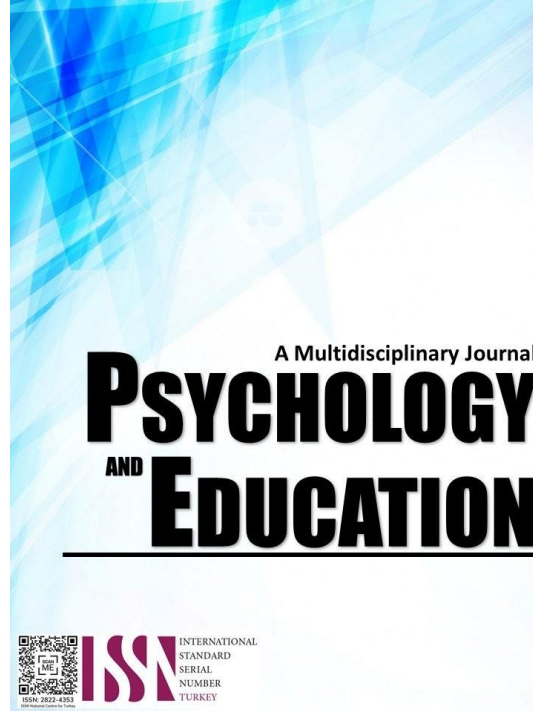


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Enhanced Project CRaDLE and Reading Comprehension of Students

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Abstract

This study examined the effectiveness of Enhanced Project CRaDLE (Comprehension, Reading Accuracy, Decoding, and Literacy Enhancement) in improving the reading proficiency of Grade 7 students at Siembre High School, Bombon, Camarines Sur, during the School Year 2025–2026. Specifically, it assessed students' reading skills in terms of vocabulary development, grammar usage, reading fluency, and comprehension before and after the intervention. A descriptive-comparative research design was employed, involving 40 purposively selected students identified as struggling readers. Data were collected using a validated teacher-made reading assessment administered as pre-test and post-test. Findings revealed that prior to the intervention, students performed at an approaching proficiency level, with strengths in vocabulary and fluency but weaknesses in grammar usage. After the implementation of Project CRaDLE, improvements were observed across all reading domains, particularly in grammar usage, which showed a statistically significant difference ($p < .001$). However, changes in vocabulary, fluency, and comprehension were not statistically significant, although mean scores increased. Effect size analysis indicated that the intervention had a large effect on grammar usage and moderate effects on other reading components. The results suggest that Project CRaDLE is an effective targeted intervention, particularly in addressing learners' grammatical difficulties, while reinforcing existing reading skills. The study highlights the importance of structured, scaffolded reading programs in enhancing literacy outcomes among secondary learners. It further recommends the integration of culturally relevant materials, differentiated instruction, and sustained intervention efforts to achieve higher levels of reading proficiency. These findings provide valuable insights for educators, curriculum developers, and policymakers in strengthening reading programs in the Philippine educational context.

Keywords: *project CRaDLE, reading proficiency, vocabulary development, grammar usage, reading fluency, comprehension, intervention program*

Introduction

Reading comprehension is an important skill necessary for interpreting vital documents like birth certificates, housing agreements, and for everyday tasks such as understanding the instructions in examinations or other written texts. It is a skill that is fundamental for success in personal and academic life. It allows individuals to decode words, derive meaning, analyze content, and apply knowledge in an effective manner. As a cognitive process, reading comprehension is developed over time and allows individuals to construct ideas, make connections, and engage with the materials in a deeper and meaningful way. With the absence of comprehension, reading would be a frustrating exercise in word calling, where individuals recognize words but cannot understand or connect their meaning.

In the 2022 rankings, the Philippines ended up among the nations that produced the lowest proficiency for young learners in reading, mathematics, and science, as revealed by the Programme for International Student Assessment (PISA, 2022). In reading, the literacy score increased from 340 points in PISA 2018 to 347 points in PISA 2022, but still remained way below the global average reading score of 476 points. Several studies also support the claim of the poor English proficiency level of the Filipino students, with most students performing at the instructional level in literal taxonomy (Larioque, 2019). Students, even at the tertiary level, have poor reading comprehension skills too. After being ranked the lowest out of 79 participating countries in 2018 in reading comprehension, the Philippines ranked 76th out of 81 countries for 2022 (PhilStar, 2023).

This global education agenda emphasizes literacy as a key learning outcome and highlights the goal of ensuring that learners gain foundational skills necessary for lifelong learning. This commitment is reinforced in Sustainable Development Goal 4 (Quality Education), which underscores effective learning outcomes and strengthens literacy development for all learners. To strengthen learners' reading skills, the Department of Education (DepEd) has implemented key initiatives aligned with its goal of providing inclusive and quality basic education. Central to this is the "Every Child a Reader Program" (ECARP), which promotes reading and writing proficiency at each learner's level. DepEd Memorandum No. 173, s. 2019, encourages all education offices and schools to intensify reading efforts and build a culture of reading. In Region V, DepEd Regional Memo No. 14, s. 2020 further emphasizes remedial reading support for non-readers and slow readers. These directives highlight the importance of evaluating and sustaining effective reading interventions to bridge literacy gaps nationwide. As stated in the memorandum:

All offices at the CO, Ros, SDOs, and school levels are strongly encouraged to respond to Hamon: Bawat Bata Bumabasa (3Bs Initiatives) by intensifying their advocacy for reading and by pledging commitment to make every learner a reader at his/her grade level. Further, all offices at CO, RO, SDOs, and school levels are directed to align their priorities toward the promotion of the culture of reading as a key step in closing achievement gaps.

