



# Study of 10th Grade Writing Skills through Claim-Evidence-Reasoning Framework

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## ABSTRACT

*This research determined the writing skills performance of 10th Graders of Academia de San Isidro Labrador in Talamban, Cebu City, during the School Year 2024 – 2025, in terms of the utilization of the Claim – Evidence – Reasoning (CER) Framework in improving writing skills as basis for a teaching – learning experience guide. Specifically, the study sought answers to the following: the pre-test performance of the learners before the utilization of the assigned intervention (CER Framework); the post-test performance of the learners after the utilization of the assigned intervention (CER Framework); the comparison and seeking for a significant difference of the pre-test and post-test performances of the learners before and after the utilization of the CER Framework; the lived experiences of the learners during the conduct and utilization of the CER Framework; and the formulation of the teaching-learning experience guide. A one-sample pretest-posttest quasi-experimental design was employed in this study. Pre-test and Post-test Activity Sheets were given to 10th graders. It revealed that the learners of Academia de San Isidro Labrador improved their writing skills after using the CER Framework in their writing classes. Their post-test performance went significantly higher after the use of the CER Framework in the completion of their writing tasks. It also revealed that the CER Framework has played a role in improving their writing skills due to its step by step process of completing writing tasks as supported by the experiences of the learners when utilizing it. With this, it is recommended that the crafted CER Framework Teaching-Learning Experience Guide be integrated in various levels of writing classes.*

**Key Words:** Argumentation Skill, Quasi-experimental, CER Framework, Persuasive Essay Writing, Philippines.

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## 1. INTRODUCTION

At the basic education level, learners need to master macro-skills such as listening, speaking, reading and writing in order for them to perform and meet educational standards. According to a 2022 report done by the United Nations International Children's Fund (UNICEF), over one-third of 10-year-olds and older are estimated to read and comprehend a simple written story, while 64% of children do not possess minimum proficiency in reading comprehension which also becomes evident when these stories and the related ideas are not relayed into a written output. This greatly impacts the literacy rate of current learners, which is highlighted and relayed by the Program for International Student Assessments (PISA) results. The PISA evaluates 15-year-old students on mathematics, reading, and science. In 2022, over seven hundred thousand students from 81 countries, including 78 in 2018, participated. The Philippines ranked 78 out of 78 in 2018 and 77 out of 81 in 2022. On average, 15-year-old students score 347 points in reading compared to an average of 476 points in the Organization for Economic Cooperation and Development (OECD) countries. Only 24% or just about one out of four Filipino students who took the PISA exam reached basic reading proficiency (Chi, 2023). This means that just 24% of students in the Philippines can, at the very least, "identify the main idea in a text of moderate length" – a competency that do not just highlight deficiency in reading skills but writing skills as well.

In the context of the present study, higher grade level (9th to 12th grades) students are finding it difficult to comprehend what they are reading that lead to difficulties in translating their understanding to written outputs like

sentence construction and paragraph writing. Their standardized assessment results showed that Grade 10 students are in the starting level for the Words and Expressions under Grammar Awareness (14%), starting level for Literary Criticism under Reading Comprehension (26.33%) and progressing level for Cohesion and Coherence under Writing Composition (55%). Various teaching-learning strategies and well-structured frameworks can be utilized to close the aforementioned gap.

The Meaningful Learning Theory (Ausubel, 1968) highlights the importance of mental processes in learning. The same idea is advanced by the Sociocultural Theory of Learning (Vygotsky, 1978) which emphasizes the need to scaffold information received by the learners. With learners having difficulty in improving their macro-skills especially in writing, specific teaching-learning strategies and structured frameworks can help develop these skills (Castaneda, 2017). One such framework for improving an aspect of a learner's writing skill is the Claim-Evidence-Reasoning (CER) Framework which focuses on helping students enhance their persuasive writing skills in the area of formulating claims/arguments; creating of main points, finding evidence for the points made and writing of conclusions.

