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Enhancing EFL Writing Instruction through Problem-Based Learning: Insights from a Classroom-Based Study

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ABSTRACT

The study aims to find out how the implementation of the Problem-Based Learning (PBL) model can enhance the writing skills of tenth-grade students, particularly in composing English exposition texts. This study applied a Classroom Action Research (CAR) method, conducted in two cycles following the stages of planning, acting, observing, and reflecting. The research was carried out in a public senior high school in Indonesia and involved 35 students. Data were gathered through writing tests, classroom observations, and student reflections. The findings revealed a steady improvement in students' writing performance across five key aspects: organization, content, grammar, mechanics, and vocabulary. The percentage of students who met the minimum mastery criterion (score ≥76) increased from 25.71% in the pre-cycle to 42.86% in Cycle 1, and reached 60% in Cycle 2. The most notable improvement occurred in organization and content, while grammar and mechanics progressed more gradually. The use of real-life problems, collaborative discussions, and reflective writing helped students produce more coherent and persuasive exposition texts. This study was limited by its short duration and the small scope of participants, which may affect the generalizability of the results. Therefore, future research is recommended to implement more extended cycles, apply the PBL model to various writing genres, and explore the integration of digital tools to support writing development, especially in grammar and mechanics.

Keywords: *Classroom-Based Instruction; EFL writing skills; exposition text writing; Problem-based Learning; writing Performance.*

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INTRODUCTION

In Indonesian senior high schools, writing in English remains one of the most challenging skills for students to master. Despite receiving English instruction for several years, many students continue to struggle with producing well-organized and coherent texts. According to Song & Song (2023), writing as a productive language skill, requires not only grammatical accuracy and vocabulary knowledge but also the ability to develop ideas, structure arguments, and communicate clearly through written form.

However, in many Indonesian EFL classrooms, writing instruction still places greater emphasis on grammatical accuracy and final written products than on the writing process itself, which leaves students insufficiently prepared to perform cognitively demanding writing tasks such as composing exposition texts. Empirical studies in the Indonesian context indicate that students commonly encounter difficulties in organizing ideas, developing logical arguments, and providing appropriate supporting evidence in written texts (Jamoom, 2021; Nuarta, 2020) Exposition texts are particularly challenging because they require higher-order thinking skills, including critical reasoning, evaluation of multiple viewpoints, and the ability to construct coherent arguments supported by factual and logical evidence (Martin & Rose, 2007; Hyland, 2004).

This gap between instruction and expectation becomes particularly apparent when students are asked to compose exposition texts, a genre that demands logical reasoning, clear argumentation, and effective use of evidence. At a public senior high school in Bogor Indonesia, classroom observations and initial assessments revealed that tenth-grade students faced substantial difficulties in this area. Their writing often lacked coherence, structure, and originality (Martin and Rose, 2007). In addition, students demonstrated weaknesses across five key aspects of writing: organization (logical sequencing of ideas), content (relevance and development of ideas), grammar (accuracy in language use), mechanics (correct use of spelling, punctuation, and capitalization), and vocabulary (range and appropriateness of word choices). These five dimensions align with the widely adopted analytical rubric model, such as the one proposed by Weigle (2015), which emphasizes writing as a multidimensional skill involving both linguistic and rhetorical competencies.

Supporting these findings, a pre-cycle writing assessment conducted at the school showed that only 9 out of 35 students (25.71%) achieved the minimum passing criterion of 76, while the majority (74.29%) failed to meet this standard. These results not only highlight the limited writing proficiency among students but also point to the inadequacy of current instructional methods in fostering essential writing skills. Clearly, a more effective and engaging

instructional approach is needed, one that addresses the five core components of writing in a structured, student-centered, and reflective manner.

