

Enhancing Critical Thinking and Short Story Writing Skills in Senior High School Students Through the Guided Inquiry Model

Meliyawati¹, Ade Hikmat², Herri Mulyono³

¹ Universitas Muhammadiyah Prof. Dr. Hamka, Jakarta, Indonesia; meliyawati@uhamka.ac.id

² Universitas Muhammadiyah Prof. Dr. Hamka, Jakarta, Indonesia; ade_hikmat@uhamka.ac.id

³ Universitas Muhammadiyah Prof. Dr. Hamka, Jakarta, Indonesia; hmulyono@uhamka.ac.id

ARTICLE INFO

Keywords:

guided inquiry;
writing process skills;
short story writing;
critical thinking;
secondary education

Article history:

Received 2024-07-31

Revised 2025-02-28

Accepted 2025-09-29

ABSTRACT

Writing is a complex and essential language skill that integrates cognitive, linguistic, and creative elements. Many students face challenges in developing writing process skills and critical thinking, particularly in short story composition. This study investigates the effectiveness of the *guided inquiry learning model* in enhancing students' writing process skills and critical thinking abilities. A true experimental design with a randomized control group was employed, involving two groups of 11th-grade students from SMA Negeri 4 Pandeglang (N = 64). The experimental group received instruction using the guided inquiry model, while the control group followed conventional methods. Data were collected through tests, observation sheets, documentation, and interviews. Students' critical thinking skills were measured using a validated post-test and analyzed with the Independent Sample T-Test in SPSS 22. The results showed a progressive increase in the writing process skills of students in the experimental group across three meetings, with an overall average score of 76.46%, categorized as "good." Additionally, the critical thinking post-test revealed a statistically significant difference between the experimental and control groups ($p = 0.0015$, one-tailed), indicating the positive impact of guided inquiry learning on students' higher-order thinking. The guided inquiry model effectively enhances students' short story writing process skills and significantly improves their critical thinking abilities. This model is recommended as an alternative instructional strategy for developing literacy and cognitive skills in secondary education.

This is an open access article below [CC BY-NC-SA](https://creativecommons.org/licenses/by-nc-sa/4.0/) license.



Corresponding author:

Meliyawati

Universitas Muhammadiyah Prof. Dr. Hamka, Jakarta, Indonesia; meliyawati@uhamka.ac.id

1. INTRODUCTION

Writing is one of the most complex and essential language skills that students must master, particularly in formal education. Unlike receptive skills such as listening and reading, or even speaking, writing requires a high level of cognitive, linguistic, and creative integration. Writers are expected to generate ideas, structure their thoughts coherently, and use appropriate language conventions to communicate meaning effectively (Cargill & O'Connor, 2021). This complexity makes writing a demanding skill, especially for students who often struggle to express their ideas fluently and logically in written form (Fitriani & Zaiturrahmi, 2022; Zhang et al., 2025).

Among the various genres of writing, literary writing—especially short story composition—is one of the most underdeveloped skills in high school education. Many students find it difficult to translate their imagination into coherent narratives, and they often lack the ability to organize story elements such as plot, character, setting, and theme (Khulel, 2022; Liu, Rahimi, & Fathi, 2022). This difficulty is further exacerbated by the perception that writing is a rigid and intimidating task. As a result, students tend to avoid creative writing activities and view them as less accessible compared to other academic tasks.

Several factors contribute to students' low writing proficiency. First, the teaching of writing in schools is often dominated by theoretical instruction with limited opportunities for practice. Teachers frequently focus on literary theory or structural analysis of texts, but rarely provide meaningful, scaffolded experiences that help students build their own stories (Amalia et al., n.d.). Second, classroom instruction tends to be teacher-centered, limiting students' autonomy and creative engagement. Students are rarely invited to explore their own ideas, experiment with language, or revise their work based on constructive feedback (Ummah, 2019).

The lack of motivational support from teachers also plays a role in students' disengagement. Teachers may unintentionally convey a low expectation for creative tasks or fail to foster a supportive classroom environment conducive to imaginative writing. Additionally, students' exposure to literary works is minimal, and their reading habits are insufficient to develop a sense of narrative structure or literary expression. This limited exposure reduces their capacity to write creatively and reflectively (Shafamarwa et al., 2024).

