

JURNAL EDUSCIENCE (JES)



p-ISSN : 2303 - 355X | I e-ISSN : 2685 - 2217 PUBLISHED BY : LPPM of UNIVERSITAS LABUHANBATU

Project-Based Learning (PjBL): Enhancing Students' Speaking Skills

Ika Purnama Sari¹, Nining Syafitri², Noor Faridha³, Eri Ester Khairas⁴, Epi Supriyani Siregar⁵, Anita Purba⁶, Rizky Khairunnisa Sormin⁷

- ¹Department of Computer Engineering, STIKOM Tunas Bangsa, Pematangsiantar, Indonesia
- ²Department of English Education, Universitas Dayanu Ikhsanuddin, Indonesia
- ³Department of Agrotechnology, Universitas Moch Sroedji, Jember, Indonesia
- ⁴Department of building construction, Politeknik Negeri Jakarta, Indonesia
- ⁵Department of Physical Health and Recreation, Universitas Pembinaan Masyarakat Indonesia, Indonesia
- ⁶Department of English Education Universitas Simalungun, Indonesia
- ⁷Department of Information Technology, STIKOM Tunas Bangsa, Pematangsiantar, Indonesia
- *Email: ikapurnama@amiktunasbangsa.ac.id

ARTICLE INFO

Keywords: Project-Based Learning, Speaking Skill, Experimental

ABSTRACT

Purpose-This study aims to measure the effectiveness of implementing Project-Based Learning (PjBL) in improving students' speaking skills.

Methodology – This study uses a quantitative pre-test and post-test design. Researchers will compare students' speaking skill scores before (pre-test) and after (post-test) using the Project-Based Learning (PjBL) to determine whether there is a significant improvement. The quantitative data will analyse used SPSS to measure the experimental and control classes.

Findings – This study show that the experimental class had a higher average score (75.74) than the control class (61.32). The Sig. (2-tailed) is less than 0.05; the difference between the means is statistically significant. There is a statistically significant difference between the means of the experimental and control classes.

Contribution – The increase in scores from pre-test to post-test is empirical evidence that project-based learning is an effective learning method for improving student learning outcomes while developing the various skills required for future success.

Received 26 July 2025; Received in revised form 08 August 2025; Accepted 12 December 2025 Jurnal Eduscience (JES) Volume 12 No. 6 (2025)

Available online 30 December 2025

©2025 The Author(s). Published by LPPM Universitas Labuhanbatu. This is an open-access article under the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License (CC BY - NC - SA 4.0)

INTRODUCTION

Language is a vital means of communication in human life. Humans can convey messages, share information, and express feelings, ideas, and thoughts through the use of language. Language has a structured,

symbolic, and meaningful sound system. Language is also conventional and unique, enabling it to be used for various communication purposes. Everyone with language skills can express themselves. Language serves as a means of expression, allowing individuals to convey their thoughts and feelings. Good language skills also contribute to the expression of positive emotions and aid interpersonal interactions. Therefore, language is crucial for communicating ideas, expressing feelings, and fostering social relationships. The language of international communication has been universally agreed upon as English. Through language, humans can convey messages, thoughts, feelings, and goals to others. Language has a sound system that is arbitrary, meaningful, and conventional. Through language, we can share information and create social interactions. According to Wullur et al. (2021), language refers to the communication instrument. Having a strong command of the language is essential not only for social communication tools but also for advancing scientific knowledge (Rohayati, 2018).

At the high schools, speaking skills play a vital role in learning English. (Hanifa, 2018). High school students face difficulties in developing their English speaking skills. These challenges include poor speaking skills and general learning difficulties. Therefore, a model capable of producing high school students' English speaking skills is needed. English-speaking skills development at the high school level can be enhanced through various strategies. So, the teacher must focus on students' communication skills (Lalogiroth & Tatipang, 2020). To communicate effectively, both in writing and orally, speaking must be taught to students (Suparmi, 2018). Speaking skills are crucial for students to communicate effectively. Speaking, training, and self-talk should be taught early to develop good oral and written communication skills. Effective communication lays a crucial foundation for student development through this training. The process of sharing meaning through various symbols, both spoken and written, is also known as speaking (Pertiwi & Kusumaningrum, 2021). As part of communication, speaking is a fundamental process of conveying and sharing meaning. This process involves using symbols, both verbally and in writing, to facilitate interaction and understanding between individuals. This includes using words, tone of voice, facial expressions, body language (in spoken contexts), as well as letters, punctuation, and sentence structure (in written contexts). The primary purpose of speaking is to convey information, ideas, and concepts to influence and create shared understanding between the speaker and the listener/reader. Students are expected to be able to communicate effectively orally, as outlined in the English curriculum. Good speaking skills are essential for learning to speak effectively.

