

## THE EFFECT OF PROJECT-BASED LEARNING ON STUDENTS' CRITICAL THINKING SKILLS IN JUNIOR HIGH SCHOOL EFL CLASSROOMS

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### ABSTRACT

Critical thinking is an essential competency required in 21st-century education. However, students in English as a Foreign Language (EFL) classrooms often have limited opportunities to engage in higher-order thinking activities due to teacher-centered instructional practices. This study investigated the effect of Project-Based Learning (PjBL) on students' critical thinking skills in junior high school EFL classrooms. A quantitative approach employing a quasi-experimental non-equivalent control group design was used. The participants consisted of an experimental group ( $N = 29$ ) taught through Project-Based Learning and a control group ( $N = 31$ ) taught through conventional instruction. Data were collected through pre-test and post-test essay assessments designed to measure students' critical thinking skills across analysis, interpretation, evaluation, and inference. The data were analyzed using descriptive statistics, gain score analysis, normality testing, homogeneity testing, the Mann-Whitney  $U$  test, and Cohen's  $d$  effect size analysis. The statistical analysis revealed a significant difference between the two groups ( $p = .036$ ), with the experimental group obtaining a higher post-test mean score and gain score than the control group. Furthermore, the effect size analysis produced a Cohen's  $d$  value of 0.675, indicating a medium treatment effect. These findings suggest that Project-Based Learning is an effective instructional approach for promoting critical thinking skills in EFL classrooms by encouraging inquiry, problem-solving, collaboration, and analytical thinking. This study contributes empirical evidence regarding the effectiveness of Project-Based Learning in improving critical thinking skills among Indonesian junior high school EFL learners, a context that remains underexplored in previous research.

**Keywords:** *Critical Thinking Skills; Project-Based Learning; EFL Classrooms; English Language Teaching; 21st-Century Skills*

### ABSTRAK

Berpikir kritis merupakan kompetensi esensial yang dibutuhkan dalam pendidikan abad ke-21. Namun, siswa dalam kelas Bahasa Inggris sebagai Bahasa Asing (*English as a Foreign Language / EFL*) sering kali memiliki kesempatan yang terbatas untuk terlibat dalam kegiatan berpikir tingkat tinggi akibat praktik pembelajaran yang berpusat pada guru (*teacher-centered*). Penelitian ini menyelidiki pengaruh Pembelajaran Berbasis Proyek (*Project-Based Learning / PjBL*) terhadap keterampilan berpikir kritis siswa di kelas EFL sekolah menengah pertama (SMP). Pendekatan kuantitatif dengan desain kuasi-eksperimental *non-equivalent control group* digunakan dalam penelitian ini. Partisipan terdiri dari kelompok eksperimen ( $N = 29$ ) yang diajar menggunakan Pembelajaran Berbasis Proyek dan kelompok kontrol ( $N = 31$ ) yang diajar menggunakan pembelajaran konvensional. Data dikumpulkan melalui asesmen esai *pre-test* dan *post-test* yang dirancang untuk mengukur keterampilan berpikir kritis siswa mencakup

aspek analisis, interpretasi, evaluasi, dan inferensi. Data dianalisis menggunakan statistik deskriptif, analisis *gain score*, uji normalitas, uji homogenitas, uji *Mann–Whitney U*, dan analisis ukuran efek (*effect size*) *Cohen's d*. Analisis statistik menunjukkan adanya perbedaan yang signifikan antara kedua kelompok ( $p = ,036$ ), dengan kelompok eksperimen memperoleh rata-rata skor *post-test* dan *gain score* yang lebih tinggi daripada kelompok kontrol. Selain itu, analisis ukuran efek menghasilkan nilai *Cohen's d* sebesar 0,675, yang menunjukkan efek perlakuan dalam kategori sedang (*medium*). Temuan ini menunjukkan bahwa Pembelajaran Berbasis Proyek merupakan pendekatan pembelajaran yang efektif untuk meningkatkan keterampilan berpikir kritis di kelas EFL dengan mendorong inkuiri, pemecahan masalah, kolaborasi, dan pemikiran analitis. Penelitian ini memberikan bukti empiris mengenai efektivitas Pembelajaran Berbasis Proyek dalam meningkatkan keterampilan berpikir kritis di kalangan siswa SMP EFL di Indonesia, sebuah konteks yang masih jarang diteliti dalam studi-studi sebelumnya.