Infrastructure and access to learning resources are also a concern. Many schools lack sufficient learning media and platforms that facilitate writing development. In an era where digital literacy is essential, underutilizing tools such as social media, blogs, or collaborative writing platforms means missing valuable opportunities to engage students. Research shows that tools like Instagram, when used with pedagogical intention, can increase student engagement, provide authentic audiences, and foster collaborative creativity (Amelia & Natasha, 2023; Arifiyanti, 2020; Bilgin & Yildiz, 2024). These digital spaces also allow students to see writing as a living, interactive process, rather than a static, one-time product.

The core issue, however, lies in the lack of effective instructional models that develop both writing process skills and critical thinking abilities. Writing, particularly in the form of short stories, requires not only creativity but also analytical and reflective thinking. Students must develop the capacity to construct logical plots, evaluate character motivations, and identify underlying themes. These are all elements of higher-order thinking that cannot be cultivated through rote memorization or teacher lectures alone (Kassem, 2018; Nushi & Orouji, 2020; Dai & Wang, 2023).

To address these challenges, educators need to implement student-centered learning models that actively involve learners in the writing process. One such model is the guided inquiry approach, which encourages learners to explore, ask questions, investigate, and construct understanding based on their own experiences and reflections. This model aligns well with constructivist learning theories, emphasizing that knowledge is best acquired through active participation and personal engagement (Schunk & DiBenedetto,

2020). Through guided inquiry, students not only learn how to write but also how to think critically—an essential skill in the modern educational landscape.

In the context of writing instruction, the guided inquiry model can be particularly powerful. It positions students as active investigators of narrative structure, style, and meaning. Rather than being passive recipients of writing rules, students engage in tasks such as analyzing story models, formulating hypotheses about effective writing techniques, drafting their own texts, and revising based on peer and teacher feedback. These activities mirror the authentic processes of professional writers and support the development of both writing fluency and critical evaluation skills (Kesumawati et al., 2024; Zhang et al., 2025).

At SMAN 4 Pandeglang, initial classroom observations revealed that students often view short story writing as intimidating and abstract. They struggle with generating ideas, organizing plots, and expressing emotions through literary devices. Moreover, teachers tend to prioritize the final product over the process, leading to a lack of formative feedback and student reflection. Students' responses during writing tasks are often minimal, and only a few feel confident enough to share their work or participate in discussions.

These conditions underline the urgent need to adopt an instructional strategy that is both structured and exploratory. The guided inquiry model offers a promising solution by balancing teacher guidance with student autonomy. It fosters an environment where students are encouraged to take intellectual risks, reflect on their thinking, and produce original narratives that are meaningful to them. Furthermore, it helps students internalize the writing process, understand the components of storytelling, and develop the metacognitive skills necessary to become independent writers.

This study aims to investigate the effectiveness of the guided inquiry learning model in enhancing students' short story writing process skills and critical thinking abilities. By embedding critical thinking indicators within the guided writing framework, this research seeks to offer empirical evidence that writing instruction can simultaneously develop cognitive and creative capacities. In doing so, it contributes to the ongoing discourse on how to improve literacy outcomes in secondary education through innovative and student-centered pedagogies.

2. METHOD

This study employed a true experimental design using the randomized control group only model (Bayram et al., 2023; Cingillioglu et al., 2024; Coppock & McClellan, 2019; Elzeky et al., 2022; Tang et al., 2022). The research was conducted at SMA Negeri 4 Pandeglang, selected through purposive area sampling to represent typical school characteristics relevant to the study. The population included all 11th-grade students enrolled in the 2023/2024 academic year. From this population, two intact classes were selected using cluster random sampling, with one designated as the experimental group (Class XI-1) and the other as the control group (Class XI-2), totaling 64 students.

2.1 Instruments and Variables

Two primary variables were examined:

1. Writing Process Skills in Short Story Composition
2. Critical Thinking Skills related to literary writing

2.1.1 Writing Process Skills Instrument

Writing process skills were assessed through structured classroom observations **and** documentation of student worksheets (LKS). The instrument was developed based on five key indicators:

- (1) identifying variables,
- (2) formulating hypotheses,
- (3) collecting and processing data,
- (4) drawing conclusions, and
- (5) conducting experiments.

The observation instrument consisted of a rubric-based assessment sheet, with each indicator rated on a 0–100 scale. The instrument was validated by three experts in language education and curriculum studies to ensure content validity. To assess inter-rater reliability, two independent raters scored a subset of 20% of the data, and the Cohen's Kappa coefficient was calculated, yielding a value of 0.84, indicating strong agreement.

