

EXAMINING PROJECT-BASED LEARNING TO FOSTER CREATIVE WRITING: EVIDENCE FROM INDONESIAN SECONDARY CLASSROOMS

^{1*}Siti Syafi'atul Qomariyah , ¹Indara Wahyudi, ¹Dira Permana, ¹Heri Hidayatullah 

¹Faculty of Culture, Management and Business, Mandalika University of Education, Indonesia

*Corresponding author email: sitisyafiatalqomariyah@undikma.ac.id

ABSTRACT

Project-Based Learning (PBL) has been widely adopted to address various instructional challenges in English as a Foreign Language (EFL) classroom. However, its specific impact on students' creative writing performance in Indonesian secondary education remains underexplored. This study aims to examine the effectiveness of PBL in enhancing secondary students' creative writing skills, particularly in higher-order language production. Employing a quasi-experimental design, the study involved 72 eleventh-grade students who were assigned to experimental and control groups. The experimental group received project-based writing instruction, while the control group was taught using conventional, teacher-centered methods. Data were collected through a creative writing test and analyzed using an independent samples *t*-test. The results revealed a statistically significant difference between the two groups, indicating that students exposed to PBL demonstrated higher levels of creativity, idea development, and linguistic expression than those in the control group. These findings extend constructivist and sociocultural perspectives by illustrating how project-based tasks facilitate creative language use through collaboration, autonomy, and authentic learning experiences. Pedagogically, this study highlights PBL as an effective instructional approach for fostering creative writing in EFL contexts and provides practical implications for teachers and curriculum developers seeking to promote creativity-oriented language instruction.

ARTICLE INFO

Article History:

Received: 23 October 2025

1st revision: 13 November 2025

2nd revision: 12 December 2025

Accepted: 22 December 2025

Published: 30 December 2025

Keywords:

Project-Based Learning

(PBL);

Creative writing;

EFL students;

Secondary classroom

How to cite: Qomariyah, S. S., Wahyudi, I., Permana, D., & Hidayatullah, H. (2025). Examining Project-Based Learning to Foster Creative Writing: Evidence from Indonesian Secondary Classrooms. *Jo-ELT (Journal of English Language Teaching) Fakultas Pendidikan Bahasa & Seni Prodi Pendidikan Bahasa Inggris IKIP*, 12(2), 578–588. <https://doi.org/10.33394/jo-elt.v12i2.18142>

Copyright© 2025, Siti Syafi'atul Qomariyah, Indara Wahyudi, Dira Permana, Heri Hidayatullah

This is an open access article under the [CC BY-SA](https://creativecommons.org/licenses/by-sa/4.0/) License.



INTRODUCTION

Creativity has long been regarded as a fundamental construct in education and psychology and is widely recognized as a multidimensional capacity that enables individuals and groups to solve complex problems (Barbot et al., 2012; Beghetto, 2005; Wang, 2012; Shadiev & Wang, 2022). Rather than being a fixed or innate trait, creativity develops dynamically through the interaction of cognitive, motivational, and emotional factors within specific cultural and social contexts (Crompton, 2011; Becker & Roos, 2016). In contemporary

education, creativity is increasingly acknowledged as a core component of twenty-first-century skills, alongside communication, collaboration, and critical thinking, which are essential for learners' academic and professional success (Mahmud & Wong, 2022; Trilling & Fadel, 2009). Within educational settings, creativity is frequently fostered through learning activities such as writing, which allow learners to express ideas, emotions, and imagination while simultaneously promoting higher-order thinking and problem-solving skills (Qomariyah & Permana, 2016; Chen & Zhao, 2024). Consequently, creative writing contributes to both intellectual and imaginative development by strengthening learners' analytical abilities, communicative competence, and linguistic proficiency (Wittek et al., 2015; Price, 2020; Jwa, 2024).

