

Original Article

Innovative Instructional Strategies and the Writing Skills of Grade 4 Pupils in Lutayan District II Elementary Schools Under the MATATAG Curriculum

Joharie Olimpain ^{1,*}, Salima Maulana ¹, Richard Toledo ¹,
Jonathan Roque ¹

Received: 26 August 2026; Revised: 01 October 2026;
Accepted: 15 October 2026; Published: 24 October 2026

DOI: <https://doi.org/10.66074/F5T3H8Q1M>

Abstract

This study determined the perceptions of teachers and pupils regarding innovative instructional strategies and pupils' self-reported writing-related abilities under the MATATAG Curriculum in Lutayan II District during the School Year 2025–2026. Specifically, it identified the level of innovative instructional strategies used in teaching writing and the level of pupils' self-reported writing-related abilities in writing fluency, organization, vocabulary, creativity, grammar, and motivation. The study also examined differences in perceptions of innovative instructional strategies and the relationship between these strategies and pupils' self-reported writing-related abilities. A descriptive-comparative quantitative research design was employed involving 21 Grade 4 teachers and 199 Grade 4 pupils from selected elementary schools in Lutayan II District. Survey questionnaires were used as the primary instrument for data collection. The mean and standard deviation were used to determine the reported levels of innovative instructional strategies and pupils' self-reported writing-related abilities. Two-Way ANOVA was used to examine the effects of respondent group and instructional strategy, while Pearson correlation was used to determine the relationship between innovative instructional strategies and pupils' self-reported writing-related abilities. Findings revealed that Collaborative Writing, Modeling and Guided Writing, Project-Based Learning, and Digital Storytelling were often used, while Journal Writing was sometimes used. Moreover,

¹ Sultan Kudarat State University, Lutayan, Sultan Kudarat, Philippines
*olimpainjoharie4@gmail.com

pupils reported an advanced level in Writing Vocabulary and proficient levels in Writing Fluency, Writing Organization, Creative Writing, and Writing Grammar, while Writing Motivation received a high mean rating. The Two-Way ANOVA showed no statistically significant effect of respondent group, a significant effect of instructional strategy, and no significant interaction effect. Pearson correlation showed a very strong positive correlation ($r = 0.96$) between innovative instructional strategies and pupils' self-reported writing-related abilities. The findings indicate an association between the reported use of innovative instructional strategies and pupils' perceptions of their writing-related abilities. However, the results do not establish causation or directly measure pupils' actual writing performance.

Keywords: collaborative writing, Grade 4 pupils, innovative instructional strategies, MATATAG Curriculum, modeling and guided writing, project-based learning, self-reported writing-related abilities, writing fluency, writing grammar, writing motivation, writing organization, writing vocabulary

1. Introduction

Writing is an important literacy skill that helps learners communicate ideas, develop creativity, and use critical thinking in written expression (Cahyani et al., 2023; Veiga-Simão et al., 2022). However, elementary pupils may experience difficulties in writing due to limited vocabulary, weak organization of ideas, and other writing-related challenges (Sarwat et al., 2021). These challenges may affect learners' ability to express their ideas clearly in written form.

In the Philippines, the Department of Education (DepEd) introduced the MATATAG Curriculum as a revised K to 10 curriculum, with its phased implementation beginning in School Year 2024–2025. The curriculum places emphasis on foundational skills and learner-centered learning experiences, with curriculum guides provided for Grade 4, including English and Filipino (Department of Education, 2023). This study also supports the United Nations Sustainable Development Goal (SDG) 4: Quality Education, which aims to ensure inclusive, equitable quality education and to promote lifelong learning opportunities for all. In particular, SDG 4 aims to ensure quality primary and secondary education and effective learning outcomes (United Nations, n.d.).