The following formula was used to quantify students' writing process skills:

$$Pp = (P / N) \times 100\%$$

Where:

- Pp = Percentage score of writing process skills
- P = Total points obtained across indicators
- N = Maximum possible points

The classification of writing process skills is outlined in Table 1:

Table 1. Classification of Writing Process Skills Based on Percentage Range

Range	Category
76% – 100%	Good
56% – <76%	Fairly Good
40% – <56%	Poor
<40%	Very Poor

2.1.2 Critical Thinking Skills Instrument

Students' critical thinking skills were measured using a post-test consisting of constructed-response items designed to assess four cognitive indicators:

- (1) asking and answering questions,
- (2) evaluating the results of short story writing,
- (3) identifying assumptions, and
- (4) determining a course of action.

The test items were adapted from validated instruments used in prior studies on higher-order thinking (An et al., 2022; Xiao et al., 2022; Yan et al., 2022). To ensure construct validity, the items were reviewed by two experts in educational psychology and one in literary pedagogy. Pilot testing was conducted on a different group of students ($N = 30$) from a comparable school, resulting in a Cronbach's alpha coefficient of 0.82, indicating high internal consistency and reliability.

2.2 Data Collection and Analysis

Data on writing process skills were collected over three instructional sessions through classroom observations and LKS analysis. Each session was documented, and results were averaged per indicator to

evaluate progress across the experimental period. Post-test data on critical thinking skills were analyzed using the Independent Sample T-Test in SPSS version 22 to determine whether there was a statistically significant difference between the experimental and control groups. A significance level of $p \leq 0.05$ was used as the threshold for rejecting the null hypothesis.

This methodology ensures a rigorous and valid evaluation of the effects of guided inquiry learning on students' writing process and critical thinking skills.

3. FINDING AND DISCUSSION

3.1 Findings

The application of the guided inquiry learning model has a good impact on students' writing process skills. This can be seen in Table 2.

Table 2. Results of Student KPS Achievements During the Learning Process

PPP indicators	Achievement (%)			
	Meeting 1	Meeting 2	Meeting 3	Average
Identify 1 Variable	61.4	71.17	75.68	69.42
Formulate a Hypothesis	64.91	80.18	86.49	77.19
Collect and process data	78.92	75.68	90.09	81.56
Conclude	77.19	58.56	68.47	68.07
Experiment	82.46	86.49	89.19	86.05
Average KPS	72.98	74.42	81.98	76.46

The results in Table 2 also indicate that students demonstrated consistent improvement in nearly all indicators of writing process skills from the first to the third meeting. The most substantial increase occurred in the "formulating a hypothesis" indicator, rising from 64.91% to 86.49%. This suggests that students became more confident in predicting outcomes and structuring their ideas as they progressed through the guided inquiry activities. Meanwhile, even though the "concluding" indicator scored the lowest overall at 68.07%, the data still show that students were gradually developing their ability to synthesize information and derive logical conclusions from their writing tasks. This pattern of progress reflects the cumulative effect of repeated practice and structured guidance, which helped students internalize each step of the writing process more effectively.

Furthermore, the overall average of 76.46% places students' writing process skills in the "good" category, highlighting the positive impact of the guided inquiry model on their learning outcomes. This finding supports the principles of constructivist learning, which emphasize that students learn best when they are actively engaged in exploring, hypothesizing, and experimenting rather than passively receiving information. By integrating these activities into short story writing instruction, the guided inquiry model not only enhanced students' technical writing abilities but also fostered critical thinking, independence, and intrinsic motivation. Such outcomes suggest that this approach can serve as a viable alternative to conventional teacher-centered methods in improving both literacy and higher-order thinking skills in secondary education.

3.2 Discussion

The findings of this study confirm that the guided inquiry learning model is an effective instructional approach for enhancing students' writing process skills in short story composition. As shown in the results, students in the experimental group demonstrated consistent improvement across key indicators of writing process skills—particularly in formulating hypotheses and conducting experiments. These outcomes align with prior research by Khulel (2022), Liu et al. (2022), and Zhang et al. (2025), which reported that guided inquiry promotes active student engagement and fosters metacognitive strategies essential for written expression. Similarly, Kesumawati et al. (2024) found that integrating the guided inquiry model with complementary tools like mind mapping significantly improved students' writing performance by enabling them to organize and express ideas more systematically.