Learning English is critical for students in higher education in Indonesia (Andayani, 2022). English is rarely used in everyday conversation in Indonesia, limiting opportunities for people to practice it. Mastery of English can increase job market opportunities, including with multinational companies, and open doors to education abroad. The importance of English language skills globally is high, but its use is still limited in Indonesia due to a lack of daily exposure and less effective learning methods (Liando & Tatipang, 2022). Nevertheless, English proficiency is essential for accessing broader educational opportunities, careers, and international connections. According to Wahyudi (2022), young English learners need to learn to speak English before they can read and write it. For all young learners in Indonesia, English speaking skills are not easy because it is a foreign language (Paranduk et al., 2021). The English learning process still experiences various obstacles and challenges (Tatipang et al., 2022), such as internal factors (learning styles, motivation, and mastery of the four basic skills: listening, speaking, reading, and writing) as well as external factors (less varied teaching methods, lack of exposure to English in the surrounding environment, and differences in mother tongue) which affect the effectiveness of learning.

Speaking is one aspect of language that helps students communicate effectively in English. Through speaking, students can express all their thoughts and ideas. The goal of teaching speaking in English is to encourage communication and develop speaking skills both inside and outside the classroom. However, in reality, many factors contribute to the lack of interest in speaking English at MAN Pematangsiantar. The lack of English tutoring is one factor that hinders students' ability to speak the English language. Challenges to learning to speak include psychological factors such as shyness, fear of making mistakes, and lack of

confidence, as well as linguistic factors such as limited vocabulary, pronunciation problems, and grammatical difficulties. Another barrier is an unsupportive environment, such as limited opportunities for practice. Furthermore, students often feel disinterested in the subject and struggle to pronounce English correctly. Students often feel embarrassed or afraid of making mistakes, which hinders their ability to speak. Furthermore, many students lack self-confidence. Lack of confidence is often a significant barrier, making students hesitant to respond or interact.

Using inappropriate teaching methods can reduce students' motivation and interest in learning, as it may lead to boredom, fatigue, and feelings of disengagement from the learning process, ultimately resulting in low academic achievement (Manuas, 2022). To address this, teachers must implement engaging and varied methods, utilize interactive learning media, encourage active student participation through discussions or simulations, and create a dynamic and supportive learning environment. It is hoped that using the Project-Based Learning (PjBL) method can improve high school students' speaking skills because PjBL provides more opportunities for students to discuss, share ideas, and actively present project results. Through collaborative activities and problem-solving, students become more confident, creative, and skilled in speaking, including fluency and pronunciation.

Project-Based Learning (PjBL) has gained popularity in education recently (Ngadiso et al., 2021). This opinion is strengthened by Greenier (2020), who states that PJBL has become increasingly popular in mainstream education. Project-Based Learning (PjBL) has a long history, dating back to the mid-19th century. Its initial use was associated with science teaching in agricultural classrooms in the United States, pioneered by David Snedden. This method emphasizes hands-on application and real-world problem-solving. Project-Based Learning was developed by William Heard Kilpatrick, a student of John Dewey, in the early 1900s. Kilpatrick focused project-based learning on student needs, helping them complete tasks with clear objectives (Sirisrimangkorn, 2018; Dewi, 2020). John Dewey is also considered an early proponent of project-based education. Project-based learning aims to enhance student creativity, making it an effective method for modern education. A project offers students the opportunity to develop various skills (Fischer, 2015).