Studies have shown that different instructional strategies may support the development of learners' writing skills. Collaborative Writing can support idea

development and writing fluency by allowing learners to work together during the writing process (Pham, 2021). Journal Writing provides learners with opportunities to reflect and express their ideas while developing creative writing skills (Awangku Arni & Abdul Aziz, 2024). Modeling and Guided Writing provide structured support to help elementary learners develop their writing skills through planning, guidance, and practice (Arrimada et al., 2021; Kartikasari, 2022). Project-Based Learning can support creative writing and creativity among elementary school learners through meaningful project-based activities (Winarni, 2023). Digital Storytelling can also support writing skills and motivation, while elementary-level research has reported improvements in vocabulary, writing style, creativity, and narrative writing performance through digital storytelling projects (Alemi et al., 2022; Mukarromah et al., 2025).

However, the existing literature has not clearly established how these five instructional strategies, when considered together, are reported and related to pupils' writing-related abilities within the context of the MATATAG Curriculum. Most of the reviewed studies examined individual strategies, different educational settings, or different grade levels. Thus, what remains insufficiently examined is the combined use of Collaborative Writing, Journal Writing, Modeling and Guided Writing, Project-Based Learning, and Digital Storytelling and their relationship with Grade 4 pupils' self-reported writing-related abilities under the newly implemented MATATAG Curriculum. This study addresses this gap by examining these five strategies together and determining their relationship with the self-reported writing-related abilities of Grade 4 pupils in Lutayan II District, Sultan Kudarat.

By focusing on teachers' and pupils' reported experiences in this specific local and curricular context, the study provides context-specific information that is insufficiently represented in the existing literature. Thus, this study aims to determine the use of innovative instructional strategies and their relationship with pupils' self-reported writing-related abilities under the MATATAG Curriculum. The findings may provide useful information for teachers and school administrators in planning learner-centered writing instruction for elementary pupils.

2. Methodology

The study utilized a descriptive-comparative quantitative research design to determine the innovative instructional strategies commonly used by teachers in teaching writing and the Grade 4 pupils' self-reported perceptions of their writing-related abilities under the MATATAG Curriculum during School Year 2025–2026 in Lutayan II District, Sultan Kudarat. A quantitative research approach was appropriate because the study involved collecting and analyzing numerical data to describe the variables and examine differences and relationships among them (Creswell & Creswell, 2018; Gay et al., 2018). The study also aimed to determine the significant differences between teachers' and pupils' perceptions of innovative instructional

strategies, and the significant relationship between these strategies and pupils' reported writing-related abilities.

The study respondents comprised 21 Grade 4 teachers and 199 Grade 4 pupils from selected elementary schools in the Lutayan II District. Total enumeration was used for the teacher respondents, while Slovin's Formula with a 5% margin of error was used to determine the sample size of the Grade 4 pupils. The formula used was:

$$n = N / (1 + Ne^2)$$

where:

n= sample size

N = total population

e = margin of error (0.05 or 5%)

The respondents were selected to provide information regarding the implementation of innovative instructional strategies and the pupils' reported perceptions of their writing-related abilities under the MATATAG Curriculum.

A researcher-made questionnaire served as the primary data-gathering instrument of the study. The first part of the questionnaire focused on innovative instructional strategies, namely Collaborative Writing, Journal Writing, Modeling and Guided Writing, Project-Based Learning, and Digital Storytelling. The second part of the questionnaire assessed the pupils' self-reported perceptions of their writing-related abilities in terms of fluency, organization, vocabulary, creativity, and grammar. It also included motivation as a related learner factor in writing. Thus, the responses in this part of the questionnaire represented the pupils' own perceptions of their writing-related abilities rather than a direct assessment of their actual written compositions.