In addition to its impact on writing processes, the guided inquiry model also produced a significant positive effect on students' critical thinking skills, as evidenced by the results of the Independent Sample T-Test ($p = 0.0015$, one-tailed). The experimental group consistently outperformed the control group across all critical thinking indicators, with the greatest difference observed in the skill of inductive reasoning (12.96 points). These findings are consistent with the theoretical underpinnings of Ausubel's meaningful learning theory, which posits that students learn more effectively when new knowledge is connected to existing cognitive structures (Asis, Ching, & Suttiwan, 2023; Schunk & DiBenedetto, 2020). Moreover, Piaget's theory of cognitive development supports this result, as high school students are generally in the formal operational stage, characterized by the ability to think abstractly, reason logically, and solve complex problems (Ustad, 2012).

The structure of guided inquiry—beginning with problem formulation, followed by hypothesis building, exploration, analysis, and conclusion—creates opportunities for students to engage in higher-order thinking throughout the writing process. This dynamic encourages students to reflect on their choices, justify their narrative decisions, and revise their work with critical awareness. The present findings are also supported by earlier studies, including those by Arifiyanti (2020) and Putri (2018), who reported moderate to high gains in students' critical thinking abilities after implementing guided inquiry strategies in secondary writing classrooms. Similarly, research by Hussin et al. (2019), Kinasih et al. (2023), and Koth et al. (2021) reinforces the claim that inquiry-based instruction yields better cognitive outcomes than conventional lecture-based teaching.

Interviews conducted with Indonesian language teachers after the intervention further support the quantitative data. Teachers observed that students became more active, autonomous, and engaged in discovering the concepts of short story writing. They noted that the guided inquiry model helped students construct knowledge through direct experience, making the material more meaningful and memorable. Students also expressed that learning through guided inquiry was easier to understand and more enjoyable, as it encouraged them to connect ideas, collaborate, and explore independently—rather than passively receive information.

Despite these promising results, several challenges emerged during implementation. First, many students found it difficult to begin writing due to limited prior experience with inquiry-based instruction. Second, the absence of sufficient supporting materials (e.g., short story writing guides, literary handbooks) created informational gaps. Third, some students struggled to manage the open-ended nature of the tasks, particularly those with lower academic confidence. These barriers highlight the need for adequate preparation, including pre-teaching inquiry procedures, providing scaffolding tools, and ensuring access to quality instructional resources. When these conditions are met, the guided inquiry model can be effectively sustained and scaled across different learning contexts.

In conclusion, this study demonstrates that the guided inquiry learning model is highly effective in developing students' short story writing process skills and improving their critical thinking in a secondary

education setting. The approach supports both cognitive and creative development, making it a compelling alternative to traditional methods in writing instruction. Future studies should consider longitudinal approaches or integrate digital tools to explore further the model's long-term effects and adaptability in various educational environments.

4. CONCLUSION

The findings of this study indicate that the use of the guided inquiry learning model significantly enhances both the writing process skills and critical thinking abilities of Grade X students in writing short stories, as demonstrated in the Indonesian language class at SMA Negeri 4 Pandeglang. The improvement in students' performance suggests that guided inquiry provides an effective framework for engaging learners in structured, yet creative, writing tasks. However, this study is limited in scope as it was conducted in a single class and focused only on specific materials related to short story writing, which may restrict the generalizability of the results. Future research is encouraged to apply the guided inquiry model to other genres or writing topics with broader student samples to validate its effectiveness. For educators, successful implementation of this model requires careful preparation, particularly in designing narrative structures such as linear, flashback, and mixed plot developments. It is also essential to ensure that students fully understand the instructions before engaging in writing tasks and that teachers allocate time for reflection and clarification to prevent misconceptions.