According to Mergendoller et al. (2013), Project-Based Learning is a systematic teaching method. In PjBL, the teacher serves as a facilitator, guiding students through their projects (King & Smith, 2020). It cultivated students' engagement in learning meaningful knowledge and skills through a student-centered inquiry process. Project-Based Learning (PjBL) builds on curriculum and standards, prompts guiding questions, and facilitates collaborative projects that integrate diverse subject matter. PJBL encourages students to investigate real-world issues and explore complex topics through abstract intellectual tasks. This approach focuses on answers through specific questions or processes, aiming to increase student engagement and competence. According to Widiyati & Pangesti (2022), research shows that Project-Based Learning (PjBL) significantly increases student engagement in English learning because it facilitates knowledge exchange through discussion and focuses on completing meaningful project outcomes. The seven characteristics of effective project-based learning include: posing important questions and conducting investigations, addressing student needs and interests, encouraging independent production and presentation, utilizing critical and creative thinking, making connections to the real world, and allowing flexibility in the process (Krauss & Boss, 2013).

METHODOLOGY

Research Design

The study employed a quasi-experimental design, specifically a non-equivalent control group design (Creswell, 2009). To select the sample, this approach used cluster sampling. The researcher used two classes in this approach: the experimental and the control class, the design showed at Figure 1 bellow. The description of the figure are E is experimental class, C is control class, X is treatment, O_1 is pre-test for experimental and control classes, and O_2 is post-test for experimental and control Ccasses (Sugiyono, 2013).

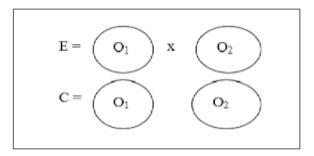


Figure 1. Experimental Design with a Control Group

Participant

The respondents were selected from the eleventh-grade science students of Madrasah Aliyah Negeri Pematangsiantar, located on Singosari Street, Pematangsiantar. Based on the confirmation and agreement with the school, the researcher took two classes: XI IPA 1 as the experimental class and XI IPA 2 as the control class. There are 34 students in the experimental class, which is the same as the control class, which has 34 students.

Data Collection and Instruments

Data collection for assessing speaking skills involves administering speaking tests and analyzing documents to gather quantitative information. The test used in this case is a project presentation. The assessment carried out in the speaking test focuses on language skills (fluency, grammar, vocabulary, and pronunciation) as well as the content conveyed. Students are given 15 minutes to prepare and deliver a presentation. Students must be able to explain the project they created to their peers and answer questions posed by them.

Procedure

The Project-Based Learning (PjBL) model is highly effective and sustainable because it is timeless, allowing for its use across generations. PjBL encourages students to actively engage in projects actively, enhancing their problem-solving skills in real-world situations. Students develop problem-solving, organizational, and problem-orientation skills. Active student involvement in projects makes learning more engaging and relevant. Students become active participants, aware of their own learning process, which tends to be more enjoyable; thereby, they foster self-confidence and improve their speaking skills automatically. The success of this active learning method will also be followed up with a research structure divided into several stages or meetings for further explanation.

- 1. A summary of the researcher's activities at the first meeting includes an opening (greeting, apperception, motivation), asking questions related to the material, administering a pre-test, forming study groups, and initial instructions for working on a project based on the assigned topic. Steps of Researcher Activities include opening, posing questions about the material, administering a pre-test, dividing the group, and project orientation. In opening, the researcher greets students, asks how they are, conducts apperception (reminding and linking students to the material), and motivates students by referring to previous learning. Next, the researcher asks several questions related to the subject matter to explore students' understanding of the topic. Then, Students were given a pre-test to assess their knowledge before starting the main activity. After the pre-test, students were divided into eight groups. The researcher instructed the groups to begin the project by selecting the topic.
- 2. In the second meeting, the researcher reviewed the previous meeting and reminded students to develop their chosen topic before drafting the project. The researcher also checked students' readiness to report on the project through their discussion groups to ensure they were ready for the presentation. The following are the details of the activities carried out by the researcher: Reviewing the previous meeting, reminding them to develop the topic, encouraging the preparation of the project draft, and checking the readiness of the project report.