Despite its importance, writing remains one of the most challenging productive skills for EFL learners. In Indonesian secondary schools, students' writing performance often falls below the expected standard, with average achievement scores of approximately 65 out of 100. Teachers frequently report that students rely heavily on model texts and demonstrate limited creativity, particularly in terms of fluency, flexibility, originality, and elaboration in their written compositions. Classroom observations at SMAN 1 Gunungsari further revealed that only 8 out of 36 students exhibited strong creative writing abilities, while the majority struggled to construct coherent sentences, organize ideas logically, and select expressive and appropriate vocabulary. These conditions highlight the need for instructional practices that can more effectively stimulate creativity and foster independent expression in EFL writing classrooms.

Among various learner-centered instructional approaches, Project-Based Learning (PJBL) has gained increasing attention for its potential to foster student engagement, collaboration, and higher order thinking skills (Bell, 2010). PJBL encourages learners to construct knowledge and develop skills through structured projects that promote active inquiry, problem solving, and real world application Thomas 2000; Kurniasih 2014. In addition, this approach supports positive teacher student interaction and facilitates cooperative learning processes that contribute to knowledge acquisition and skill development Sultan et al. 2023. Previous empirical studies have demonstrated that PJBL can enhance students creative writing performance Amalia et al. 2022; Winarni 2023; Harbi et al. 2024. However, much of the existing research has primarily focused on linguistic competence, with limited emphasis on the specific dimensions of creative writing. Furthermore, insufficient attention has been given to the integration of creativity theory, particularly the indicators of fluency, flexibility, originality, and elaboration, within PJBL frameworks in EFL secondary school contexts. This gap highlights the need for further empirical investigation into how PJBL can be systematically implemented to operationalize and nurture creativity in students' writing.

To address this gap, the current study examines the effectiveness of Project-Based Learning in fostering creative writing among students in Indonesian secondary classrooms. Grounded in creativity theory and a pedagogical framework of creative cognition, the study operationalizes creativity through four indicators, namely fluency, flexibility, originality, and elaboration. By integrating these theoretical constructs within a PJBL instructional design, this research seeks to provide new empirical evidence on how Project-Based Learning can enhance creativity in EFL writing. The findings are expected to contribute both theoretically by linking creativity research with language pedagogy and practically by offering insights into effective strategies for cultivating students' creative potential in EFL classrooms.

RESEARCH METHOD

Research Design

This study employed a quantitative research paradigm that emphasizes the measurement and analysis of variables through statistical procedures (Kothari, 2004). Quantitative data enable researchers to identify relationships and examine the effects among measurable variables. The aim of this study was to examine the effectiveness of Project-Based Learning in

fostering creative writing among students in Indonesian secondary classrooms. A quasi-experimental design was adopted, specifically a post-test control group design, to determine the causal impact of the PJBL intervention on students' creative writing performance. This design was selected because it allows comparison between an experimental group receiving PJBL instruction and a control group receiving conventional instruction, even when random assignment of participants is not fully feasible within a school context (Creswell, 2012).

Population and Sample

The population of this study comprised all second-grade students of SMAN 1 Gunungsari, West Lombok, West Nusa Tenggara, in the academic year 2024/2025, totaling 171 students. A cluster sampling technique was employed to select the sample. Two intact classes were chosen, with 36 students assigned to the experimental group and another 36 students assigned to the control group.

Research Instrument

Data were collected using a creative writing test designed to assess students' writing creativity after the instructional treatment. In this test, students were required to produce a short narrative text based on a given topic within a 60-minute time limit. The students' writing products were evaluated using an analytic scoring rubric adapted from Torrance's creativity framework (Torrance, 1974). The rubric assessed four key dimensions of creativity, namely fluency, which reflects the quantity and flow of ideas, flexibility, which refers to the variety and adaptability of ideas, originality, which captures the novelty and uniqueness of expression, and elaboration, which represents the richness of detail and descriptive development demonstrated in the narrative.