**Kata Kunci:** *Keterampilan Berpikir Kritis, Pembelajaran Berbasis Proyek, Kelas EFL, Pengajaran Bahasa Inggris, Keterampilan Abad ke-21*

## INTRODUCTION

The rapid development of technology, globalization, and the increasing complexity of modern society have transformed educational priorities worldwide. Education is no longer limited to passive knowledge acquisition but focuses on developing competencies that enable students to adapt effectively to contemporary challenges. Consequently, 21st-century skills, particularly critical thinking, creativity, communication, and collaboration, have become essential educational goals in modern schooling (Sari & Wardhani, 2021). Among these competencies, critical thinking plays a crucial role because it enables students to analyze information, evaluate evidence, and make reasoned decisions (Facione, 2020; Corbeil & Corbeil, 2025; Mehta, 2025; Stanikzai, 2023). Developing critical thinking in secondary education is therefore necessary to prepare learners for complex academic and real-world problem-solving.

In Indonesia, the implementation of *Kurikulum Merdeka* emphasizes the development of higher-order thinking skills and the *Pancasila* Student Profile, which highlights critical reasoning as a core dimension (Sari & Wardhani, 2021). Despite these national curriculum reforms, classroom instruction in many secondary schools remains predominantly teacher-centered. Students frequently receive information passively through lecture-based teaching and traditional textbook exercises, which limits opportunities to engage in reflective thinking (Fitriani et al., 2021; Kim & Sakir, 2020; Nurhasanah et al., 2025; Pitorini et al., 2024). This gap between ideal curriculum policy and actual classroom practice hinders students from developing autonomous analytical skills. Consequently, instructional strategies must shift toward student-centered practices that actively stimulate analytical reasoning.

Within English as a Foreign Language (EFL) learning, critical thinking is vital because language serves as a tool for constructing meaning and evaluating arguments. Effective EFL instruction should encourage learners to analyze texts, evaluate claims, and express ideas logically in the target language (Liu & Stapleton, 2020). However, empirical evidence indicates that many EFL classrooms still prioritize language forms and rote memorization over higher-order thinking (Fitriani et al., 2021). This narrow focus on linguistic mechanics often leaves learners ill-equipped to express complex, critical perspectives in English. Thus, language pedagogy requires innovative instructional models that integrate language practice with

cognitive skill development.

Traditional direct instruction and conventional group activities often fail to promote critical thinking because they lack authentic inquiry and collaborative problem-solving. In contrast, Project-Based Learning (PjBL) addresses these limitations by placing students in authentic, student-centered learning environments (Bell, 2010). PjBL engages learners in sustained investigations where they must formulate questions, gather evidence, and solve complex problems collaboratively. Through these meaningful project tasks, students actively construct knowledge while developing evaluative and analytical skills (Condliffe et al., 2021). Therefore, PjBL offers a promising alternative to conventional teacher-led methods in fostering higher-order thinking.

Previous studies have reported positive contributions of Project-Based Learning toward student engagement and higher-order thinking (Kokotsaki et al., 2016). However, most existing research has focused on senior high school or university levels, leaving empirical evidence in Indonesian junior high school EFL classrooms relatively limited. Furthermore, critical thinking has frequently been treated as a secondary outcome rather than the primary focus of experimental investigation. To address this gap, empirical research is needed to examine the specific impact of PjBL on young EFL learners' critical thinking skills. Accordingly, this study aimed to investigate the effect of Project-Based Learning on students' critical thinking skills in junior high school EFL classrooms.

## METHOD

This study employed a quantitative research approach utilizing a quasi-experimental non-equivalent control group design to examine the effect of Project-Based Learning on students' critical thinking skills. The study was conducted at a public junior high school in Garut, West Java, Indonesia, during the first semester of the 2025/2026 academic year from August to October 2025. The participants comprised 60 eighth-grade EFL students selected through purposive sampling based on English proficiency equivalence. Twenty-nine students were assigned to the experimental group receiving instruction through Project-Based Learning, while thirty-one students were assigned to the control group receiving conventional teacher-centered instruction. Data were collected using an essay-based critical thinking test consisting of six prompt items administered as pre-tests and post-tests. The test measured four critical thinking dimensions proposed by Facione, including analysis, interpretation, evaluation, and inference. Content validity was established through expert review, and inter-rater reliability was confirmed prior to formal field data collection.