Critical thinking skills do not develop automatically without any instruction. This is one aspect that peers, classmates and teachers can help with because interaction with others offers value in developing critical thinking skills. As posited by Vygotsky's Sociocultural Theory, social interaction with a more knowledgeable individual significantly contributes to the social and cognitive development of the learner. In addition, Piaget's Constructivist Learning Theory, as stated by McLeod (2019), put forth this same claim where learners acquire knowledge through experiences and interactions which places primary importance on analyzing any given information with prior knowledge, and self-reflection. Constructivist Learning Theory also argues that students develop their cognitive abilities by constructing and refining existing ideas with prior knowledge and experiences. New knowledge and experiences become integrated into the learners' schema enabling them to build strong and relevant explanations to demonstrate their comprehension and understanding of the topic.

The present study aims to explore the idea of providing students with relevant activities to practice critical thinking skills, integrating their prior knowledge and experiences to the topics/tasks at hand. It is believed that development of logical reasoning, critical thinking, and effective writing skills stems from their cognitive ability to process information from various sources at the same time. Studies showed that structured argumentative activities help students develop critical thinking and comprehension skills. The scaffolding elements of argumentation help students assess evidence and integrate ideas which enhances their organizational skills. The ability to think critically and construct an argumentation is a skill that transcends discipline and field of study.

Braten and Braasch (2017) reasoned that critical thinking frameworks enhance students' comprehension and analysis when engaging with multiple sources alongside prior knowledge. This reinforces that the Claim-Evidence-Reasoning Framework and other structure-based argumentation frameworks bolster writing and comprehension. Another study (Petelin, 2021) argued that effective writing is achieved by reading extensively as it allows the learner to grasp the concepts of writing like sentence construction, paragraph organization, proper word choice and many other writing skills. With the aforementioned, the present study aims to assess the use of Claim-Evidence-Reasoning (CER) Framework in enhancing the persuasive essays of the Grade 10 students in Talamban, Cebu City.

## **2. METHODOLOGY**

This study utilized the quasi-experimental method of research specifically the one-group pretest post-test design. According to Cranmer (2017), this is a design to determine the effect of an intervention or treatment – in this study's case, the Claim-Evidence-Reasoning Framework - to a given sample who are the 30 Grade 10 students of ASIL as representations of the whole Grade 10 population. This method aimed to estimate the impact of an intervention to a target population. This involved conducting a pre-test and a post-test with the target population and analyzing the impact of a designated intervention between the pretest and the post-test performances. Between the conduct of the pre-test and the post-test will be the utilization of the assigned intervention during designated class sessions which will allow the respondents to experience the usage of the intervention (CER Framework). During the

Preliminary Stage of Data Gathering, a letter of request is submitted addressed to the School Director through the Basic Education Principal asking permission to conduct the study at the Academia de San Isidro Labrador. Once approved, the students were informed of their participation in the research through a letter to their parents with the parents' consent form as well as the students' assent form. These forms were explained to the respondents and their parents. After the necessary approvals were obtained, the pretest was conducted using the adapted instrument (Rapatan, 2024) which contained the text (The Tell -Tale Heart by Edgar Allan Poe) that the learners have to work on together with the CER Activity Worksheet wherein they have to place their written outputs based on the text-based main question provided. After the pre-test, the implementation of the intervention scheme is done – the holding of writing classes using the CER Framework as an activity which was introduced to the class for the first time. After the implementation of the intervention scheme, the conduct of the post-test followed using the same instrument used in the pre-test but this time with a different text assignment (What the Immigrants Say by Howard Grose). When the pre-test and post-test results are gathered, the learners' answers were then rated. The learners' outputs were rated using an analytic rubric for formulating arguments, determining salient points/claims, finding supporting details/evidence, and writing conclusions. The rubric's set of criteria is based on the competencies being measured in this study. Each output is rated by three (3) separate raters (who were teaching writing in High School classes) according to the scoring rubric. The average rating across the three raters is taken as the "score" of the participant's output. In this rubric, each competency was rated using the following category: 1 - Not yet meeting standard, 2 - Approaching standard, 3 - Meeting standard, and 4 - Exceeding standard.