3. In the third meeting, the researcher administered a posttest to assess students' speaking skills by having them present an oral project on a procedural text, allowing for questions and answers, and providing feedback using a rubric that evaluated students' fluency, accuracy, and comprehension. The following are the key points of the activity: oral presentation, interactive discussion, post-test assessment, and assessment method.

Data Analysis

In this study, the collected data were processed using SPSS version 20 for statistical analysis. Researchers compared the results between the experimental and control classes using a t-test. This demonstrates the use of quantitative methods that rely on numerical data and statistical analysis to identify differences in results.

FINDINGS

This section presents the research results and their discussion. This section presents the findings data briefly in the results section, then explains the meaning in the discussion section.

| Description | Control | | Experiment | | | |
|----------------|----------|------------|------------|-----------|--|--|
| | Pre-test | Post-test | Pre-test | Post-test | | |
| Mean | 44.71 | 61.32 | 52.94 | 75.74 | | |
| Median | 45.00 | 60.00 | 50.00 | 75.00 | | |
| Variance | 83.244 | 59.559 | 130.481 | 103.231 | | |
| Std. Deviation | 9.124 | 7.717 | 11.423 | 10.160 | | |
| Minimum Score | 30 | 45 | 30 | 50 | | |
| Maximum Score | 65 | <i>7</i> 5 | 70 | 90 | | |
| Std Error | 1 565 | 1 324 | 1 959 | 1 742 | | |

Table 1. Statistic Description for Control and Experiment Group

The average pre-test score for the control class was 44,71, with the highest score recorded as 65 and the lowest as 35. The average post-test score in the control class was 61,32, with the highest score being 75 and the lowest being 45. Furthermore, the average pre-test score for the experimental class was 52.94, with the highest score being 70 and the lowest score being 30. In contrast, the average post-test score for the experimental class was 75.74, with the highest score being 90 and the lowest score being 50. The difference between the experimental and control classes suggests that something more than just general learning is at play in the experimental class. Students in the experimental class experienced better learning outcomes than those in the control class.

Table 2. Percentage and Frequency of Students' Scores on Pre-Test and Post-Test in Experimental Class

| No | Criteria | Classification | Pre Test | % | Post Test | % |
|-------|----------|----------------|----------|----------|-----------|----------|
| 1 | 86-100 | Very Good | 0 | 0 | 6 | 17,64706 |
| 2 | 71-85 | Good | 0 | 0 | 15 | 44,11765 |
| 3 | 51-70 | Average | 16 | 47,05882 | 12 | 35,29412 |
| 4 | 25-50 | Poor | 18 | 52,94118 | 1 | 2,941176 |
| 5 | 0-24 | Very Poor | 0 | 0 | 0 | 0 |
| Total | | | 34 | 100 | 34 | 100 |

The pre-test results in the experimental class showed that no students achieved the "perfect" or "good" criteria, while 16 students (47.05%) achieved the "average" criteria, and 18 students (52.94%) achieved the "poor" criteria. In contrast, the post-test showed a significant improvement, with six students (17.64%) achieving "perfect" criteria, 15 students (44.11%) achieving "good" criteria, 12 students (35.29%) achieving "average" criteria, and only one student (2.9%) achieving "poor" criteria. There was a clear improvement in the

speaking test results after the treatment, indicated by the emergence of excellent and good scores and a drastic reduction in poor scores.

Table 3. Percentage and Frequency of Students' Scores on Pre-Test and Post-Test in the Control Class

| No | Criteria | Classification | Pre Test | % | Post Test | % |
|-------|----------|----------------|----------|---------|-----------|----------|
| 1 | 86-100 | Very Good | 0 | 0 | 0 | 0 |
| 2 | 71-85 | Good | 0 | 0 | 2 | 5,882353 |
| 3 | 51-70 | Average | 6 | 17,6471 | 27 | 79,41176 |
| 4 | 25-50 | Poor | 28 | 82,3529 | 5 | 14,70588 |
| 5 | 0-24 | Very Poor | 0 | 0 | 0 | 0 |
| Total | | | 34 | 100 | 34 | 100 |

Table 3 shows that in the control group, speaking test scores did not show significant changes between the pre-test and post-test. The highest pre-test score was "average," which was achieved by six students (17.64%), and 28 students (82.35%) achieved "poor" criteria. The highest post-test score was "good," which was achieved by two students (5.88%). No students achieved "perfect" criteria in either stage. Next, 27 (79.41%) students achieved the "average" criteria, while five students (14.70%) achieved the "poor" criteria.