Statistical Treatment. Mean and standard deviation were used to summarize the reported levels of innovative instructional strategies and pupils' self-reported writing-related abilities. Two-Way ANOVA was used to examine the main effects of respondent group and instructional strategy, as well as their interaction. In a two-factor ANOVA, the analysis considers the main effects of the two factors and their interaction (Penn State Eberly College of Science, n.d.). Pearson's correlation coefficient was used to determine the direction and strength of the relationship between innovative instructional strategies and pupils' self-reported writing-related abilities. Pearson's *r* ranges from -1 to +1, with values closer to either -1 or +1 indicating stronger relationships (Penn State Eberly College of Science, n.d.). The statistical results were interpreted using the appropriate critical values at the selected level of significance.

Prior to data collection, the questionnaire underwent expert validation to assess the clarity, relevance, and appropriateness of the items for respondents. The reliability of the questionnaire was then examined through internal consistency. Cronbach's alpha is commonly used to assess the internal consistency of questionnaire items and the reliability of a scale (UCLA Statistical Consulting Group, n.d.). The internal consistency reliability of the 33-item questionnaire was assessed using Cronbach's

alpha based on the pilot test results. The questionnaire obtained a Cronbach's alpha coefficient of 0.8994, indicating excellent internal consistency and demonstrating that the items were sufficiently consistent for use in the study. The validated and reliable questionnaire was then administered to the selected respondents. The collected responses were coded, tabulated, and analyzed using the statistical treatments employed in the study.

3. Results

Table 1. Differences in innovative instructional strategies commonly used by teachers, as perceived by teachers and Grade 4 students.

Variables	Teachers Mean	Students Mean	Interpretation
Collaborative Writing	4.77	3.93	Often Used
Journal Writing	3.00	2.81	Sometimes Used
Modeling and Guided Writing	4.77	4.42	Often Used
Project Based learning (PBL)	4.41	4.08	Often Used
Digital Storytelling	3.80	4.16	Often Used

The results show that collaborative writing, modeling and guided writing, project-based learning, and digital storytelling were reported as "often used," while journal writing was reported as "sometimes used." modeling and guided writing received the highest mean among the pupils' responses, while collaborative writing and modeling and guided writing both obtained the highest mean among teachers.

Table 2. Grade 4 pupils' self-reported writing-related abilities.

Writing Skills	Pupils Mean	Interpretation
Writing Fluency	3.55	Proficient
Writing Organization	3.16	Proficient
Writing Vocabulary	4.00	Advanced
Creative Writing	3.33	Proficient
Writing Grammar	3.27	Proficient
Writing Motivation	4.28	Proficient

The results indicate that writing vocabulary obtained the highest mean among the writing-related indicators, followed by writing fluency, creative writing, writing grammar, and writing organization. Writing motivation also obtained a high mean score. these results represent the pupils' self-reported perceptions based on their questionnaire responses and do not constitute a direct assessment of their actual written compositions.

Table 3. Two-Way ANOVA on teachers' and Grade 4 pupils' perceptions of innovative instructional strategies.

Source of Variation	Computed F-value	Critical F-value	Decision	Interpretation
Respondent Group (Teachers and Students)	1.41	3.89	Fail to Reject H_0	Not Significant
Instructional Strategies	9.75	2.37	Reject H_0	Significant
Respondent Group and Instructional Strategies	1.04	2.37	Fail to Reject H_0	Not Significant

Table 3 presents the results of the two-way ANOVA examining teachers' and Grade 4 pupils' perceptions of innovative instructional strategies. The results show that the effect of the respondent group was not statistically significant, with a computed F-value of 1.41 compared with the critical F-value of 3.89. However, the effect of instructional strategy was statistically significant, as the computed F-value of 9.75 was higher than the critical F-value of 2.37. Meanwhile, the interaction between respondent group and instructional strategy was not statistically significant, with a computed F-value of 1.04 compared with the critical F-value of 2.37. These findings indicate that perceptions differed significantly across instructional strategies, whereas the respondent group and its interaction with instructional strategy did not yield statistically significant differences.

Table 4. Pearson correlation between innovative instructional strategies and Grade 4 pupils' self-reported writing-related abilities ($N = 199$).