One such approach that One instructional approach that holds promise in enhancing students' argumentative reasoning, idea organization, and engagement in the writing process is Problem-Based Learning (PBL). Problem-Based Learning (PBL) is an instructional approach in which learning begins with an authentic, ill-structured problem that students collaboratively analyze and solve, with the teacher acting as a facilitator rather than a direct source of information (Hmelo-Silver, 2004; Savery, 2006). When implemented appropriately in writing instruction, Problem-Based Learning (PBL) has the potential to create a meaningful learning context that facilitates students' exploration of ideas, argument development, and text organization, although its effectiveness may vary according to instructional design and learner proficiency. This instructional process supports students' language development and reasoning skills, as evidenced by improvements in writing performance and critical thinking reported by Sema et al. (2024), while Wangi et al. (2024) highlight increased student engagement and learner autonomy through collaborative problem-solving activities.

Given the diverse ways Problem-Based Learning (PBL) has been implemented in classroom settings, several recent studies have examined its impact on students' writing performance across different genres and educational contexts. Kristyanawati et al., (2019) implemented PBL to improve junior high school students' exposition text writing skills and motivation. Their study revealed significant gains in both writing performance and student motivation over three cycles, with mastery increasing from 12.5% to 100%. However, the study focused on general writing skills at the middle school level, without detailed assessment across multiple writing components. Similarly, Alghamdy (2023) examined the effectiveness of PBL on paragraph writing and grammar skills among EFL secondary students in Saudi Arabia. The results indicated a statistically significant improvement in both grammar accuracy and paragraph development. Yet, the focus was limited to micro-writing elements, and the genre used was not argumentative or analytical in nature. Meanwhile, Wangi et al. (2024) applied PBL to enhance negotiation text writing skills in Indonesian language instruction at a vocational high school. Their study showed a moderate improvement in writing performance and student participation, though it centered on transactional text structures and not academic or analytical writing.

To address this gap, the present study adopts a comprehensive approach to developing students' writing skills based on five key indicators: organization, content,

grammar, mechanics, and vocabulary. Rather than viewing writing as a static product, this study treats it as a process that can be scaffolded, practiced, and refined through problem-based tasks. It aims to demonstrate that when students are actively engaged in solving real-world problems, their writing enhances not only in structure and fluency but also in content depth and linguistic accuracy.

This study employed a Classroom Action Research (CAR) design implemented through two iterative cycles comprising planning, action, observation, and reflection. The adoption of a two-cycle framework was methodologically justified by the need for ongoing instructional refinement informed by formative evidence. The first cycle was designed to capture students' initial engagement with the Problem-Based Learning (PBL) approach and to identify persistent challenges in their writing performance. Drawing on reflective analysis of the first cycle, targeted pedagogical adjustments were introduced in the second cycle better to align the intervention with learners' evolving needs. This cyclical process facilitated a systematic enhancement of the instructional strategy, thereby increasing its responsiveness and effectiveness in addressing the five key dimensions of writing performance.

In response to these pedagogical challenges, this study addresses the following research questions: (1) To what extent does the implementation of Problem-Based Learning (PBL) enhance students' ability to write English exposition texts? and (2) How does PBL influence students' writing performance across the five key indicators of writing competence, namely organization, content, grammar, mechanics, and vocabulary?

METHOD

This study adopted a Classroom Action Research (CAR) design to enhance tenth-grade students' ability to write English exposition texts through the implementation of the Problem-Based Learning (PBL) model. CAR was selected due to its reflective and iterative nature, which allows educators to systematically refine instructional practices while responding to students' learning needs (Susilowati, 2018). Consistent with the framework proposed by Kemmis and McTaggart, the research was organized into cyclical stages of planning, action, observation, and reflection, enabling continuous pedagogical improvement informed by classroom-based evidence.

The study was conducted in a public senior high school in Indonesia during the second semester of the 2024/2025 academic year. Participants comprised 35 tenth-grade students from one intact class, selected through purposive sampling based on preliminary diagnostic writing tasks, classroom observations, and consultation with the English teacher. These preliminary findings indicated persistent challenges in idea organization, content development,

and the production of coherent and structured exposition texts. The intervention was implemented over two complete cycles, with the two-cycle design intended to facilitate systematic instructional refinement based on formative outcomes from the initial cycle.