Conversely, the table shows a significant difference in the experimental results, as most students in the experimental group achieved average scores on the test after the intervention, which differed from the results in the control group.

Table 4. Group Statistics

| | Class | N | Mean | Std. Deviation | Std. Error Mean |
|-------|--------------------------------|----|-------|----------------|-----------------|
| Caomo | Post Test (Control class) | 34 | 61.32 | 7.717 | 1.324 |
| Score | Post Test (Experimental Class) | 34 | 75.74 | 10.160 | 1.742 |

The table displays the post-test results for two groups: a control group and an experimental group. The data suggests that the experimental class performed better than the control class. The number of students in each class. The controlled and experimental classes had 34 students, with the average score for each class. The experimental class had a higher average score (75.74) than the control class (61.32). The difference in the mean scores suggests that the intervention or teaching method applied to the experimental class may have positively affected student performance.

Table 3. Independent Samples Test

| | | Levene's Equality of | s | t-test for Equality of Means | | | | | | | |
|-------|------------------------------|-------------------------|------|------------------------------|-------|--------------------|--------------------|--------------------------|---------|---------------------|--|
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | | onfidence terval | |
| | | | | | | | | - - | Lower | Upper | |
| Score | Equal variances assumed | 2.618 | .110 | -6.586 | 66 | .000 | -14.412 | 2.188 | -18.781 | -10.043 | |
| | Equal variances not assumed. | | | -6.586 | 61.57 | .000 | -14.412 | 2.188 | -18.786 | -10.037 | |

This output presents the results of an independent samples t-test, which compares the means of two groups. The Sig. (2-tailed) is less than 0.05; the difference between the means is statistically significant. There is a statistically significant difference between the means of the two groups.

DISCUSSION

Based on the findings, project-based learning can improve speaking skills. The results show that the experimental class had a higher average score (75.74) than the control class (61.32). The difference in the mean

scores suggests that the intervention or teaching method applied to the experimental class may have positively affected student performance. There is a significant improvement, with six students (17.64%) achieving the "very good" criteria, and 15 students (44.11%) achieving the "good" criteria. In contrast, previously, no students achieved either the "very good" or "good" criteria. The null hypothesis was rejected based on the results. There was a significant difference between the experimental and control classes.

The pre-test score of the experimental class was 52.94, and the post-test score was 75.74. In contrast, the pre-test score of the control class was 44.71, and the post-test score was 61.32. The data shows a significant increase in learning outcomes in the experimental class, which increased by 22.80 points compared to the control class, which increased by 16.62 points.

There was an increase in median scores from the pre-test to the post-test in both classes; however, the experimental class showed a more significant increase (from 50 to 75) than the control class (from 45 to 60). This does not automatically mean that both groups of students achieved "good" scores, but rather indicates the effectiveness of the methods used in the experimental class in improving student scores. The increase in median scores in the experimental class (25 points) was greater than in the control class (15 points), indicating that the intervention or treatment given to the experimental class may have been more effective.

The mode values for both groups (experimental and control) were identical on the pre-test (50), indicating that both groups had the same most frequently occurring score before the treatment was administered. However, after the treatment, the mode in the experimental group increased to 75, while the mode in the control group became 65. This difference in modes indicates that the treatment had an impact on the experimental group, causing the most frequently occurring score to shift to a higher value than in the control group.

The increase in scores in both classes indicates the overall effect of the learning process. Still, the difference between the experimental and control classes suggests that something more than just general learning is at play in the experimental class. Students in the experimental class experienced better learning outcomes than those in the control class (Istiqlal et al., 2024; Safitri, 2024b, 2024a; Safitri et al., 2024, 2025; Safitri & Ansyari, 2024).