### 3. RESULTS AND DISCUSSION

This section presents the writing performance of the participants before and after the implementation of the intervention scheme, that is, utilizing the CER framework in enhancing the students' persuasive essay writing skills in the following writing competencies: formulating arguments, creating and determining of main points, finding supporting evidence for the points made, and creating conclusions. The test of significant difference between the pretest and post-test scores is also hereby presented.

**Table 1. "PRE-TEST PERFORMANCE OF THE RESPONDENTS IN WRITING PERSUASIVE ESSAYS"**

Competency	Frequency (%)				Mean (SD)
	ES	MS	AS	NYMS	
Formulating of arguments	0 (0.0)	5 (16.7)	22 (73.3)	3 (10.0)	2.21 (0.32)
Creating and determining of main points	0 (0.0)	4 (13.3)	12 (40.0)	14 (46.7)	1.90 (0.46)
Finding supporting evidence for the points made	0 (0.0)	0 (0.0)	15 (50.0)	15 (50.0)	1.77 (0.48)
Creating conclusions	0 (0.0)	2 (6.7)	7 (23.3)	21 (70.0)	1.48 (0.49)

During the pretest, a large majority of the participants were only either approaching standard (AS) or not yet meeting standard (NYMS) in all competencies. A small number of participants were meeting the standard (MS) in formulating of arguments, creating and determining of main points, and in creating conclusions. Of the four competencies, the participants performed best in terms of formulating of arguments scoring an average of 2.21. They struggle the most with creating conclusions scoring only an average of 1.48. This result showed that the participants have prior knowledge in writing persuasive essays and have tried creating them before. This result is supported by the idea that learners construct their knowledge by processing information and making connections between what they know before and what they are able to know now, as explained by the main point of the Cognitivist Theory of Learning. Their level of skills at this point still needed further guidance as this also showed that there is a performance gap as most participants are not yet meeting the required standard for these competencies. This showed that there is a need for intervention which might be effective in improving the performances of the learners. The prior knowledge

they have about writing persuasive texts and essays has helped them construct their responses for the items in the questionnaire which aligned with a study conducted by Shi and Qu in 2022 where a performance gap is enhanced by enabling students to accurately encode information through a structured process as a form of a focused intervention which eventually allowed the learners to meet expected standards.

**Table 2. “POST-TEST PERFORMANCE OF THE RESPONDENTS IN WRITING PERSUASIVE ESSAYS”**

Competency	Frequency (%)				Mean (SD)
	ES	MS	AS	NYMS	
Formulating of arguments	2 (6.7)	18 (60.0)	10 (33.3)	0 (0.0)	2.71 (0.37)
Creating and determining of main points	13 (43.3)	11 (36.7)	6 (20.0)	0 (0.0)	2.96 (0.42)
Finding supporting evidence for the points made	18 (60.0)	8 (26.7)	4 (13.3)	0 (0.0)	3.18 (0.51)
Creating conclusions	10 (33.3)	14 (46.7)	6 (20.0)	0 (0.0)	2.96 (0.50)