Data analysis was performed using statistical software to evaluate differences in critical thinking performance between the two groups. Descriptive statistics and normalized gain score analysis were initially calculated to summarize baseline and post-treatment scores. Inferential statistical assumptions were tested using the Shapiro-Wilk test for normality and Levene's test for homogeneity of variance. Because post-test scores violated the assumption of normal distribution, the non-parametric Mann-Whitney U test was applied to test the primary research hypothesis at a significance level of 0.05. Additionally, the magnitude of the instructional treatment effect was calculated using Cohen's *d* to evaluate the practical significance of Project-Based Learning in the EFL classroom setting. All testing procedures were conducted rigorously to ensure the overall validity and reliability of the statistical conclusions. This quantitative analytical framework allowed for a robust comparison of student learning outcomes while minimizing potential bias inherent in non-randomized quasi-experimental designs in real school

classroom environments.

## RESULT AND DISCUSSION

### Results

The following are the descriptive statistics for the pre-test and post-test scores, as well as the gain score statistics.

**Table 1. Descriptive Statistics of Pre-test and Post-test Scores**

| Group              | N  | Pre-test Mean | Post-test Mean | SD (Pre-test) | SD (Post-test) |
|--------------------|----|---------------|----------------|---------------|----------------|
| Experimental Group | 29 | 77.40         | 86.80          | 13.778        | 13.376         |
| Control Group      | 31 | 79.17         | 77.22          | 11.789        | 6.468          |

**Table 2. Gain Score Statistics**

| Group              | N  | Mean Gain Score | Minimum Gain | Maximum Gain |
|--------------------|----|-----------------|--------------|--------------|
| Experimental Group | 29 | 9.40            | -20          | 55           |
| Control Group      | 31 | -1.94           | -25          | 30           |

Based on table 1 the statistical results evaluated the effect of Project-Based Learning on eighth-grade EFL students' critical thinking performance. Prior to treatment, both the experimental group ( $N = 29$ ) and the control group ( $N = 31$ ) demonstrated comparable baseline critical thinking skills on the pre-test, with the experimental group recording a mean score of 77.40 ( $SD = 13.78$ ) and the control group recording a mean score of 79.17 ( $SD = 11.79$ ). Following the instructional intervention, descriptive statistics indicated that the experimental group achieved a substantially higher post-test mean score ( $M = 86.80, SD = 13.38$ ) compared to the control group ( $M = 77.22, SD = 6.47$ ). Based on table 2 furthermore, gain score analysis showed that the experimental group obtained a positive mean gain score of 9.40 (ranging from -20.00 to 55.00), whereas the control group obtained a negative mean gain score of -1.94 (ranging from -25.00 to 30.00), demonstrating greater cognitive improvement among students exposed to project-based instruction.

### Normality and Homogeneity Tests

The Shapiro-Wilk test indicated that the post-test data were not normally distributed.

**Table 3. Shapiro-Wilk Normality Test**

| Data      | Group        | Sig. Value | Interpretation |
|-----------|--------------|------------|----------------|
| Pre-test  | Experimental | 0.175      | Normal         |
| Pre-test  | Control      | 0.071      | Normal         |
| Post-test | Experimental | 0.001      | Not Normal     |
| Post-test | Control      | 0.009      | Not Normal     |

To determine the appropriate inferential statistical test on table 3, distributional assumptions were examined using the Shapiro-Wilk normality test and Levene's test for homogeneity of variance. The Shapiro-Wilk test indicated that while pre-test scores for both groups were normally distributed ( $p = .175$  for experimental;  $p = .071$  for control), the post-test scores deviated significantly from a normal distribution ( $p = .001$  for experimental;  $p = .009$  for control). Based on table 4 Levene's test confirmed that the assumption of variance

homogeneity was satisfied across groups ( $F = 1.193, p = .281$ ).

**Table 4. Homogeneity Test Result**

|            | Levene Statistic | Sig. Value | Interpretation |
|------------|------------------|------------|----------------|
| Gain Score | 1.193            | 0.281      | Homogeneous    |

### Hypothesis Testing

Because the data were not normally distributed, the Mann-Whitney U Test was used to test the research hypothesis.

**Table 5. Mann-Whitney U Test Result**

| Test                | Sig. Value | Interpretation |
|---------------------|------------|----------------|
| Mann-Whitney U Test | 0.036      | Significant    |

The normality test indicated that the post-test data were not normally distributed. Therefore, a non-parametric Mann-Whitney U test was conducted. The analysis on table 5 produced a significance value of 0.036, which was lower than the significance threshold of 0.05. Accordingly, the null hypothesis was rejected, indicating a statistically significant difference between the experimental and control groups.