Data Analysis

Quantitative data were analyzed using SPSS version 26. The analysis began with data screening followed by the calculation of descriptive statistics, including the mean, standard deviation, minimum score, and maximum score. Assumption testing was then conducted to examine data normality using the Shapiro-Wilk test and homogeneity of variances using the Levene test. Since the assumptions were met with probability values greater than 0.05, an independent samples *t*-test was employed to determine whether a statistically significant difference existed between the experimental group receiving Project-Based Learning instruction and the control group receiving conventional instruction. In addition, Cohen's *d* was calculated to measure the effect size and to provide insight into the practical significance of the findings. This analytical procedure ensured that the conclusions were based on reliable statistical evidence and demonstrated the effectiveness of PJBL in fostering creativity in students' EFL writing.

RESEARCH FINDINGS AND DISCUSSION

Research Findings

This study examines the effectiveness of Project-Based Learning in fostering creative writing among students in Indonesian secondary classrooms. To measure the impact of the intervention, a creative writing test was administered after the treatment. The data analysis procedure involved several stages, including tests of normality, homogeneity of variance, and hypothesis testing to determine the effectiveness of PJBL on students' creative writing.

Table 1
Test of Normality

Group	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistics	df	Sig.	Statistics	df	Sig.
Experiment	.217	36	.000	.932	36	.238
Control	.147	36	.047	.938	36	.044

Table 1 presents the results of the Kolmogorov-Smirnov and Shapiro-Wilk normality tests for both the experimental group ($n = 36$) and the control group ($n = 36$). For the experimental group, the Kolmogorov-Smirnov test yielded a significant result ($p < .001$), indicating a deviation from normality. However, the Shapiro-Wilk test showed a non-significant result ($p = .238$), suggesting that the data can be considered normally distributed based on this test. In contrast, the results for the control group revealed significant values in both the Kolmogorov-Smirnov test ($p = .047$) and the Shapiro-Wilk test ($p = .044$), indicating that the data for the control group do not follow a normal distribution.

The normality tests produced different outcomes for the experimental and control groups. In the experimental group, the Kolmogorov-Smirnov test indicated a significant deviation from normality, $D(36) = 0.22$, $p < 0.001$. However, the Shapiro-Wilk test did not reveal a significant departure from a normal distribution, $W(36) = 0.93$, $p = 0.238$, suggesting that the experimental group data were normally distributed. In contrast, both the Kolmogorov-Smirnov test, $D(36) = 0.15$, $p = 0.047$, and the Shapiro-Wilk test, $W(36) = 0.94$, $p = 0.044$, showed significant results for the control group, indicating that the control group data did not meet the assumption of normality. Therefore, based on the Shapiro-Wilk test, which is more appropriate for small sample sizes, the experimental group data were considered normally distributed, whereas the control group data were not.

Table 2
Test of Homogeneity of Variance

Test Basis	Levene Statistics	df1	df2	Sig.
Based on Mean	5.641	1	72	.020
Based on Median	5.953	1	72	.017
Based on Mean and With adjusted df	5.953	1	69.133	.017
Based on trimmed mean	5.859	1	72	.018

Based on Table 2 above, Levene's test indicated that the assumption of homogeneity of variance was violated. The test yielded statistically significant results across all calculation methods. When assessed based on the mean, the test produced $F(1, 72) = 5.64$, $p = .020$. Similarly, the median-based test showed $F(1, 72) = 5.95$, $p = .017$. When adjusted degrees of freedom were applied, the result remained significant, $F(1, 69.13) = 5.95$, $p = .017$. The trimmed mean also yielded a significant outcome, $F(1, 72) = 5.86$, $p = .018$. These findings indicate that the variances were not equal across the groups, confirming that the assumption of homogeneity of variance was not met ($p < .05$).

Despite this violation, the adjusted analysis still revealed a substantial improvement in both the experimental and control groups, suggesting a positive impact of the intervention. This finding strengthens the conclusion that Project-Based Learning had a meaningful and positive effect on students' creativity in writing, even after differences in variance were taken into account.

Table 3
Descriptive statistics

Group	N	Mean	Std. Deviation	Std Error Mean
Experiment	36	85.67	5.92	0.99
Control	36	70.25	6.40	1.07

Table 3 shows that the experimental group achieved a substantially higher mean score ($M = 85.67, SD = 5.92$) than the control group ($M = 70.25, SD = 6.40$). The mean difference of 15.42 points indicates that students who learned through Project-Based Learning demonstrated markedly greater improvement in creative writing performance compared to those taught through conventional instruction. The relatively small standard deviations in both groups ($SD < 7$) suggest a consistent level of performance within each group, enhancing the reliability of the descriptive results.