Variable	Pearson r	Computed t -value	P- Value	Interpretation
Innovative Instructional Strategies and Self-Reported Writing-Related Abilities	0.52	8.54	<.001	Moderate Positive Correlation

Table 4 presents the Pearson product-moment correlation analysis evaluating the relationship between the frequency of innovative instructional strategies and Grade 4 pupils' self-reported writing-related abilities across all individual respondents ($N = 199$). The results reveal a statistically significant moderate positive correlation between the two variables, $r = 0.52$, $t(197) = 8.54$, $p < .001$. This leads to the rejection of the null hypothesis, indicating that a higher frequency of exposure to innovative instructional strategies is significantly associated with higher self-reported writing abilities among Grade 4 pupils.

4. Discussion

The study found that teachers frequently used innovative instructional strategies to teach writing under the MATATAG Curriculum. Collaborative writing, modeling and guided writing, project-based learning, and digital storytelling obtained high mean scores and were interpreted as “Often Used,” indicating that teachers reported frequent use of learner-centered and interactive approaches in writing instruction. Among the strategies, modeling and guided writing obtained the highest mean scores from both teachers and pupils, suggesting that these strategies were commonly reported by both groups in their classroom experiences. Collaborative writing was also widely reported, allowing pupils to exchange ideas, cooperate with peers, and participate in group writing activities. Likewise, project-based learning and digital storytelling were frequently reported as part of writing instruction. However, journal writing obtained the lowest mean scores and was interpreted as “sometimes used.” this indicates that journal writing was reported less frequently than the other instructional strategies included in the study.

This pattern is consistent with research emphasizing explicit instruction, guided support, and peer assistance in elementary writing. In a meta-analysis of writing instruction for elementary-grade students, Graham et al. (2012) found positive effects for strategy instruction, prewriting activities, peer assistance, and process-oriented writing instruction. These findings provide a research-based explanation for why modeling, guided writing, and collaborative activities may be prominent in classroom practice: they offer pupils structured support as they generate, organize, and communicate ideas. Research on collaborative writing among primary school pupils has also described how peer interaction can create opportunities for learners to share knowledge, discuss content, and make decisions about text (Herder et al., 2020). However, the present study measured the reported frequency of use, not the effectiveness of each strategy; therefore, the high mean for modeling and guided writing should not be interpreted as evidence that these strategies produce better writing outcomes than the others.

The study also revealed that Grade 4 pupils reported varying levels of writing-related abilities based on their questionnaire responses. Writing vocabulary obtained the highest mean score and was interpreted as “advanced,” indicating that pupils reported stronger vocabulary-related abilities compared with the other writing-related indicators. Writing motivation also obtained a high mean score, suggesting that pupils reported a positive level of motivation toward writing activities. Meanwhile, writing fluency, writing organization, creative writing, and writing grammar were interpreted as “proficient” based on the questionnaire results. These findings reflect the pupils’ self-reported perceptions of their writing-related abilities and should not be interpreted as a direct assessment of their actual written outputs.

The results should be interpreted in light of research showing that writing involves several related skills, including generating ideas, organizing text, using

language, and applying writing strategies. Graham et al. (2012) reported that explicit instruction in writing strategies, text structure, creativity, and transcription skills can improve the quality of elementary pupils' writing. This literature is relevant because the present study assessed multiple dimensions of writing-related ability rather than a single skill. Nevertheless, because the indicators in this study were based on questionnaire responses, the relatively high vocabulary rating reflects pupils' perceptions of their vocabulary-related abilities; it does not independently confirm the range, accuracy, or appropriateness of vocabulary in their written compositions.