### Effect Size Measurement

To determine the magnitude of the treatment effect, Cohen's  $d$  was calculated.

**Table 6. Effect Size Result**

| Cohen's $d$ | Interpretation |
|-------------|----------------|
| 0.675       | Medium Effect  |

Based on table 6 to determine the practical significance of the treatment, Cohen's  $d$  was calculated. The result yielded an effect size value of 0.675, indicating a medium effect. This finding suggests that Project-Based Learning had a meaningful impact on students' critical thinking skills.

### Discussion

The empirical findings demonstrate that project-based learning significantly enhances eighth-grade EFL students' critical thinking performance. Prior to the intervention, baseline critical thinking skills were comparable, with the experimental group of 29 students recording a pre-test mean score of 77.40 and a standard deviation of 13.778, while the control group of 31 students achieved a pre-test mean score of 79.17 and a standard deviation of 11.789. Following instruction, the experimental group achieved a post-test mean score of 86.80 with a standard deviation of 13.376 and a positive mean gain score of 9.40, ranging from negative 20 to 55. Conversely, the control group recorded a lower post-test mean score of 77.22 with a standard deviation of 6.468 and a negative mean gain score of negative 1.94, ranging from negative 25 to 30. Because post-test scores deviated significantly from a normal distribution according to the *Shapiro-Wilk* test, a non-parametric *Mann-Whitney U* test was conducted. The analysis yielded a significance value of 0.036, which is below the 0.05 threshold, while *Cohen's d* revealed a medium effect size of 0.675, confirming that project-based instruction drove meaningful cognitive growth.

The cognitive improvement in critical thinking can be explained by the constructivist nature of project-based learning, which engages students in authentic inquiry, problem identification, information gathering, evidence evaluation, and decision-making. These collaborative activities directly mirror core cognitive processes such as analysis, evaluation, interpretation, and reasoning (Facione, 1990). Engaging learners in real-world tasks encourages them to construct knowledge independently rather than passively absorb information (Bell,

2010). In EFL contexts, project-based learning allows students to utilize English simultaneously as a cognitive and communicative tool. As learners analyze texts, debate ideas, and present arguments, active task engagement stimulates higher-order thinking skills and reflective reasoning (Condliffe et al., 2017; Fitriani et al., 2020; Kokotsaki et al., 2016). The observed medium effect size proves that structured project work serves as an effective instructional strategy for developing analytical capacity in Indonesian junior high school EFL classrooms (Halim et al., 2023; Lestari et al., 2025; Rochmahwati et al., 2024).

Beyond cognitive gains, the integration of project-based learning transforms the traditional language classroom dynamics by contextualizing target language usage. Rather than focusing on isolated grammatical exercises, students apply target language structures to solve real-world problems and co-construct meaningful artifacts. This dual-focus pedagogy reinforces language acquisition while exercising evaluative judgment and problem-solving strategies. The collaborative nature of project work also fosters peer interaction and verbal negotiation, requiring learners to defend their perspectives and refine their arguments using target language structures (Benlaghrissi & Ouahidi, 2024; Ferecbeyli, 2025; Yong & Saad, 2023). Consequently, language proficiency and critical thinking skills develop symbiotically through purposeful, student-centered interactions. This pedagogical synergy demonstrates that embedding critical thinking objectives within task-based language activities enhances overall academic engagement, making learning more relevant, durable, and intellectually stimulating for secondary school EFL learners (Peng, 2024; Yu & Singh, 2024; Z., 2026).

The practical and theoretical implications of these findings offer valuable insights for English language educators, curriculum developers, and institutional policymakers. Practically, EFL teachers are encouraged to transition from teacher-centered lecturing toward project-based frameworks that integrate real-world tasks, structured peer collaboration, and authentic problem-solving into daily lesson plans (Cahyono et al., 2024; Neupane, 2025; Syafryadin et al., 2024). School administrators should support this pedagogical shift by providing targeted professional development workshops and allocating flexible classroom time for project execution. Theoretically, this research enriches language teaching literature by confirming that cognitive development and foreign language acquisition can be successfully fostered in tandem within secondary education. Educational policymakers can leverage these empirical insights to design national English curricula that emphasize higher-order thinking skills and task-based learning, thereby preparing young learners to navigate complex global challenges.