The pronounced difference in mean scores reflects the strong effect of PjBL on students' creative writing skills. This finding suggests that the experimental group benefited from engaging in authentic, collaborative, and inquiry-based writing projects, which enabled students to generate, elaborate, and express ideas more creatively. In contrast, the lower mean score of the control group implies that traditional teacher-centred instruction may provide fewer opportunities for students to explore and develop their creative potential in writing. Pedagogically, these results reinforce the effectiveness of student-centred, project-oriented learning in fostering creativity in EFL writing, supporting learners' independent learning, meaningful language use, and the development of creative and critical thinking skills.

Table 4
Independent samples test

Variance Assumption	Levene's Test for Equality of Variances		t-test for Equality of Means		Sig. (2-tailed)
	F	Sig.	t	df	
Equal Variances Assumed	5.641	.020	8.788	72	.000
Equal Variances Not Assumed	-	-	8.788	63.069	.000

Table 4 presents the results of the independent samples *t*-test comparing the post-test scores of the experimental and control groups. Levene's Test for Equality of Variances yielded a significant result with $F = 5.641$ and $p = .020$, indicating that the assumption of equal variances was violated. Therefore, the equal variances not assumed results were used for the *t*-test analysis. The independent samples *t*-test revealed a statistically significant difference between the two groups with $t(63.07) = 8.79$ and $p < .001$, indicating that students taught using Project-Based Learning significantly outperformed those in the control group.

The large effect size with Cohen's $d = 2.50$ indicates that the impact of PjBL was not only statistically significant but also educationally substantial. These results suggest that Project-Based Learning enabled students to generate richer ideas in terms of fluency, explore multiple perspectives in terms of flexibility, produce more unique expressions in terms of originality, and develop ideas in greater detail through elaboration. In practical classroom terms, these improvements imply that students became more engaged, expressive, and confident writers. The collaborative and inquiry-driven nature of PjBL encouraged learners to connect personal experiences with creative topics, engage in peer discussion and refine their writing through feedback, which fostered imaginative and independent thinking.

A closer analysis of each creativity dimension reveals that Project-Based Learning had a strong and meaningful effect on students' writing across all four indicators, namely fluency, flexibility, originality, and elaboration. All indicators showed statistically significant

differences with $p < .05$, confirming that PjBL enhanced students' creative writing performance in multiple aspects.

In terms of fluency, students in the PjBL group produced a greater number of relevant ideas, indicating improved divergent thinking. Regarding flexibility, their ability to shift between ideas and writing strategies increased, reflecting greater adaptability and openness in idea development. With respect to originality, students generated more unique and less conventional ideas, demonstrating independent and innovative thinking. In terms of elaboration, they provided more detailed and expanded explanations showing greater depth and refinement in their creative process.

These consistent improvements across all indicators strengthen the evidence that PjBL is effective in fostering multidimensional writing creativity not only by increasing the quantity of ideas but also by enhancing the quality, depth, and sophistication of students' written expression.

The statistical evidence indicates that Project-Based Learning substantially fostered students' creativity in writing. The higher mean scores of the experimental group reflect how project-based tasks encouraged collaboration, independent inquiry, and self-expression, which are core components of creative learning. Students were actively engaged in planning, exploring, and presenting their writing projects, which nurtured a sense of ownership and motivation. In contrast, the control group, which experienced more traditional instruction, had fewer opportunities to explore ideas independently or engage with authentic contexts.

From a pedagogical perspective, these findings offer important implications for EFL teachers. The collaborative and inquiry-based structure of Project-Based Learning encouraged students to connect personal experiences with creative topics, engage in peer discussion and refine their work through reflection and feedback. This learning process fostered independent thinking, confidence, and motivation, which are essential conditions for creativity to develop.