The findings further showed no significant difference in the overall perceptions of teachers and pupils regarding innovative instructional strategies based on the Two-Way ANOVA results. The computed F-value of 1.41 was lower than the critical F-value of 3.89. However, the effect of instructional strategy was significant, with a computed F-value of 9.75 exceeding the critical F-value of 2.37, while the interaction between respondent group and instructional strategy was not significant ($F = 1.04 < 2.37$). This indicates that the reported perceptions varied across the instructional strategies, but the respondent group and its interaction with strategy did not produce statistically significant differences.

The absence of a significant difference between respondent groups suggests that teachers' and pupils' overall ratings were not statistically distinguishable in this sample, although it does not establish that their experiences were identical. The significant effect of instructional strategy indicates that ratings differed across the strategies considered in the analysis. This is compatible with the broader writing-instruction literature, which examines distinct practices—such as strategy instruction, peer assistance, and prewriting—as separate approaches rather than assuming that all writing strategies function in the same way (Graham et al., 2012). The present statistical results, however, do not identify why the ratings differed and should be interpreted only in relation to the variables and measures included in the study.

The study also examined the relationship between innovative instructional strategies and pupils' self-reported writing-related abilities using Pearson correlation across all individual respondents ($N = 199$). The result showed a Pearson correlation coefficient of $r = 0.52$, indicating a statistically significant moderate positive correlation. The computed t-value of 8.54 ($p < .001$) was higher than the tabular t-value of 1.96, leading to the rejection of the null hypothesis. This finding suggests that higher reported use of innovative instructional strategies was associated with higher self-reported writing-related abilities among the pupils. However, this relationship should not be interpreted as proof that the strategies directly caused improvement in actual writing performance.

This positive association is broadly consistent with research indicating that structured writing instruction and supported writing activities are related to stronger writing outcomes. Graham et al. (2012), for example, found that several instructional practices—including strategy instruction, peer assistance, and prewriting—had positive effects on elementary pupils' writing quality in intervention studies. In addition, Mukarromah et al. (2025) reported positive effects of a digital storytelling

project model on elementary pupils' narrative writing performance, including gains in brainstorming, vocabulary, and writing style. These studies offer relevant context for the relationship observed in the present research. Still, their designs and outcome measures differ from the current questionnaire-based correlational study. Accordingly, the correlation of $r = 0.52$ indicates an association between reported strategy use and self-reported abilities; it does not demonstrate causation or confirm changes in independently assessed writing performance.

Taken together, the findings show that the innovative instructional strategies were reported to be commonly used, while pupils also reported varying levels of writing-related abilities. Modeling and guided writing received the highest reported mean score, while journal writing received the lowest among the strategies for the writing-related indicators. Vocabulary obtained the highest reported mean. The moderate positive correlation between innovative instructional strategies and self-reported writing-related abilities further shows an association between the two variables. These findings describe patterns in the questionnaire responses and should be understood as reported perceptions rather than direct evidence of objectively measured writing performance.

The lower reported use of Journal Writing may indicate an opportunity for teachers to consider incorporating regular reflective or independent writing tasks into classroom routines when appropriate. However, the present data do not establish why journal writing was used less frequently; possible explanations such as limited instructional time, classroom priorities, or assessment practices would require further investigation rather than assumption. More broadly, the research reviewed by Graham et al. (2012) supports the value of providing pupils with structured opportunities to write and receive support during the writing process. For collaborative activities, Herder et al. (2020) describe peer writing as a context in which primary pupils can share and discuss knowledge. In a quasi-experimental study of elementary pupils' narrative writing, Mukarromah et al. (2025) found positive outcomes. These studies support considering a range of writing opportunities, while the present study itself does not determine which particular strategy is most effective.

Overall, the findings provide information about teachers' and pupils' reported experiences with innovative instructional strategies and pupils' self-reported perceptions of their writing-related abilities under the MATATAG Curriculum. The significant correlation indicates an association between the two variables, but it does not establish causation or demonstrate improvement in actual writing performance. Future studies may strengthen the assessment of writing ability by including actual writing tasks, validated scoring rubrics, portfolios, or independent evaluation of pupils' written outputs.