REFERENCES

- Al Islamiah, S. F., & Sari, D. M. M. (2021). Using Outlining Strategy in Essay Writing for Elt Students'. *Jurnal Basis*, 8(1), 141. <https://doi.org/10.33884/basisupb.v8i1.3688>
- Amalia, R., Azis, dan, Daeng Tata Raya, J., & Selatan, S. (n.d.). *PENGARUH PENGGUNAAN MEDIA VIDEO KARTUN TERHADAP KETERAMPILAN MENULIS CERPEN SISWA KELAS IX SMP*. Retrieved from <https://ojs.unm.ac.id/indonesia>
- Amelia, R., & Natasha, H. (2023). Using Picture-Series-On-Instagram to Improve Students' Narrative Writing Skills at A Public Senior High School in Kampar. *Milenial: Journal for Teachers and Learning*, 3(2), 45–57.
- An, J., Oh, J., & Park, K. (2022). Self-regulated learning strategies for nursing students: A pilot randomized controlled trial. *International Journal of Environmental Research and Public Health*, 19(15), 9058.
- Arifiyanti, F. (2020). Reciprocal Teaching as a Technique to Promote Students' Critical Thinking in Comprehending a Text for Senior High School Students. *RETAIN: Journal of Research in English Language Teaching*, 8(3).
- Asis, A., Ching, C. P., & Suttiwan, W. (2023). Increasing Students' Cognitive Absorption Through Remedial Learning in Physics. *Schrödinger: Journal of Physics Education*, 4(3), 86–91.
- Bayram, Ş. B., Gülnar, E., Özveren, H., & Çalışkan, N. (2023). The effect of flipped learning on blood pressure knowledge and self-directed learning skills of first-year nursing students: A randomized controlled trial. *Nurse Education in Practice*, 67, 103557.
- Bilgin, R., & Yildiz, Y. (2024). Fostering EFL Learners' Writing Competence through Problem-Based Learning. *Forum for Linguistic Studies*, 6(3).
- Cargill, M., & O'Connor, P. (2021). *Writing scientific research articles: Strategy and steps*. John Wiley & Sons.
- Cingillioglu, I., Gal, U., & Prokhorov, A. (2024). AI-experiments in education: An AI-driven randomized controlled trial for higher education research. *Education and Information Technologies*, 29(15), 19649–19677.

- Coppock, A., & McClellan, O. A. (2019). Validating the demographic, political, psychological, and experimental results obtained from a new source of online survey respondents. *Research & Politics*, 6(1), 2053168018822174.
- Dai, K., & Wang, Y. (2023). Investigating the interplay of Chinese EFL teachers' proactive personality, flow, and work engagement. *Journal of Multilingual and Multicultural Development*, 1–15.
- Elzaky, M. E. H., Elhabashy, H. M. M., Ali, W. G. M., & Allam, S. M. E. (2022). Effect of gamified flipped classroom on improving nursing students' skills competency and learning motivation: a randomized controlled trial. *BMC Nursing*, 21(1), 316.
- Fitriani, N., & Zaiturrahmi, Z. (2022). "I Think Our Writing Become Tidy, Clear and Also Perfect" Students' Feedback on Writing Class with Technology Performance. *Jurnal Sains Riset*, 12(1), 88–95. <https://doi.org/https://doi.org/10.5897/err2019.3757>
- Hussin, W., Harun, J., & Shukor, N. A. (2019). Problem based learning to enhance students critical thinking skill via online tools. *Asian Social Science*, 15(1), 14–23.
- Kassem, M. A. M. (2018). Improving EFL Students' Speaking Proficiency and Motivation: A Hybrid Problem-based Learning Approach. *Theory & Practice in Language Studies (TPLS)*, 8(7).
- Kesumawati, N. L., Landrawan, I., Tresnayani, N. N., Rahayu, N. M. I., Marta, K. A., Oktaviantari, K. C., ... Santi, N. N. (2024). Implementation Of The Pancasila Student Profile Strengthening Project (P5) In Developing Critical Thinking Character And Global Diversity In Students Of SMA Negeri 4 Singaraja. *Proceedings of the 6th International Conference on Law, Social Sciences and Education, ICLSSE 2024, 17 October 2024, Singaraja, Bali, Indonesia*.
- Khulel, B. (2022). Improving students' writing skill through project-based learning, process writing, and Instagram. *IJECA (International Journal of Education and Curriculum Application)*, 5(1), 25–35.
- Kinasih, A., Mariana, E., Yanti, F. A., & Wardany, K. (2023). The Use of the NHT Type Cooperative Learning Model Can Improve Students' Critical Thinking Ability. *IJECA (International Journal of Education and Curriculum Application)*, 6(1), 13–20.
- Koth, A. J., Focken, A. G., Lyden, E. R., & Yoachim, S. D. (2021). Effectiveness of an E-module at teaching novice learners critical thinking skills related to dentistry. *Journal of Dental Education*, 85(12), 1879–1888. <https://doi.org/10.1002/jdd.12757>
- Listia, R., & Febriyanti, E. R. (2020). EFL learners' problems in using tenses: an insight for grammar teaching. *IJET (Indonesian Journal of English Teaching)*, 9(1), 86–95.
- Liu, G., Rahimi, M., & Fathi, J. (2022). Flipping writing metacognitive strategies and writing skills in an English as a foreign language collaborative writing context: a mixed-methods study. *Journal of Computer Assisted Learning*, 38(6), 1730–1751.
- Nurmaini, A. F., & Sukenti, D. (2024). Indonesia the application of problem based learning to the writing ability of news texts of Grade XI students. *RETORIKA: Jurnal Ilmu Bahasa*, 10(1), 306–315.
- Nushi, M., & Orouji, F. (2020). Investigating EFL Teachers' Views on Listening Difficulties Among Their Learners: The Case of Iranian Context. *SAGE Open*, 10(2), 1–16.
- Panggabean, C. I. T., & Triassanti, R. (2020). the Implementation of Metacognitive Strategy Training To Enhance Efl Students Oral Presentation Skill. *English Education : Journal of English Teaching and Research*, 5(1), 32–40. <https://doi.org/10.29407/jetar.v5i1.14324>
- Putri, R. O. (2018). Investigating the link between critical thinking skill and argumentative writing skill: The case of Islamic senior high school. *Edukasi: Jurnal Pendidikan Dan Pengajaran*, 5(2), 144–153.
- Salem, A. A. M. S. (2022). RETRACTED: The Impact of WebQuest-Based Sheltered Instruction on Improving Academic Writing Skills, Soft Skills, and Minimizing Writing Anxiety. *Frontiers in Education*, 7, 799513. Frontiers Media SA.
- Schunk, D. H., & DiBenedetto, M. K. (2020). Motivation and social cognitive theory. *Contemporary Educational Psychology*, 60, 101832.

