge, all pivotal in the mastering of complex skills like speaking.

This improvement is vividly depicted with histograms from the study, showing a shift in the score distributions from the 70 range in the pre-test to between 80 and 90 in the post-test, thereby reinforcing the numerical data through visualization. Qualitative feedback from students in the PBL group supported these findings, which showed increases in vocabulary, fluency, and confidence—these are important sub-components of effective speaking skills.

Clearly, this research illustrates that PBL not only clearly improves student outcomes with respect to speaking skills but also provides much greater levels of student engagement than traditional didactic approaches. Via this kind of environment set in PBL, students are encouraged to develop themselves not only academically but also personally by enhancing their communication ability and confidence in using the target language.

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## REFERENCES

- Almulla, M. A. (2020). The Effectiveness of the Project-Based Learning (PBL) Approach as a Way to Engage Students in Learning. *SAGE Open*, 10(3). <https://doi.org/10.1177/2158244020938702>
- Bastian, A., Firdaus, M., & Rizky, R. (2023). The School Readiness in Implementing the Merdeka Curriculum in Pekanbaru : A Survey of Teachers and Students' Perspectives. *Jurnal Kependidikan: Jurnal Hasil Penelitian Dan Kajian Kepustakaan di Bidang Pendidikan, Pengajaran Dan Pembelajaran*, 9(4), 1162. <https://doi.org/10.33394/jk.v9i4.9321>
- Bergeron, H. (2016). *Project-Based Learning and Student Engagement in Elementary School*. 1–23. ProQuest LLC, Boston, MA. <https://repository.library.northeastern.edu/files/neu%3A4f16j7030/fulltext.pdf>
- Cole, F. (2024). An educator's guide to project-based learning: Turning theory into practice. Routledge. ISBN 978-1032543284. <https://www.routledge.com/An-Educators-Guide-to-Project-Based-Learning-Turning-Theory-into-Practice/Cole/p/book/9781032543284>
- Fonseka, E. A. G. (2024). *Some Universals in the Process of Curriculum Development in ELT*. July. [https://www.researchgate.net/publication/382504062\\_Some\\_Universals\\_in\\_the\\_Process\\_of\\_Curriculum\\_Development\\_in\\_ELT](https://www.researchgate.net/publication/382504062_Some_Universals_in_the_Process_of_Curriculum_Development_in_ELT)
- Hakimah, N. (2023). Assessing the Impact of Project-Based Learning on Students' Writing Skills: A Pre-Experimental Study. *Acitya: Journal of Teaching and Education*, 5(2), 434–448. <https://doi.org/10.30650/ajte.v5i2.3723>
- Hartono, H., Retnawati, B. B., Leong, H., Mulyani, T. H., & Hernawati, L. (2022). The implementation of MBKM policy and its impact on the curriculum and learning model. *Celt: A Journal of Culture, English Language Teaching & Literature*, 22(1), 25–38. <https://doi.org/10.24167/celt.v22i1.4246>
- Markula, P., & Aksela, M. (2022). The key characteristics of project-based learning: How teachers implement projects in K-12 science education. *Disciplinary and Interdisciplinary Science Education Research*, 4(1), Article 4. <https://d-nb.info/1255983299/34>
- Mislana, Erlina, & Anggraini, H. W. (2021). *The Application of Project-Based Learning (PBL) Through Storyboard to Improve Reading Achievement of the 10th Grade Students*. 513, 395–401. <https://doi.org/10.2991/assehr.k.201230.136>
- Mulenga Mutale. (2018). Conceptualization and Definition of a Curriculum. *Journal of Lexicography and Terminology*, 2(2), 1–23.

[https://www.researchgate.net/publication/332152068\\_Conceptualization\\_and\\_Definition\\_of\\_a\\_Curriculum](https://www.researchgate.net/publication/332152068_Conceptualization_and_Definition_of_a_Curriculum)

- Pramesti, N. M. A., Manurung, K., & Aminah, A. (2023). The Implementation of Problem-Based Learning (PBL) Model to Improve Students' Vocabulary Mastery. *Manazhim*, 5(2), 1131–1146. <https://doi.org/10.36088/manazhim.v5i2.3764>
- Prisca Diantra Sampe, R. E. (2023). Survey Minat Belajar Peserta Didik Terhadap Penggunaan Aplikasi JITSI MEET Pada Siswa SD Negeri 4 Ambon. *Pedagogika: Jurnal Pedagogik dan Dinamika Pendidikan*. 10(1), 50–55. <https://media.neliti.com/media/publications/519363-survei-minat-belajar-peserta-didik-terha-fe6d974c.pdf>
- Quinapallo-quintana, A. M., & Quinapallo-quintana, A. M. (2024). *Project-Based Learning*. *International Research Journal of Management, IT & Social Sciences*. 11(1), 58–65. <https://doi.org/10.21744/irjmis.v11n1.2415>
- Sirisrimangkorn, L. (2021). Improving EFL Undergraduate Learners' Speaking Skills Through Project-Based Learning Using Presentation. *Advances in Language and Literary Studies*, 12(3), 65. <https://doi.org/10.7575/aiaac.all.v.12n.3.p.65>
- Sulong, W. N., Sermsook, K., Sooknit, O., & Worapun, W. (2023). Project-Based Learning in General Psychology Class for Undergraduate Students. *Journal of Education and Learning*, 12(6), 82. <https://doi.org/10.5539/jel.v12n6p82>
- Sultana, M., & Musavi, T. M. (2022). Enhancing students' academic listening using project based learning method. *Periodicals of Social Sciences*, 2(2), 235–248. <https://psocialsciences.com/poss/index.php/poss/article/view/35>
- Tempera, T., & Tinoca, L. (2023). Project-Based Learning in Initial Teacher Education: The Practice of Three Higher Education Institutions in Portugal. *Center for Educational Policy Studies Journal*, 13(2), 57–77. <https://doi.org/10.26529/cepsj.1141>
- We, S. M. (2020). Enhancing Students Speaking Skills through Project-Based Learning. *Jurnal Lingua Idea*, 11(2), 113. <https://doi.org/10.20884/1.jli.2020.11.2.2931>
- Weller, D. R. (2023, June 20). What is project-based learning? Medium. <https://davidrweller.medium.com/what-is-project-based-learning-8cb4261a0c08>
- Wongdaeng, M., & Hajihama, S. (2018). Perceptions of Project-Based Learning on Promoting 21st Century Skills and Learning Motivation in a Thai EFL setting. *JSEL*, 13(2), 158–190. <https://so04.tci-thaijo.org/index.php/jsel/article/download/113931/117634/451549>
- Zhang, L., & Ma, Y. (2023). A study of the impact of project-based learning on student learning effects: a meta-analysis study. *Frontiers in Psychology*, 14(July), 1–14. <https://doi.org/10.3389/fpsyg.2023.1202728>
- Zoghbor, W., & Al-alamy, S. (n.d.). *21st Century Linguistics and Language Teaching: Bridging Diversification and Equality in the Classroom*. [https://www.zu.ac.ae/main/en/research/\\_publications/\\_books\\_reports/2018/allt2018\\_proceedings.pdf](https://www.zu.ac.ae/main/en/research/_publications/_books_reports/2018/allt2018_proceedings.pdf)
- Zubair, A. M. (2023). Experimental research design—Types & process. *Academia Open*. [https://www.researchgate.net/publication/367044021\\_Experimental\\_Research\\_Design-types\\_process](https://www.researchgate.net/publication/367044021_Experimental_Research_Design-types_process)