This recommendation is consistent with the writing-assessment literature. Graham et al. (2012) synthesized intervention studies that assessed writing outcomes, while Graham et al. (2015) found that feedback from adults, peers, students themselves, and computers was associated with improvements in writing quality across studies involving students in Grades 1–8. Future research on Grade 4 pupils

under the MATATAG Curriculum could therefore combine questionnaires with samples of pupils' actual writing, a clearly defined scoring rubric, and feedback or portfolio evidence. Such a design would help distinguish pupils' perceptions of their abilities from their demonstrated performance and provide stronger evidence of how instructional practices relate to writing development.

5. Conclusion

Modeling and Guided Writing received high mean ratings from both teachers and pupils, indicating that they were among the most commonly reported instructional strategies in writing instruction, while journal writing received the lowest mean rating. The Grade 4 pupils reported varying levels of writing-related abilities based on their questionnaire responses. Writing vocabulary obtained the highest mean and was interpreted as advanced, while writing fluency, writing organization, creative writing, and writing grammar were interpreted as proficient. Writing motivation also received a high mean rating. The Two-Way ANOVA results revealed no statistically significant difference in the overall perceptions of teachers and pupils regarding innovative instructional strategies. However, a statistically significant difference was found among instructional strategies, while the interaction between respondent group and instructional strategy was not statistically significant. Furthermore, the Pearson correlation analysis involving 199 respondents revealed a statistically significant moderate positive relationship between innovative instructional strategies and pupils' self-reported writing-related abilities ($r = 0.52$, $t = 8.54$, $p < .001$). This finding indicated that higher ratings of innovative instructional strategies were associated with higher ratings of writing-related abilities. However, the results did not establish a causal relationship or demonstrate actual improvements in writing performance, as the study relied on self-reported questionnaire responses rather than direct assessments of pupils' written outputs.

Acknowledgment

The researchers express their sincere gratitude to Almighty God for His guidance and blessings throughout the study. They also extend their appreciation to their research adviser, panel members, and instructors for their valuable guidance and recommendations. Special thanks are given to the Schools Division Office, school heads, Grade 4 teachers, and pupils of Lutayan II District, Sultan Kudarat, for their cooperation and participation. The researchers likewise acknowledge their group, Black Mamba, for their teamwork and dedication, and their parents and families for their unwavering love, encouragement, and support.

Conflict of Interest Statement

The authors have no relevant financial or non-financial interests to disclose.

References

- Alemi, M., Givi, S. S., & Rezanejad, A. (2022). The role of digital storytelling in EFL students' writing skill and motivation. *Language Teaching Research Quarterly*, 32, 16–35. <https://doi.org/10.32038/ltrq.2022.32.02>
- Arrimada, M., Torrance, M., & Fidalgo, R. (2022). Response to intervention in first-grade writing instruction: A large-scale feasibility study. *Reading and Writing*, 35(4), 943–969. <https://doi.org/10.1007/s11145-021-10211-z>
- Awangku Arni, D. N., & Abdul Aziz, A. (2024). Utilising journaling technique to enhance creative writing skills among primary school students. *Jurnal Pendidikan Malaysia*, 49(1), 9–19. <https://ejournal.ukm.my/jpend/article/view/77241>
- Cahyani, I., Nurhadi, J., & Mentari, M. (2023). Enhancing writing skills and language creativity through the plus-minus-interesting technique: A case study at the primary school level. *Indonesian Journal of Applied Linguistics*, 13(1), 63–71. <https://doi.org/10.17509/ijal.v13i1.58257>
- Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). SAGE Publications. <https://edge.sagepub.com/creswellrd5e>
- Department of Education. (2023). *MATATAG Curriculum: Kindergarten*. Department of Education, Republic of the Philippines. <https://www.deped.gov.ph/matatagcurriculumk147/>
- Gay, L. R., Mills, G. E., & Airasian, P. W. (2018). *Educational research: Competencies for analysis and applications* (12th ed.). Pearson. <https://www.pearson.com/en-us/subject-catalog/p/Mills-Educational-Research-Competencies-for-Analysis-and-Applications-Subscription-12th-Edition/P200000001511/9780134784229>
- Graham, S., Hebert, M., & Harris, K. R. (2015). Formative assessment and writing: A meta-analysis. *The Elementary School Journal*, 115(4), 523–547. <https://doi.org/10.1086/681947>
- Graham, S., McKeown, D., Kiuvara, S., & Harris, K. R. (2012). A meta-analysis of writing instruction for students in the elementary grades. *Journal of Educational Psychology*, 104(4), 879–896. <https://doi.org/10.1037/a0029185>
- Herder, A., Berenst, J., de Glopper, K., & Koole, T. (2020). Sharing knowledge with peers: Epistemic displays in collaborative writing of primary school children. *Learning, Culture and Social Interaction*, 24, Article 100378. <https://doi.org/10.1016/j.lcsi.2019.100378>