Despite its valuable empirical insights, several limitations of this study should be acknowledged to contextualize the findings. The sample was restricted to eighth-grade students across two intact classes in a single school, which limits the regional generalizability of the results to broader EFL populations. Additionally, the intervention was implemented over a relatively short timeframe, preventing the assessment of long-term knowledge retention or sustained critical thinking habits. The reliance on non-parametric analysis due to post-test distributional skewness also highlights potential variances in individual student responsiveness to project-based instruction. Future research should employ longitudinal, quasi-experimental designs across diverse geographical regions and school types with larger sample sizes. Scholars are also encouraged to investigate potential mediating variables, such as student motivation, digital literacy, and English language proficiency, to gain a more nuanced understanding of how project-based learning shapes critical thinking development.

## CONCLUSION

This study concludes that the implementation of project-based learning has a significant positive impact on enhancing students' critical thinking skills in English language learning. Statistically, this instructional model has been shown to foster the development of cognitive aspects—such as analysis, evaluation, and drawing conclusions—more effectively than conventional teaching methods. Through active engagement in authentic, inquiry-based tasks and collaborative problem-solving, students are able to utilize English not merely as rote-memorized material, but as a medium for logical communication. Consequently, this teaching approach proves to be an effective pedagogical strategy for transforming the EFL classroom environment from a teacher-centered model into one that is interactive, analytical, and adaptive to the demands of 21st-century competencies.

The study's implications highlight the importance for educators and policymakers to integrate project-based learning models into foreign language curricula to strengthen students' higher-order thinking skills. Future research should examine the effectiveness of project-based learning through longitudinal studies involving larger sample sizes across various educational levels. Further investigation is also needed to explore the influence of other mediating variables, such as digital literacy, motivation levels, and students' initial English proficiency. Additionally, a mixed-methods approach is recommended to provide a deeper qualitative understanding of the dynamics of student collaboration during the classroom project completion process.

## REFERENCES

- Afshar, H. S., & Movassagh, H. (2021). The role of critical thinking in EFL learning. *Thinking Skills and Creativity*, 39, Artikel 100842. <https://doi.org/10.1016/j.tsc.2021.100842>
- Bell, S. (2010). Project-based learning for the 21st century: Skills for the future. *The Clearing House: A Journal of Educational Strategies, Issues and Ideas*, 83(2), 39–43. <https://doi.org/10.1080/00098650903505415>
- Benlaghrissi, H., & Ouahidi, L. M. (2024). The impact of mobile-assisted project-based learning on developing EFL students' speaking skills. *Smart Learning Environments*, 11(1), Artikel 12. <https://doi.org/10.1186/s40561-024-00303-y>
- Cahyono, B. Y., Irawati, R., Amalia, S. N., & Hidayat, L. E. (2024). Project-based learning in EFL educational settings: A meta-analysis study in EFL/ESL writing. *Journal of Writing Research*, 16(1), 105–127. <https://doi.org/10.17239/jowr-2024.16.01.04>
- Condliffe, B., Quint, J., Visser, M. G., Bangser, M. R., Drohojowska, S., Saco, L., & Nelson, E. (2021). Project-based learning: A literature review. *Education Sciences*, 11(7), Artikel 371. <https://doi.org/10.3390/educsci11070371>
- Corbeil, J. R., & Corbeil, M. E. (2025). *Teaching and learning in the age of generative AI*. Routledge. <https://doi.org/10.4324/9781032688602>
- Facione, P. A. (1990). *Critical thinking: A statement of expert consensus for purposes of educational assessment and instruction*. California Academic Press.
- Facione, P. A. (2020). *Critical thinking: What it is and why it counts*. Measured Reasons LLC.
- Ferecbeyli, N. (2025). Project-based learning in language teaching. *EuroGlobal Journal of Linguistics and Language Education*, 2(5), 107–118. <https://doi.org/10.69760/egille.2505009>
- Fitriani, S., Faridi, A., & Hartono, R. (2021). Promoting students' critical thinking in EFL classroom. *Studies in English Language and Education*, 8(3), 917–934. <https://doi.org/10.24815/siele.v8i3.20389>