- Shafamarwa, S., Thahir, A., Puspita, A., Pirka, F. I., Wiliyanti, V., & Dhanny, D. R. (2024). The Implementation of Problem-Based Learning to Improve Students' Writing Achievement in Argumentative Essay: Global Warming. *E3S Web of Conferences*, 482, 04023. EDP Sciences.
- Shih, H. C. J. & Huang, S. H. C. (2020). College students' metacognitive strategy use in an EFL flipped classroom. *Computer Assisted Language Learning*, 33(7), 755–784.
- Susanti, E., Juarni, J., & Sobari, T. (2018). Application of ICT based contextual approach to improve writing short story skill and learning interest of senior high school students. *JLER (Journal of Language Education Research)*, 1(3).
- Tang, Y., Diao, H., Jin, F., Pu, Y., & Wang, H. (2022). The effect of peer education based on adolescent health education on the resilience of children and adolescents: A cluster randomized controlled trial. *PLoS One*, 17(2), e0263012.
- Taşpınar, H. K., & Cubukcu, F. (2020). The impact of critical literacy instruction on adult EFL learners' reading comprehension. *Language Teaching and Educational Research*, 3(1), 34–55.
- Ummah, P. W. B. (2019). Genre-based approach as a method to build students' critical thinking in comprehending narrative text for senior high school. *RETAIN: Journal of Research in English Language Teaching*, 7(1).
- Vejayan, L., & Yunus, M. M. (2022). Writing skills and writing approaches in ESL classroom: A systematic review. *International Journal of Academic Research in Business and Social Sciences*, 12(6), 1301–1319.
- Xiao, S., Angjeli, E., Wu, H. C., Gaier, E. D., Gomez, S., Travers, D. A., ... Repka, M. X. (2022). Randomized controlled trial of a dichoptic digital therapeutic for amblyopia. *Ophthalmology*, 129(1), 77–85.
- Yan, L., Chen, Y., Chen, F., Tao, T., Hu, Z., Wang, J., ... Ye, W. (2022). Effect of Helicobacter pylori eradication on gastric cancer prevention: updated report from a randomized controlled trial with 26.5 years of follow-up. *Gastroenterology*, 163(1), 154–162.
- Zhang, Y., Qi, W., Xia, C., Sun, H., & Chen, L. (2025). Exploring the effect of cooperative learning on senior high school students' critical thinking in EFL writing: An intervention study. *Thinking Skills and Creativity*, 56, 101765.