The researcher used Project-Based Learning as a learning method. There is a significant difference in students' speaking abilities after implementing the Project-Based learning. The implementation of Project-Based Learning has been proven effective in improving students' speaking scores. These results are consistent with other studies, which show significant improvements in students' speaking skills after implementing Project-Based Learning. This improvement not only impacts grades but also student attitudes. The implementation of Project-Based Learning has been proven effective in enhancing student learning outcomes, including improvements in speaking skills. A similar study conducted by (Widiyati & Pangesti, 2022); (We, 2020);(Jaya et al., 2019) showed similar results. Project-Based Learning was a method that could effectively improve students' speaking skills. Besides its advantages, research using Project-Based Learning (PjBL) also experiences weaknesses such as a lack of adequate resources and the potential for students to become passive in groups. Other obstacles include the difficulty teachers face in assessing project results and the challenge of managing classroom dynamics that can become unproductive during student discussions. However, through project-based learning, students are forced to use English actively in various contexts, improving their speaking skills, self-confidence, and learning motivation. The implementation of Project-Based Learning encourages students to be more confident in presenting. This occurs because Project-Based Learning incorporates presentations into the learning process. Students gain a more contextual and in-depth learning experience through the presentations and discussions that are part of the learning process. Implementing Project-Based Learning increases students' confidence because they learn through hands-on experience.

CONCLUSION

Based on the data analysis results, there was a significant difference in students' speaking ability after applying the Project-Based Learning approach. The Sig. (2-tailed) is less than 0.05; the difference between the

means is statistically significant. There is a statistically significant difference between the means of the experimental and control classes. The experimental class performed better than the control class. The number of students in each class. The controlled and experimental classes had 34 students, with the average score for each class. The experimental class had a higher average score (75.74) than the control class (61.32). Project-based learning encourages students to be creative and fosters self-confidence. This also motivates students. When they see their friends bravely performing, other students will be motivated to do the same. From this, teachers can directly observe the development of students' abilities in problem-solving, critical thinking, creativity, and collaboration.

REFERENCES

- Andayani, E. S. (2022). The importance of learning and knowing English in higher education in Indonesia. *Research and Development Journal Of Education*, *8*(1), 372–379.
- Creswell, J. W. (2009). Research designs. Qualitative, quantitative, and mixed methods approaches.
- Dewi, K. M. S. (2020). The effect of project based learning and learner autonomy on students' speaking skills. *Journal of Education Research and Evaluation*, 4(1), 82–89.
- Fischer, C. (2015). Project-based learning. Research Starters: Education, 8.
- Greenier, V. T. (2020). The 10Cs of project-based learning TESOL curriculum. *Innovation in Language Learning and Teaching*, 14(1), 27–36.
- Hanifa, R. (2018). Factors generating anxiety when learning EFL speaking skills. *Studies in English Language and Education*, 5(2), 230–239.
- Istiqlal, M., Istiyono, E., Widihastuti, Sari, D. K., Danni, R., & Safitri, I. (2024). Construction of Mathematics Cognitive Test Instrument of Computational Thinking Model for Madrasah Aliyah Students. *Nazhruna: Jurnal Pendidikan Islam*, 7(2), 475–492. https://doi.org/10.31538/nzh.v7i2.4425
- Jaya, A., Hermansyah, H., & Rosmiyati, E. (2019). The implementation of project-based learning in increasing speaking achievement and self-confidence. *Indonesian Educational Administration and Leadership Journal (IDEAL)*, 1(1), 4–14.
- King, B., & Smith, C. (2020). Using project-based learning to develop teachers for leadership. *The Clearing House: A Journal of Educational Strategies, Issues and Ideas*, 93(3), 158–164.
- Krauss, J., & Boss, S. (2013). Thinking through project-based learning: Guiding deeper inquiry. Corwin Press.
- Lalogiroth, A., & Tatipang, D. P. (2020). An Analysis of English National Exam And English Teachers' perception Using Bloom's Revised Taxonomy. *Journal of English Culture, Language, Literature and Education*, 8(1), 1–19.
- Liando, N. V. F., & Tatipang, D. P. (2022). English or Indonesian language? Parents' perception toward children's second language learning context. *Jurnal Lingua Idea*, 13(1), 61–75.
- Manuas, M. (2022). Reading motivation of tenth grade students at sma advent unklab airmadidi. *Journal of English Culture, Language, Literature and Education*.
- Mergendoller, J. R., Markham, T., Ravitz, J., & Larmer, J. (2013). Pervasive management of project-based learning: Teachers as guides and facilitators. In *Handbook of classroom management* (pp. 593–626). Routledge.
- Ngadiso, N., Sarosa, T., Asrori, M., Drajati, N. A., & Handayani, A. (2021). Project-based Learning (PBL) in EFL learning: Lesson from Indonesia. *Al-Ishlah: Jurnal Pendidikan*, 13(2), 1114–1122.
- Paranduk, R., Rombepajung, P., & Karisi, Y. (2021). Enhancing Students's peaking Skill in Facing The Revolution Era 4.0. *Journal of English Culture, Language, Literature and Education*, 9(2), 103–116.
- Pertiwi, D. R., & Kusumaningrum, M. A. D. (2021). The infographic projects in speaking activities. *JELLT* (*Journal of English Language and Language Teaching*), 5(1), 52–62.
- Rohayati, D. (2018). Analisis strategi pembelajaran bahasa dalam pembelajaran bahasa inggris sebagai bahasa asing. *Mimbar Agribisnis: Jurnal Pemikiran Masyarakat Ilmiah Berwawasan Agribisnis, 1*(3), 269–280.
- Safitri, I. (2024a). Should likert data be transformed using summated rating scale? A confirmatory factor analysis study on the continuous learning. *Jurnal Eduscience (JES)*, 11(3), 790–801.