Performance in the posttest has visibly increased across all competencies. This is emphasized by three most noticeable indications: increased mean scores, occurrence of participants exceeding standards (ES) and having no more participants who are not yet meeting standards (NYMS). In formulating of arguments, two-thirds of the participants are categorized as at least meeting standard (MS) while the remaining one-third are approaching standard (AS). In creating and determining of main points, four of every ten participants are already exceeding standards while only two in ten are still approaching standards. About the same picture is seen with creating conclusions. It is with finding supporting evidence for the points made that the participants performed the best with majority (60%) now exceeding standard. In the posttest, the participants performed best in finding supporting evidence for the points made with a mean score of 3.18 points. They performed poorest with formulating arguments. Now this is a notable irony since in the pretest, it was with formulating arguments that they performed best. And it was with finding supporting evidence for the points made that they performed second worst. This result shows that the participants have developed skills in improving their writing skills as there is a visible increase in their performance compared to the pre-test. This also shows that the use of the intervention – the CER Framework - has helped them moved levels in their writing skills compared to the time when they were not using any writing strategy and framework in the construction of their writing outputs. The feature of a step by step process of the intervention, the CER Framework, allows the participants to segment the information gathered in order to organize them in their written outputs. A gradual building of knowledge has allowed the participants to complete their written output with more ease which highlights that learning happens when scaffolding of information is followed and used. This also aligns with a study conducted in 2002 by Duke and Pearson in which the CER Framework and other such organized frameworks helped improve the performances of learners as they are required to reason and defend their comprehension through guided instructions following the framework used.

**Table 3. TEST OF SIGNIFICANCE OF THE DIFFERENCE BETWEEN THE PRE-TEST AND POS-TEST PERFORMANCE OF THE RESPONDENTS \*FOR THE 3 COMPETENCIES**

Competency*	Mean Scores (SD)		Mean Difference (SD)	<i>t</i> -statistic	<i>p</i> -value
	Pretest	Posttest			
formulating of arguments	2.21	2.71	0.50 (0.478)	5.734	< 0.001
creating and determining of main points	1.90	2.96	1.06 (0.626)	9.240	< 0.001
*finding supporting evidence for the points made	1.77	3.18	1.41 (0.544)	-	-
creating conclusions	1.48	2.96	1.48 (0.742)	10.912	< 0.001

\*comparison for this competency found in the next table presentation

The results of the paired samples *t*-test show that students' performance increased by an average of 0.50 points for formulating of arguments, by 1.06 points for creating and determining of main points, 1.41 points for finding supporting evidence for the points made and by 1.48 points for creating conclusions. Hence, the greatest improvement can be observed with creating conclusions but the smallest improvement is with formulating of arguments. The *t*-statistic calculated only for the three competencies found without evidence of non-normality. In all such competencies, a *p*-value less than 0.001 was found compelling us to reject the null hypothesis and conclude that there is a significant difference in the pretest and posttest scores of the participants in terms of formulating arguments, creating and determining of main points, and creating conclusions. For the competency of finding supporting evidence for the points made, Wilcoxon Signed-Rank test was used. Results were showed as follows in Table 4.

**TABLE 4. "PRE-TEST AND POST-TEST PERFORMANCE COMPARISON FOR THE COMPETENCY ON FINDING SUPPORTING EVIDENCE FOR THE POINTS MADE"**

	n	Mean rank	Sum of Ranks
Negative Ranks	0	0.00	0.00
Positive Ranks	30	15.50	465.00
Ties	0		
Z		-4.794	
<i>p</i> -value (Asymptotic Significance)		< 0.001	

Zero (0) negative ranks and 30 positive ranks were found. This means that all 30 participants increased their scores in this competency from pretest to posttest. A *z*-statistic of -4.794 was calculated which corresponds to a *p*-value less than 0.001. Thus, the null hypothesis is also rejected and it is concluded that there is a statistically significant difference in the pretest and posttest scores in this competency. The pre-test and post-test performance of the learners showed that they construct knowledge on their own following a certain process, as demonstrated in the features of the CER Framework. They did not just passively receive information but construct meaning on their own using their prior knowledge and experiences related to the topic and the task at hand. The pre-test and post-test used different kinds of texts with different foci, but following the same processes of the CER Framework. Keeping in touch with the prior knowledge and experiences, the participants were able to construct new knowledge based on the new information they have received. A study by De Torres (2015) revealed that teaching writing within a process-oriented



paradigm in the Philippines and focused on planning, crafting evidence-based arguments, and revising, significantly improved the performance of learners in terms of output completion. This is how constructivism works and how it supports the significant difference between the pre-test and post-test performances of the participants.