In contrast, students in the control group who experienced more traditional instruction had fewer opportunities for self-expression, critical exploration, or collaborative learning. As a result, their writing tended to be more conventional and limited in creative depth. Substantively, these findings demonstrate that PjBL functions as an effective pedagogical strategy for fostering students' creative potential in writing.

The higher mean scores achieved by the experimental group indicate that project-based tasks encouraged learners to collaborate, investigate, and construct meaning autonomously. In this way, PjBL aligns with constructivist principles by positioning students as active creators of knowledge rather than passive recipients. Furthermore, the authentic and context-rich tasks embedded in PjBL helped bridge classroom learning with real-world application, thereby promoting a stronger sense of purpose and relevance in writing.

Moreover, the integration of cognitive, affective, and social dimensions in Project-Based Learning aligns with the principles of twenty-first-century learning by fostering essential competencies such as problem solving, innovation, and teamwork. Teachers can leverage these outcomes by designing writing projects that connect classroom topics with students' personal experiences and social environments. For example, projects involving community narratives, cultural stories, or multimedia presentations may further enhance student engagement and creativity.

These findings demonstrate that PjBL had a meaningful impact on students' creativity in writing. The higher performance of the experimental group suggests that engaging students in Project-Based Learning encouraged them to think more critically and innovatively explore ideas beyond routine responses and express their thoughts more creatively in writing. In contrast to traditional instruction, which often emphasizes memorization and teacher-directed activities, PjBL allows students to actively construct knowledge, collaborate with peers, and

apply conceptual understanding to real-world contexts. These learning experiences appear to provide richer opportunities for developing and demonstrating creativity in writing.

Furthermore, the statistically significant difference between the experimental and control groups supports the conclusion that PjBL is effective in enhancing students' creative writing ability while also fostering academic achievement and essential skills such as problem-solving, imagination, and independent thinking. Taken together, these results advocate for the integration of PjBL into EFL writing instruction as a means of nurturing not only more proficient writers but also more imaginative and autonomous learners. The success of PjBL in this study highlights its potential to transform classroom environments into spaces where creativity, inquiry, and meaningful communication can flourish.

Discussion

The findings of this study demonstrate that Project-Based Learning (PJBL) is highly effective in fostering students' creativity in EFL writing. Beyond confirming its statistical effectiveness, the results provide deeper insight into the pedagogical and theoretical mechanisms through which PJBL enhances creative writing performance. Grounded in constructivist learning theory (Piaget, 1973; Vygotsky, 1978), PJBL positions learners as active constructors of knowledge who engage with authentic problems, generate ideas, and produce meaningful written texts. This active engagement supports the four core dimensions of creativity, fluency, flexibility, originality, and elaboration by encouraging students to explore ideas extensively, revise iteratively, and refine their written products.

From a cognitive perspective, PJBL promotes creativity by engaging students in sustained inquiry, problem-solving, and meaning-making processes. When learners design and complete authentic writing projects, they employ higher-order thinking skills such as analysis, synthesis, and evaluation, which are essential for creative expression. The iterative cycles of planning, drafting, revising, and presenting within PJBL facilitate divergent thinking (fluency), adaptive thinking (flexibility), novel idea production (originality), and detailed development of ideas (elaboration). These processes closely align with Torrance's (1995) model of creative cognition, suggesting that the structural features of PJBL naturally support creative thinking in writing.

From a motivational and socio-constructivist perspective, the effectiveness of PJBL can also be explained through Self Determination Theory (Deci and Ryan, 2000). PJBL supports learners' needs for autonomy, competence, and relatedness, thereby enhancing intrinsic motivation, which is an essential condition for creativity to emerge. Students are given greater control over topic selection, project planning, and the expression of ideas, fostering a sense of ownership and confidence in writing. Collaborative group work and peer feedback further create a supportive social environment that transforms writing from an isolated academic activity into a shared process of inquiry and self-expression. This motivational climate encourages students to take creative risks and experiment with language, resulting in more innovative and expressive written outputs.