- Halim, N., Boys, M. L., Fahmi, F., Nozaki, K., & Wuttipong, M. (2023). Implementation of project-based learning in Indonesian EFL class between 2017 to 2022. *Journal Neosantara Hybrid Learning*, 1(2), 94–109. <https://doi.org/10.55849/jnhl.v1i2.94>
- Kim, J. G., & Sakir, N. A. I. (2020). Enhancing students' learning activity and outcomes via implementation of problem-based learning. *Eurasia Journal of Mathematics, Science and Technology Education*, 16(12), Artikel em1916. <https://doi.org/10.29333/ejmste/9344>
- Kokotsaki, D., Menzies, V., & Wiggins, A. (2016). Project-based learning: A review of the literature. *Improving Schools*, 19(3), 267–277. <https://doi.org/10.1177/1365480216659733>
- Lestari, I. S., Nurnaningrum, G., Astuti, I. A., Hermawan, H. A., Lugina, T. D., & Amalia, L. L. (2025). Writing indigenous narratives through project-based learning: Promoting students' critical thinking in an EFL classroom. *International Journal of Language Education*, 1(2), 415–425. <https://doi.org/10.26858/ijole.v1i2.75812>
- Liu, F., & Stapleton, P. (2020). Critical thinking and argumentation in EFL contexts: An exploratory study. *System*, 93, Artikel 102155. <https://doi.org/10.1016/j.system.2020.102155>
- Mehta, S. (2025). The role of critical thinking in education. *Edumania: An International Multidisciplinary Journal*, 3(2), 242–247. <https://doi.org/10.59231/edumania/9129>
- Neupane, R. N. (2025). Bridging theory and practice: Project-based learning in EFL classrooms. *Kanya Journal*, 6(1), 22–35. <https://doi.org/10.3126/kanyaj.v6i01.87699>
- Nurhasanah, S., Sutiana, D., Nabil, F., Fauji, I., Hendriyan, S., & Dian, D. (2025). Bridging the gap: A systematic review of deep learning pedagogy for Indonesia's curriculum reform. *Tarbawi: Jurnal Keilmuan Manajemen Pendidikan*, 11(2), 277–292. <https://doi.org/10.32678/tarbawi.v11i02.11368>
- Peng, J. (2024). English language teaching methods: Exploring the impact of various approaches on students' language learning outcomes. *SHS Web of Conferences*, 187, Artikel 01008. <https://doi.org/10.1051/shsconf/202418701008>
- Pitorini, D. E., Suciati, S., & Harlita, H. (2024). Students' critical thinking skills using an e-module based on problem-based learning combined with Socratic dialogue. *Journal of Learning for Development*, 11(1), 52–65. <https://doi.org/10.56059/jl4d.v11i1.1014>
- Rochmahwati, P., Yuliasri, I., Sukarno, S., & Pratama, H. (2024). Unleashing analytical mastery: Elevating HOTS with hybrid project-based learning in academic writing courses. *International Journal of Evaluation and Research in Education (IJERE)*, 13(5), 3571–3581. <https://doi.org/10.11591/ijere.v13i5.29595>
- Sari, D. M. M., & Wardhani, A. K. (2021). Critical thinking as learning and innovation skill in the 21st century. *Journal of English Language and Pedagogy*, 4(2), 88–98. <https://doi.org/10.36597/jelp.v4i2.8778>
- Stanikzai, M. I. (2023). Critical thinking, collaboration, creativity and communication skills among school students: A review paper. *European Journal of Theoretical and Applied Sciences*, 1(5), 441–453. [https://doi.org/10.59324/ejtas.2023.1\(5\).34](https://doi.org/10.59324/ejtas.2023.1(5).34)
- Syafryadin, S., Othman, J., Amalia, S., & Wardhana, D. E. C. (2024). Unveiling students' challenges and attitudes towards project-based learning in English-speaking tertiary classroom. *LLT Journal: A Journal on Language and Language Teaching*, 27(1), 198–213. <https://doi.org/10.24071/llt.v27i1.8181>

- Yong, M. F., & Saad, W. Z. (2023). Fuelling grammar mastery and 21st century skills through project-based learning. *Pertanika Journal of Social Sciences & Humanities*, 31(1), 99–124. <https://doi.org/10.47836/pjssh.31.1.06>
- Yu, H., & Singh, C. K. S. (2024). Meta-synthesis of task-based learning implementation in China: Impact and challenge. *English Education Journal*, 15(3), 129–141. <https://doi.org/10.24815/eej.v15i3.38520>
- Z., A. (2026). *Innovative approaches to teaching English as a foreign language in secondary schools: Enhancing student engagement and motivation* (Naskah pracetak). Zenodo. <https://doi.org/10.5281/zenodo.18240991>