Data were collected using multiple instruments, including writing assessments, classroom observations, and student reflection records. Writing tests were administered at the pre-cycle, Cycle 1, and Cycle 2 stages and were designed in alignment with PBL principles through the use of contextualized problem scenarios. Students engaged in both individual writing tasks and group-based problem-solving activities, which served as the primary sources for assessing writing performance. An analytic scoring rubric was employed to evaluate students' texts across five dimensions: organization, content, grammar, mechanics, and vocabulary. Classroom observations were conducted using structured observation sheets to document students' engagement, participation, and interaction throughout the learning process.

During the action stage, the PBL model was implemented through learning activities that began with the presentation of authentic, real-world problems relevant to students' academic and social contexts, such as environmental concerns, technology use, or school-related issues. Students worked collaboratively in small groups to analyze the problems, generate ideas, formulate arguments, and support their perspectives with evidence. Following group discussions, students independently composed exposition texts based on the outcomes of their collaborative reasoning. Throughout the process, the teacher acted as a facilitator, providing scaffolding, linguistic support, and prompts to stimulate critical thinking and collaborative engagement.

The observation stage focused on systematically recording students' participation, problem-solving behaviors, and classroom interactions using observation checklists and field notes. Students' written products from each cycle were also collected for qualitative and quantitative analysis, allowing for close examination of changes in writing performance across cycles.

The reflection stage involved a comprehensive analysis of data obtained from writing assessments and classroom observations. Students' texts were evaluated using the predetermined analytic rubric, and mean scores were calculated to identify patterns of improvement and areas requiring further instructional support. Observational data were triangulated with assessment results to evaluate the effectiveness of the instructional strategies. Based on reflections from Cycle 1, pedagogical adjustments were introduced in Cycle 2, including more explicit modeling of exposition text structures, targeted vocabulary support, and extended opportunities for revision.

To evaluate student enhancement, writing assessments were administered at the end of each cycle. The results were analyzed descriptively to measure changes in writing performance across the five indicators. This methodological approach enabled effective tracking of the Problem-based Learning (PBL) implementation in promoting student engagement and in developing essential writing competencies through contextual, student-centered learning.

RESULTS

The Efficacy of PBL in Enhancing Overall Expository Writing Proficiency

The findings indicate that the implementation of the Problem-Based Learning (PBL) model led to a progressive and measurable improvement in students' overall ability to write English exposition texts. As illustrated in Figure 1, the proportion of students achieving the minimum mastery criterion (≥76) increased steadily across the research stages, from 25.71% in the pre-cycle to 42.86% in Cycle 1, and further to 60% in Cycle 2. This upward trend demonstrates that PBL had a positive instructional impact on students' writing achievement.

Before the intervention, students' writing performance was generally limited, reflecting insufficient control over both the rhetorical structure of exposition texts and essential language features. Following the initial implementation of PBL in Cycle 1, a notable improvement was observed, suggesting that engaging students in problem analysis and collaborative discussion supported their initial development of argumentative writing. Further refinement of PBL strategies in Cycle 2 resulted in more substantial gains, indicating that sustained exposure to problem-based tasks, combined with structured scaffolding and feedback, contributed to meaningful enhancement in students' exposition writing ability.

Overall, these results provide empirical evidence that PBL can effectively enhance EFL students' exposition text writing when implemented through iterative instructional cycles.

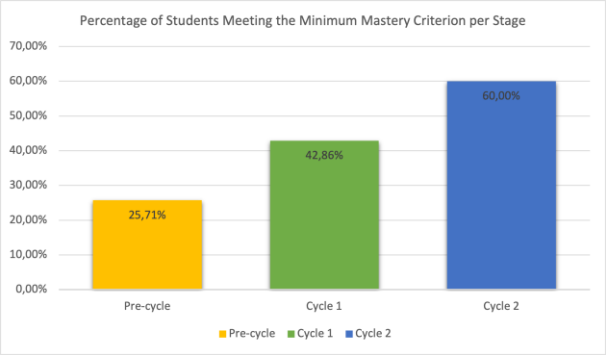

Figure 1. Student mastery achievement across PBL intervention stages.