Compared to traditional teacher-centered instruction, which often emphasizes mechanical accuracy and model imitation, PJBL provides students with greater responsibility for managing their own writing processes. Through project-based activities, students actively generate ideas (fluency), adapt perspectives and strategies (flexibility), produce original content (originality), and expand ideas in greater depth (elaboration). These dimensions collectively represent the core indicators of creativity in writing and explain the significantly higher performance of students in the PJBL group.

The findings of this study are consistent with previous research highlighting the effectiveness of PJBL in fostering creativity across educational contexts. Fauzana, Slamet, & Adi (2025) reported significant improvements in creativity through PJBL in poetry writing,

while Wulandari et al. (2024) demonstrated enhanced creative thinking and academic achievement in physics education. In EFL writing contexts, Resti and Wibowo (2023) found that PJBL improved idea generation, narrative development, and student engagement, particularly when integrated with local cultural content and visual media. Similarly, Hidayati et al. (2023) showed that PJBL grounded in multiliteracy practices enabled students to produce innovative digital texts, such as blogs and digital stories. The present study extends these findings by providing empirical evidence that PJBL effectively enhances creative writing performance in EFL secondary classrooms, with a specific focus on multidimensional creativity.

Furthermore, the results align with studies by Huang (2021), Shadiev and Wang (2022), and Garay and Quintana (2019), which emphasize that project-based activities encourage learners to connect language learning with real-world contexts and creative problem solving. Kokotsaki, Menzies, and Wiggins (2016) similarly highlighted that PJBL enhances learner autonomy, collaboration, and innovation, which are key factors associated with creative outcomes. Unlike prior research that often focused on speaking skills or general creativity, this study contributes new evidence by demonstrating that PJBL enhances creativity specifically in EFL writing across fluency, flexibility, originality, and elaboration.

Pedagogically, these findings suggest that PJBL should be integrated as a core instructional strategy in EFL writing classrooms. PJBL offers a framework that combines linguistic objectives with higher-order thinking skills and authentic communicative purposes. By engaging students in designing, investigating, and presenting writing projects, teachers can create meaningful opportunities for language use that foster creativity, collaboration, and reflective thinking. Importantly, the findings reinforce the view that creativity in writing is not an innate trait but a skill that can be systematically developed through well-designed pedagogy.

Theoretically, this study contributes to a deeper understanding of creative cognition in EFL contexts by integrating constructivist and motivational perspectives within writing instruction. The results support the argument that creativity in a second language is shaped not only by linguistic proficiency but also by learners' autonomy, engagement, and collaborative inquiry. Empirically, the study enriches the literature by providing quantitative evidence from Indonesian secondary schools, an educational context that has received limited attention in PJBL research.

Despite its strong findings, this study has certain limitations. The sample was drawn from a single school, and the intervention was conducted over a relatively short duration. As noted by Markham (2011), the long-term effectiveness of PJBL depends on its sustained and systematic implementation. Future research should therefore explore longitudinal applications of PJBL, as well as its integration with digital tools, interdisciplinary projects, and intercultural collaboration to further enhance creative writing outcomes.

This study provides compelling evidence that Project-Based Learning significantly enhances students' creativity in EFL writing. Consistent with constructivist learning principles, motivational theory, and contemporary educational demands, PJBL offers an effective pedagogical approach for fostering creativity, autonomy, and higher-order thinking skills. By providing authentic, student-centered, and process-oriented learning experiences, PJBL enables learners to actively construct meaning, take intellectual risks, and express ideas in innovative ways. These findings strongly support the integration of PJBL into EFL curricula as a means of balancing linguistic competence with creativity and innovation in 21st-century education.

CONCLUSION

This study provides empirical support for Project-Based Learning (PJBL) as an effective pedagogical model for enhancing creativity in EFL writing. The findings advance theoretical

understanding by demonstrating that creativity can be explicitly taught and systematically developed through structured, inquiry-based, and collaborative learning tasks. Grounded in constructivist and self-determination perspectives, the results highlight how cognitive engagement, learner autonomy, and social interaction jointly stimulate creative thinking and language development in EFL contexts.