- https://doi.org/10.36987/jes.v11i3.6412
- Safitri, I. (2024b). Transformation of Student Science Achievement Through Project-Based Learning (PjBL): A Meta Analysis Study. *Scientiae Educatia: Jurnal Pendidikan Sains*, 13(2). https://doi.org/DOI: 10.24235/sc.educatia.v13i2.18694
- Safitri, I., Andriyanti, E., Ansyari, R., Harahap, R. D., Harahap, R. H., & Istiqlal, M. (2025). Character Education in Indonesia: Do Integrated Islamic Schools Outperform Public Schools? *Journal of Education Culture and Society*, 16(1), 251–270.
- Safitri, I., & Ansyari, R. (2024). The Calibration of Science Achievement Test Based on Integrated Islamic Curriculum. 8th International Conference on Education and Multimedia Technology (ICEMT), 329–336. https://doi.org/10.1145/3678726.3678727
- Safitri, I., Lestarani, D., Imtikhanah, R. D. N. W., Akbarini, N. R., Sari, M. W., Fitrah, M., & Hapsan, A. (2024). *Teori Pengukuran dan Evaluasi*. CV. Ruang Tentor.
- Sirisrimangkorn, L. (2018). The use of project-based learning focusing on drama to promote speaking skills of EFL learners. *Advances in Language and Literary Studies*, 9(6), 14–20.
- Sugiyono, D. (2013). Metode penelitian kuantitatif. Kualitatif, Dan Tindakan, 189-190.
- Suparmi, S. (2018). An Analysis of Students' Anxiety in Speaking Class of English Department, Universitas Putra Indonesia YPTK, Padang. *Tell-Us Journal*, 4(2), 120–128.
- Tatipang, D. P., Manuas, M. J., Wuntu, C. N., Rorintulus, O. A., & Lengkoan, F. (2022). EFL students' perceptions of the effective English teacher characteristics. *Jurnal Pendidikan Bahasa Inggris Undiksha*, 10(1), 23–30.
- Wahyudi, I. (2022). The Effect of Video Project-Based Learning on Students' Speaking Skill. *Jurnal Ilmu Bahasa Dan Sastra*, 16(2).
- We, S. M. (2020). Enhancing students speaking skills through Project-Based Learning. *Jurnal Lingua Idea*, 11(2), 113–126.
- Widiyati, E., & Pangesti, W. (2022). Project-based learning in teaching speaking to young learners: Is it effective? *EduLite: Journal of English Education, Literature and Culture*, 7(1), 71–81.
- Wullur, A. E. J., Liando, N. V. F., & Rorimpandey, R. (2021). Improving students' motivation in studying english using audio-lingual method. *Journal of English Language and Literature Teaching*, 5(1).