Influence of PBL on the Five Indicators of Writing Competence

In addressing the second research question, the analysis of students' average scores across the five writing indicators reveals differentiated patterns of development over the three stages.

Pre-cycle Performance

In the pre-cycle stage, students demonstrated relatively low performance across all five indicators (Figure 2). Average scores were 65 for organization, 64 for content, 62 for grammar, 60 for mechanics, and 63 for vocabulary. These results indicate that students struggled most with grammatical accuracy and mechanics, as reflected in frequent errors in sentence construction, punctuation, and spelling. Difficulties in organization and content further suggest limited awareness of exposition text structure and insufficient development of logical arguments. The baseline proficiency of students across the five writing dimensions was rigorously evaluated during the pre-cycle stage. Figure 2 presents a detailed breakdown of the mean scores, illustrating the initial performance gaps that served as the empirical basis for the subsequent Problem-based Learning (PBL) intervention.

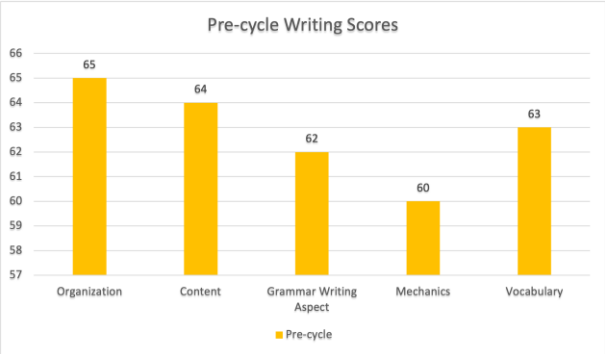

Figure 2. Figure 2. Pre-cycle average scores across writing indicators

Development in Cycle 1

In Cycle I, the PBL model was implemented using the topic "Should students be allowed to bring mobile phones to school?". Students worked collaboratively to discuss real-life problems, generate ideas, and construct arguments before writing a short exposition paragraph. Instructional support was provided through brainstorming worksheets and paragraph templates to guide students in organizing their ideas.

The results of Cycle I showed a noticeable improvement compared to the pre-condition stage. A total of 15 out of 35 students (42.86%) reached the minimum mastery criterion. The average scores increased to: organization (71), content (70), grammar (67), mechanics (65), and vocabulary (68). The most significant improvement was observed in organization and content, indicating that students had begun to understand how to structure exposition texts and develop relevant arguments.

However, some challenges remained, particularly in grammar and mechanics. Errors related to subject–verb agreement, punctuation, and spelling were still frequently found in students' writing. These findings suggested that while PBL helped students generate and organize ideas more effectively, additional support and practice were required to improve linguistic accuracy.

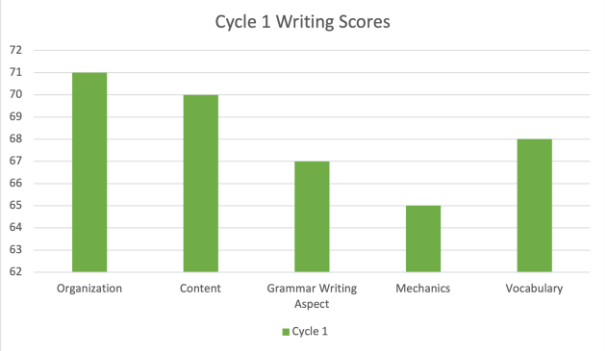

Figure 3. Average writing indicator scores in Cycle 1.