#### **4. CONCLUSION**

The use of the CER Framework in writing is proven to enhance writing skills and is highly recommended to be utilized in developing the persuasive essay writing skills of the students. CER Framework-based writing activity sheet can be tailored to fit the writing activity in class in all levels. Improved writing skills is one of the core 21st century skills that each learner have to develop as part of a clearer and more impactful communication thereby aiding them with critical thinking, creativity, communication and collaboration.

#### **REFERENCES**

- Ausubel, D. 1963. "The Psychology of Meaningful Verbal Learning". Grune and Stratton, New York.
- Bråten, I., & Braasch, J. L. G. 2017. Handbook of Multiple Source Use. Routledge.
- Castañeda, R. P. 2017. "Effects of Scaffolded Writing Activities on the Argumentative Writing Skills of Grade 10 Students." Asia Pacific Journal of Multidisciplinary Research, 5(3), 64-72.
- Cranmer, G. (2017). One-group pretest–posttest design. In The sage encyclopedia of communication research methods (Vol. 4, pp. 1125-1126). SAGE Publications, Inc, <https://doi.org/10.4135/9781483381411.n388>
- Chi, C. 2023. "Philippines still lags behind world in math, reading and science — PISA 2022." "The PhilStar Global. <https://www.philstar.com/headlines/2023/12/06/2316732/philippines-still-lags-behind-world-math-reading-and-science-pisa-2022>.
- De Torres, M. D. 2015. "Teaching Writing as a Process: Effects on Students' Writing Performance." Philippine Journal of Education, 94(4), 15-24.
- Duke, N. K., & Pearson, P. D. 2002. "Effective practices for developing reading comprehension." In A. Farstrup & S. Samuels (Eds.), What Research Has to Say About Reading Instruction (pp. 205-242). International Reading Association.
- Grose, H. B. (2022). What the Immigrants Say. In I. R. Juco Antonio O. Rivera, English for Innovative Minds (pp. 271-275). Makati City: DIWA Learning Systems Inc.
- McLeod, S. A. (2019). Jean Piaget's theory of cognitive development. Simply Psychology. <https://www.simplypsychology.org/piaget.html>
- Petelin, R. 2021. "How Reading Will Help Your Writing and Add Pleasure to Your Life." Routledge Taylor and Francis Group. <https://www.routledge.com/blog/article/how-reading-will-help-your-writing-and-add-pleasure-to-your-life> Accessed date: October 7, 2024.
- Organisation for Economic Co-operation and Development. (2023). PISA 2022 results: Country note – Philippines [PDF]. In PISA 2022 Volume I: The state of learning and equity in education. OECD Publishing. Retrieved from <https://www.oecd.org/education/pisa-2022-results-country-notes.htm>

- Poe, E. A. (2022). The Tell-Tale Heart. In I. R. Juco Antonio O. Rivera, English for Innovative Minds (pp. 232-235). Makati City: DIWA Learning Systems Inc.
- Rapatan, M. Q. (2024, July 10). CER Framework Learning Resources. Manila, Manila, Philippines.
- Shi, Y., & Qu, S. (2022). The Effect of Cognitive Ability on Academic Achievement: The Mediating Role of Self-discipline and the Moderating Role of Planning. *Frontiers in Psychology*.
- UNICEF. (2022, September 16). UNICEF warns of shockingly low levels of learning, with only a third of 10-year-olds globally estimated to be able to read and understand a simple written story. UNICEF. Retrieved from <https://www.unicef.org>
- Vygotsky, L. S. (1978). *Mind in Society: The Development of Higher Psychological Processes*. M. Cole, V. John-Steiner, S. Scribner, & E. Souberman (Eds.). Cambridge, MA: Harvard University Press.