- Kartikasari, A. E. (2022). Penerapan guided writing untuk meningkatkan keterampilan menulis deskripsi pada peserta didik kelas II sekolah dasar. *Didaktika Dwija Indria*, 10(6). <https://doi.org/10.20961/ddi.v8i01.39776>
- Mukarromah, N., Lidyasari, A. T., & Pangestu, R. F. (2025). Enhancing elementary students' narrative writing skills through digital storytelling projects. *World Journal on Educational Technology: Current Issues*, 17(2), 58–66. <https://doi.org/10.18844/wjet.v17i2.9345>
- Penn State Eberly College of Science. (n.d.). Correlation. STAT 200: Elementary Statistics. <https://online.stat.psu.edu/stat200/lesson/12/12.2>
- Penn State Eberly College of Science. (n.d.). Multi-factor ANOVA. STAT 502: Analysis of Variance and Design of Experiments. <https://online.stat.psu.edu/stat502/Lesson05>
- Pham, V. P. H. (2021). The effects of collaborative writing on students' writing fluency: An efficient framework for collaborative writing. *SAGE Open*, 11(1), 1–11. <https://doi.org/10.1177/2158244021998363>
- Sarwat, S., Ullah, N., Shehzad Anjum, H. M., & Bhuttah, T. M. (2021). Problems and factors affecting students' English writing skills at elementary level. *Elementary Education Online*, 20(5), 3079–3086. <https://doi.org/10.17051/ilkonline.2021.05.332>
- UCLA Statistical Consulting Group. (n.d.). What does Cronbach's alpha mean? UCLA Institute for Digital Research and Education. <https://stats.oarc.ucla.edu/spss/faq/what-does-cronbachs-alpha-mean/>
- United Nations. (n.d.). Goal 4: Quality education. United Nations Sustainable Development Goals. <https://sdgs.un.org/goals/goal4>
- Veiga-Simão, A. M., Oliveira, S., Silva-Moreira, J., & Temudo, M. I. (2022). Assessing the efficacy and social validity of CriaTivo, a curriculum-based intervention to promote self-regulation of writing in Portuguese elementary education. *SAGE Open*, 12(3). <https://doi.org/10.1177/21582440221117133>
- Winarni, R. (2023). The effect of project based learning on creative writing skills in elementary school students: Multivariate analysis of variance on themes, diction, imagination. *Jurnal Iqra': Kajian Ilmu Pendidikan*, 8(2), 120–129. <https://doi.org/10.25217/ji.v8i2.2826>
-

Author Contributions: Olimpain, J., Maulana, S., Toledo, R., and Roque, J.; Contributed equally to study conceptualization, methodology design, data collection, formal analysis, data validation, original manuscript writing, critical review, and manuscript editing. All authors read and approved the final version of the manuscript and agreed to be accountable for the integrity and accuracy of the work.