Consolidation in Cycle 2

Based on the reflection results from Cycle I, instructional strategies in Cycle II were refined by incorporating model text analysis, structured outlining, and peer-review activities. Students were given a more complex topic, "Should school uniforms be abolished?", and were guided to write a complete exposition text consisting of a thesis statement, supporting arguments, and a conclusion.

The results of Cycle II demonstrated a substantial improvement in students' writing performance. In this cycle, 21 out of 35 students (60%) achieved the minimum mastery criterion. The average scores increased further to: organization (78), content (77), grammar (74), mechanics (72), and vocabulary (75). Students showed stronger control over exposition text structure, clearer and more persuasive arguments, and improved use of cohesive devices.

Notably, grammar and vocabulary showed considerable progress in Cycle II. This improvement suggests that repeated feedback, exposure to model texts, and peer-review activities contributed to students' increased grammatical awareness and more precise word choices. The results indicate that the enhanced PBL implementation in Cycle II was effective in addressing both content-related and language-related aspects of writing.

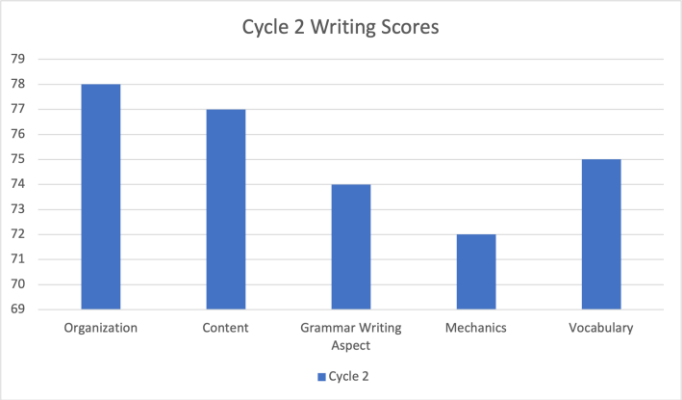

Figure 4. Average writing indicator scores in Cycle 2.

Empirical evidence from this study demonstrates that the systematic implementation of PBL facilitates a progressive enhancement in students' expository writing standards. The transition from the Pre-cycle to Cycle 2 saw the mastery rate more than double, increasing from an initial 25.71% to a final 60%. These findings suggest that the problem-driven approach not only fosters heightened student engagement but also serves as a robust framework for bridging gaps in complex writing dimensions. As illustrated in Figure 5, the intervention yielded holistic improvements, most notably in the synergy between conceptual

reasoning and linguistic accuracy.

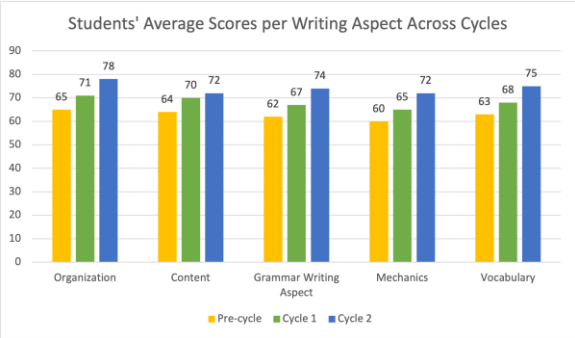

Figure 5. Progress of students' writing scores across five indicators.

DISCUSSION

The findings of this study provide further support for the effectiveness of Problem-Based Learning (PBL) in enhancing EFL students' exposition writing skills. The steady increase in the proportion of students achieving the minimum mastery criterion across instructional stages suggests that PBL facilitates sustained writing development through iterative engagement with meaningful tasks. From a constructivist perspective, this improvement can be understood as the result of learners actively constructing knowledge through problem exploration, peer interaction, and reflective writing rather than passively receiving linguistic input.