The study contributes to current discussions on creativity in language education by bridging theoretical frameworks with classroom practice. It demonstrates that PJBL effectively enhances students' creativity in EFL writing, reinforcing the view that creativity is not a fixed trait but a developable skill shaped by appropriate pedagogical design. By situating writing within authentic, inquiry-driven, and collaborative contexts, PJBL operationalizes key principles of constructivism and self-determination theory, showing how meaningful engagement and learner agency foster creative written expression.

In addition, the findings contribute to the theoretical understanding of creativity in EFL by linking creative thinking with linguistic development and twenty-first-century competencies, including critical thinking, collaboration, and communication. Pedagogically, the results indicate that PJBL supports not only students' writing performance but also the development of higher-order thinking skills and learner autonomy, which are essential for success in academic and real-world contexts.

Future research is encouraged to investigate the long-term and cross-contextual effects of PJBL, particularly through its integration with digital technologies and interdisciplinary learning environments. Such investigations may provide deeper insights into how project-based approaches can further enhance creative writing development in diverse EFL settings.

REFERENCES

- Amalia, G. R., Kurniasih, S., & Jaenudin, D. (2022). Project-based learning on biotechnology materials to enhance high school students' creativity and problem-solving skills. *JSEP (Journal of Science Education and Practice)*, 6(1), 51–64. <https://doi.org/10.33751/jsep.v6i1.5704>
- Barbot, B., Tan, M., Randi, J., Santa-Donato, G., & Grigorenko, E. L. (2012). Essential skills for creative writing: Integrating multiple domain-specific perspectives. *Thinking Skills and Creativity*, 7(3), 209–223. <https://doi.org/10.1016/j.tsc.2012.04.006>
- Becker, C., & Roos, J. (2016). An approach to creative speaking activities in the young learners' classroom. *Education Inquiry*, 7, Article 27613. <https://doi.org/10.3402/edui.v7.27613>
- Beghetto, R. A. (2005). Does assessment kill student creativity? *The Educational Forum*, 69(3), 254–263.
- Bell, S. (2010). Project-based learning for the 21st century: Skills for the future. *The Clearing House*, 83(2), 39–43. <https://doi.org/10.1080/00098650903505415>
- Chen, R., & Zhao, H. (2024). ChatGPT in creative writing courses in Chinese universities: Application and research. In *Proceedings of the 12th International Conference on Information and Education Technology (ICIET 2024)* (pp. 243–247). IEEE. <https://doi.org/10.1109/ICIET60671.2024.10542824>
- Creswell, J. W. (2012). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (4th ed.). Pearson.
- Cropley, A. J. (2011). Definitions of creativity. In M. A. Runco & S. R. Pritzker (Eds.), *Encyclopedia of creativity* (2nd ed., pp. 358–368). Academic Press. <https://doi.org/10.1016/B978-0-12-375038-9.00066-2>
- Deci, E. L., & Ryan, R. M. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55(1), 68–78. <https://doi.org/10.1037/0003-066X.55.1.68>