The progressive enhancement of students' writing skills across the Pre-cycle, Cycle 1, and Cycle 2 reveals the pedagogical value of implementing Problem-Based Learning (PBL) in the context of English exposition writing. Among the five writing aspects, organization and content showed the most immediate improvement, particularly after the first cycle. This improvement aligns with the structured support provided through brainstorming activities and paragraph scaffolds, which enabled students to better organize their thoughts and articulate coherent arguments. These results confirm the view that genre-based instruction, when integrated with real-life problem contexts, can help students internalize the structural conventions of academic writing (Hyland, 2004).

In contrast, grammar and mechanics, initially the most problematic areas, required more sustained intervention and only demonstrated substantial gains by the end of Cycle 2. This delayed progress is understandable, as grammatical competence tends to develop gradually through repeated exposure and targeted feedback. The use of peer-review sessions and explicit modeling appeared to play a significant role in raising students' grammatical awareness and reducing surface-level errors such as subject-verb agreement and punctuation misuse. Vocabulary, while not the primary instructional focus, also improved notably, likely due to the topical nature of the writing tasks that encouraged students to engage with new and relevant lexis in context.

The consistent upward trajectory across all five aspects reflects the strength of PBL in creating a learning environment where students are actively involved in

constructing meaning, solving problems, and using language with purpose. Rather than simply receiving instruction, students became participants in their own learning process, an essential element in developing both writing fluency and accuracy. These outcomes resonate with Hmelo-Silver's (2004) assertion that PBL promotes deeper engagement and long-term retention of skills through inquiry-driven learning.

Despite these promising results, this study is not without limitations. First, it was conducted within the scope of two action cycles over a relatively short time frame. Although improvement was evident, particularly in organization and content, some aspects such as grammar and mechanics may have shown more pronounced gains had the intervention been extended to a third or even fourth cycle. Second, the study was limited to a single class at one institution, which may restrict the generalizability of the findings to other contexts with different student demographics or proficiency levels.

Based on these limitations, future researchers may consider implementing PBL over a longer duration and involving more than two cycles to provide sufficient time for students to internalize and master each writing component. It would also be beneficial to explore the integration of digital tools, such as grammar-checking applications or collaborative writing platforms, to enhance students' language accuracy particularly in grammar and mechanics. Furthermore, incorporating differentiated instruction within the PBL framework could help address the varied needs and learning styles of students, ensuring more inclusive and effective writing instruction.

The findings of this study confirm that the Problem-based Learning (PBL) model effectively supports the development of students' writing skills across five key aspects: organization, content, grammar, mechanics, and vocabulary. Through structured guidance, collaborative problem-solving, and iterative feedback, students showed significant progress not only in organizing and articulating their ideas but also in improving linguistic accuracy and lexical choice. These outcomes suggest that when implemented consistently, PBL can serve as a powerful approach to enhance students' overall writing performance in academic settings. Digital tools, such as Grammarly, Google Docs, and Padlet, have the potential to enhance students' grammatical accuracy, expand their vocabulary, and facilitate peer collaboration in future implementations.

The integration of these digital tools can serve as meaningful scaffolding to support students' writing development both inside and outside the classroom. Grammarly, for example, provides automated feedback on grammatical structure, spelling, and mechanics, which helps students independently identify and correct their writing errors. Google Docs enables real-time collaboration and teacher monitoring, allowing for more interactive

and immediate revision processes. Meanwhile, Padlet can be used as a platform for brainstorming and idea mapping, supporting students in planning and organizing their exposition texts more effectively.

In the context of Problem-Based Learning, these tools align well with the principles of student-centered instruction by promoting autonomy, engagement, and continuous improvement. When integrated purposefully into each stage of the PBL process, digital tools not only enhance linguistic accuracy but also facilitate active learning through peer interaction and iterative feedback. Therefore, future implementations of PBL in writing instruction are encouraged to incorporate relevant digital platforms as complementary resources to strengthen the overall effectiveness of the learning model.

CONCLUSION

This classroom action research explored the implementation of the Problem-based Learning (PBL) model as a pedagogical framework to enhance the writing skills of tenth-grade students in an English class. The findings underscore the model's instructional efficacy in fostering measurable improvement across five critical dimensions of writing: organization, content, grammar, mechanics, and vocabulary. Throughout two action styles, students evolved from producing fragmented and linguistically limited texts to composing more coherent, structured, and semantically precise exposition writing.

The learning model's emphasis on inquiry, real-world relevance, and collaborative engagement created a dynamic environment that supported both cognitive and linguistic development. Substantial gains in organization and content reflected students' growing capacity to generate and structure arguments effectively, while the more gradual improvement in grammar, mechanics, and vocabulary highlighted the role of sustained modelling, feedback, and peer scaffolding in developing language accuracy and lexical depth. These progressive outcomes affirm that PBL not only cultivates surface-level fluency but also nurtures deeper writing competence through meaningful learning tasks. Moreover, the integration of digital tools such as Grammarly, Google Docs, and Padlet can enhance the implementation of the PBL model by offering real-time feedback, facilitating collaborative writing, and promoting learner autonomy. These tools serve as complementary resources that extend writing activities beyond the classroom, thereby supporting students' language development through interactive and accessible learning environments.

The findings of this study confirm that PBL is an effective and meaningful approach for improving students' writing skills at senior high school. Its student-centered, problem-driven structure offers a fertile ground for language development,

promoting autonomy, critical thinking, and communicative clarity. When implemented thoughtfully and iteratively, PBL holds the potential to advance students' writing proficiency in ways that are both academically rigorous and contextually authentic.

Future researchers are encouraged to extend the implementation period and include more than two action cycles to allow deeper internalization of writing skills, especially in grammar and mechanics. It is also recommended to apply the PBL model to other genres of writing and to explore the integration of digital tools to enhance students' accuracy, collaboration, and engagement in the writing process.

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AUTHORS' CONTRIBUTION STATEMENT

Muhammad Faqihna Fiddin (M.F.F.) led the conceptualization and research design of the study, conducted the data analysis, and drafted the manuscript. Tasya Marsanda Hafifah (T.M.H.) was responsible for implementing the instructional intervention, collecting data, and conducting classroom observations. Regina Fitria Augustin (R.F.A.) developed the research instruments and assisted with data coding and validation. Harit Ananda Librata (H.A.L.) contributed to the literature review and theoretical framing of the study. Tina Priyantin (T.P.) supported data interpretation and revised the manuscript to enhance clarity and coherence. Dini Ruswardiningsih (D.R.) provided academic supervision, validated the methodology, and approved the final version of the manuscript for submission.

REFERENCES

Alghamdy, R. Z. (2023). Efficacy of problem-based learning strategy to enhance EFL learners' paragraph writing and grammar skills. *SSRN Electronic Journal*, 14, 43–58. https://doi.org/10.2139/ssrn.4431211

Apriatni, S., & Khaeroni. (2025). Pemanfaatan magic straws untuk meningkatkan aktivitas dan hasil belajar siswa pada materi dimensi tiga. *Jurnal Tindakan Kelas*, 5(2), 309–326. https://doi.org/10.53624/ptk.v5i2.546

Baron, R. A. (1977). *Human aggression*. Springer. Elya, & Ratnaningsih, N. (2025). Penerapan problem-based learning untuk meningkatkan hasil belajar matematika. *Jurnal Tindakan Kelas*, 5(2), 371–387. https://doi.org/10.51169/adikarsa.v15i2.94

Hambleton, R. K. (2005). Issues, designs, and technical guidelines for adapting tests into multiple languages and cultures. In R. K. Hambleton, P. F. Merenda, & C. D. Spielberger (Eds.), *Adapting educational and psychological tests for cross-cultural assessment* (pp. 3–38).