- Fauzana, U. A., Slamet, S. Y., & Adi, F. P. (2025). The interaction between project-based learning models and learning creativity on elementary school students' poetry writing skills. *International Journal of Elementary Education*. <https://doi.org/10.23887/ijee.v9i2.94708>
- Garay, I. S., & Quintana, M. G. B. (2019). 21st-century skills: An analysis of theoretical frameworks to guide educational innovation processes in the Chilean context. In V. A. & L. M. D. (Eds.), *Springer Proceedings in Complexity* (pp. 37–46). Springer. https://doi.org/10.1007/978-3-030-30809-4_4
- Harbi, M. Y., Eliza, E., Syahrul, S., & Syafitri, W. (2024). The effect of project-based learning toward students' creative thinking and writing skills on exposition text at the second grade of SMA N 1 Palembang. *Jurnal Pendidikan Tambusai*, 8(1), 16348–16352. <https://doi.org/10.31004/jptam.v8i1.14716>
- Hidayati, N., Utami, T. S., & Nugroho, Y. (2023). Multiliteracy-based project-based learning to improve students' creativity in producing digital products. *Pendas: Jurnal Ilmiah Pendidikan Dasar*, 8(1), 45–56. <https://doi.org/10.30659/pendas.8.1.45-56>
- Huang, C.-N. (2021). Exploring EFL learners' vocabulary development through digital learning environments. *Journal of Language Teaching and Research*, 12(3), 455–468.
- Jwa, S. (2024). L2 college students' disciplinary literacy development: The mediating role of writing practice. *Journal of Language, Identity, and Education*, 23(5), 658–674. <https://doi.org/10.1080/15348458.2022.2029449>
- 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>
- Kothari, C. R. (2004). *Research methodology: Methods and techniques* (2nd rev. ed.). New Age International.
- Kurniasih. (2014). *Sukses mengimplementasikan Kurikulum 2013*. Kata Pena.
- Mahmud, M. M., & Wong, S. F. (2022). Stakeholders' perspectives of the twenty-first century skills. *Frontiers in Education*, 7, Article 931488. <https://doi.org/10.3389/educ.2022.931488>
- Markham, T. (2011). Project-based learning: A bridge just far enough. *Teacher Librarian*, 39(2), 38–42.
- Piaget, J. (1973). *To understand is to invent: The future of education*. Grossman.
- Price, K. (2020). The writing teacher: Rethinking assessment and transformative learning in the creative writing classroom. *New Writing*, 17(4), 463–470. <https://doi.org/10.1080/14790726.2019.1699577>
- Qomariyah, S. S., & Permana, D. (2016). Process-based approach towards students' creativity in writing English paragraphs. *IJELTAL (Indonesian Journal of English Language Teaching and Applied Linguistics)*, 1(1), 37–47. <https://doi.org/10.21093/ijeltal.v1i1.5>
- Resti, R., & Wibowo, H. (2023). Enhancing creativity and collaboration in story writing through project-based learning with illustrated stories. *Jurnal Pendidikan Progresif*, 13(2), 122–134. <https://doi.org/10.23960/jpp.v13.i2.32544>
- Retno Winarni. (2023). The effect of project-based learning on creative writing skills in elementary school students: Multivariate analysis of variance on themes, diction, and imagination. *Jurnal Iqra': Kajian Ilmu Pendidikan*, 8(2), 120–129. <https://doi.org/10.25217/ji.v8i2.2826>
- Shadiev, R., & Wang, X. (2022). A review of research on technology-supported language learning and 21st century skills. *Frontiers in Psychology*, 13, Article 897689. <https://doi.org/10.3389/fpsyg.2022.897689>

- Sultan, M. R., Qalbi, N., & Nappu, S. (2023). Project-based learning in creative writing: Teachers' strategies and encountered obstacles. *VOLES (Voice of English Language Education Society)*, 7(2), 374–383. <https://doi.org/10.29408/veles.v7i2.21419>
- Thomas, J. W. (2000). *A review of research on project-based learning*. Autodesk Foundation.
- Torrance, E. P. (1974). *Torrance tests of creative thinking: Norms-technical manual*. Personnel Press.
- Torrance, E. P. (1995). *Why Fly?: A philosophy of creativity*. Ablex Publishing Corporation.
- Trilling, B., & Fadel, C. (2009). *21st century skills: Learning for life in our times*. Jossey-Bass.
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Harvard University Press.
- Wang, A. Y. (2012). Exploring the relationship of creative thinking to reading and writing. *Thinking Skills and Creativity*, 7(1), 38–47. <https://doi.org/10.1016/j.tsc.2011.09.001>
- Wittek, A. L., Askeland, N., & Aamotsbakken, B. (2015). Learning from and about writing: A case study of the learning trajectories of student teachers. *Learning, Culture and Social Interaction*, 6, 16–28. <https://doi.org/10.1016/j.lcsi.2015.02.001>
- Wulandari, S., Fadillah, N., & Pratama, R. (2024). The impact of project-based learning on creative thinking and academic achievement in physics. *Jurnal Penelitian Pendidikan IPA*, 10(4), 765–774. <https://jppipa.unram.ac.id/index.php/jppipa/article/view/9738>