Erlbaum. Handayani, A. D., Cahyono, B. Y., & Widiati, U. (2018). The use of Instagram in the teaching of EFL writing: Effect on writing ability and students' perceptions. *Studies in English Language Teaching*, 6(2), 112–122. https://doi.org/10.22158/selt.v6n2p112

Indriani, L. (2022). Penerapan problem-based learning untuk meningkatkan keaktifan dan hasil belajar siswa pada pelajaran bahasa Inggris. *Jurnal Ilmiah Pendidik Indonesia*, 1(1), 15–22. https://doi.org/10.56916/jipi.v1i1.116

Jamoom, O. A. (2021). EFL students' needs for improving their writing skills. *Scholars International Journal of Linguistics and Literature*, 4(4), 106–111. https://doi.org/10.36348/sijll.2021.v04i04.004

Kristyanawati, M. D., Surwandi, S., & Rohmadi, M. (2019). Improvement of exposition text writing motivation and skills through the application of the problem-based learning model. *Budapest International Research and Critics in Linguistics and Education (BirLE) Journal*, 2(2), 278–287. https://doi.org/10.33258/birle.v2i2.296

Martin, J. R., & Rose, D. (2007). *Working with discourse* (2nd ed.). Continuum. Nuarta, I. N. (2020). Meningkatkan prestasi belajar bahasa Inggris melalui penerapan model pembelajaran problem-based learning. *Indonesian Journal of Educational Development*, 1(3), 283–293. https://doi.org/10.5281/zenodo.4006057

Perumal, K., & Ajit, I. (2020). Enhancing writing skills: A review. *Psychology and Education*, 57(9), 382–390. https://doi.org/10.17762/pae.v57i9.592 Rao, P. S. (2019). The characteristics of effective writing skills in English. *Research Journal of English (RJOE)*, 2(2), 75–86.

Sema, E. A., Yesigat, S. G., & Dememe, Z. B. (2024). Effects of problem-based instruction on EFL students' writing performance. *Journal of China University of Mining and Technology*, 29(3), 153–165. https://doi.org/10.1654/zkdx.2024.29.3-12

Setlight, K. C. M. S., Betaubun, M., & Kartika, V. (2023). A model for teaching writing: Problem-based learning as an alternative for EFL students' writing improvement. *Journal of English Culture, Language, Literature and Education*, 11(2), 210–235. https://doi.org/10.53682/eclue.v11i2.6625

Song, C., & Song, Y. (2023). Enhancing academic writing skills and motivation: Assessing the efficacy of ChatGPT in AI-assisted language learning for EFL students. *Frontiers in Psychology*, 14, Article 1260843. https://doi.org/10.3389/fpsyg.2023.1260843

Susilowati, D. (2018). Penelitian tindakan kelas (PTK): Solusi alternatif problematika pembelajaran. *Edunomika*, 2(1), 1–12.

Wahyuni, S. (2022). The use of peer corrective feedback in improving argumentative writing skill of university students. In *Proceedings of the 1st International Conference on English Language Teaching (ICELT)* (pp. 55–60).

Wangi, N. B. S., Pradana, M. S., & Saifuddin. (2024). Application of problem-based learning model to improve negotiation text writing skills of tenth-grade vocational students. *Journal of Islamic Education Studies*, 9(1), 22–35. https://doi.org/10.58788/alwijdn.v9i1.3624

Wati, N. S. (2010). *The correlation between English grammar and writing ability among the third semester students of IAIN Metro* (Undergraduate thesis). Institut Agama Islam Negeri Metro Lampung.

Wenas, N. M., Tulung, G. J., & Yundayani, A. (2022). The influence of problem-based learning model, expository learning model, and students' learning styles on descriptive writing skill. *Soscied*, 5(2), 77–88.

Weigle, S. C. (2016). Assessing writing. In J. C. Alderson & L. F. Bachman (Eds.),

Assessing language ability in the classroom. Cambridge University Press. https://doi.org/10.1515/9781614513827-012

Wulandari, R., Wardhani, S., & Nawawi, S. (2020). Pengaruh model problem-based learning terhadap keterampilan berpikir kritis siswa pada materi keanekaragaman hayati. *Biology Education, Science & Technology*, 3(1), 45–53.