In light of these challenges, research by the Philippine National Center for Education Statistics underscores a concerning correlation that 43% of adults with low reading comprehension and literacy levels live in poverty (Bales, 2018). This statistic highlights the broader

societal implications of struggles for literacy, indicating that poverty and limited literacy are connected to one another. This interconnection between poverty and literacy issues highlights needs to focus on enhancing reading comprehension skills in order to break the cycle of socio-economic disadvantage. Those students from lower-income backgrounds are often at a disadvantage because of a lack of exposure to language-rich environments and academic resources. Therefore, they may struggle to develop foundational skills such as vocabulary and text comprehension, which are essential for academic success, besides Memorandum no. 891, s. 2019 entitled Reading Interventions and Programs of Schools for 3Bs Initiatives in the New Normal, anchored on the schools' division reading support: Balanced Reading Program, highlighted that schools need to provide reading interventions through contextualized strategies and programs to constantly address the gaps in learners' reading performance.

Within classroom realities, reading challenges appear in concrete ways: limited vocabulary affects meaning-making; weak grammar knowledge interferes with sentence-level comprehension; poor fluency reduces attention to meaning; and difficulty in understanding literary and informational texts restricts learners' ability to interpret ideas and respond to comprehension tasks. These areas are not isolated; they interact as learners attempt to make sense of texts aligned with Grade 7 expectations. The current curriculum direction underscores literacy development as foundational in the learning process, strengthening the need for focused comprehension support in the secondary level.

The results of this study are hoped to be beneficial to the following: The Department of Education can use the results of this study in shaping national policies and educational initiatives. Insights that may be derived from the study may help in developing curriculum standards and guidelines that would improve the reading comprehension levels across various educational institutions. School administrators play a pivotal role in the implementation of the research findings in their institutions. They can make refinements on the curriculum plans and other educational programs based on the outcomes of the study so they can better meet the needs of their students. English teachers will also benefit from this study. Their knowledge and expertise on reading comprehension can be tailored for effective instruction, thereby fostering improved reading comprehension skills among their students. Students, as the central focus of the study, are expected to gain substantial benefits from its findings. They can gain insights into their own reading comprehension abilities. Future researchers can build upon the methodologies and findings presented here to deepen understanding of reading comprehension processes and instructional interventions. By catalyzing further inquiry and innovation, this study has the potential to contribute significantly to advancements in educational research and practice.

Despite various efforts to improve reading comprehension in the Philippines, numerous students still struggle with this essential skill. Those assessments highlight the persistence of the problem, signaling the need for further research into effective interventions. While several studies have attempted to enhance reading comprehension, the ongoing challenges suggest that traditional approaches have not fully resolved the issue. Moreover, there is a notable lack of research on interventions for reading comprehension in the Philippine context. Although this approach has garnered global attention, its potential to improve reading comprehension in the Philippines remains underexplored. Few studies have implemented reading comprehension interventions, underscoring the need for research that not only explores its theoretical potential but also evaluates its practical effectiveness in real-world educational settings. Addressing this research gap is critical for advancing our understanding of effective reading comprehension interventions and informing educational policies aimed at improving literacy outcomes among high school students in the Philippines. By bridging this gap, researchers can provide valuable insights into enhancing reading comprehension skills, ultimately contributing to the academic success of secondary students. This research seeks to fill the existing gaps in the literature by critically assessing the effectiveness of the intervention Project CRaDLE in the specific context of secondary education in Bombon, province of Camarines Sur. This study aims to offer valuable recommendations that can inform teaching strategies, curriculum design, and the integration of advanced technologies into educational practices. Most importantly, the findings will enhance the educational outcomes of high school students in improving reading comprehension in secondary education.

Research Objectives

The study determined the effectiveness of Project CRaDLE on the reading proficiency of Grade 7 students of Siembre High School, Bombon, Division of Camarines Sur. Specifically, this attained the following objectives:

1. To determine the status of reading proficiency of Grade 7 students in terms of vocabulary development, grammar usage, reading fluency, and comprehension.
2. To develop the design of the Project CRaDLE
3. To determine the status of reading proficiency of Grade 7 students after the implementation of Project CRaDLE.
4. To assess the significant difference between the students' reading proficiency before and after the implementation of the Project CRaDLE.
5. To assess the extent of influence of Project CRaDLE on the reading proficiency of Grade 7 students.

Methodology

Research Design

This study employed a descriptive-comparative research design to examine differences and relationships in learners' reading

competencies. The descriptive component was utilized to determine the level of reading proficiency of Grade 7 students across vocabulary development, grammar usage, reading fluency, and comprehension. It also guided the development and evaluation of Project CRaDLE as an instructional intervention. Descriptive approaches are widely used in educational research to provide a systematic profile of learners' abilities and identify areas requiring targeted intervention, as supported by prior studies that examined reading performance using standardized assessment frameworks.

The comparative component was applied to determine significant differences in context clues knowledge and reading comprehension when learners were grouped according to class program, as well as to evaluate changes in reading proficiency before and after the implementation of Project CRaDLE. Non-parametric (Kruskal–Wallis with Dunn's post hoc test) and parametric procedures were employed where appropriate to ensure robust statistical inference. The design further enabled the examination of the relationship between context clues, knowledge, and reading comprehension. Consistent with prior empirical work, comparative designs are effective in identifying performance variations across groups and in evaluating the impact of instructional interventions on literacy outcomes.

Respondents

The respondents of the study were selected Grade 7 students enrolled at Siembre High School, Bombon, Camarines Sur, during the School Year 2025–2026. The school, a public secondary institution, serves learners from varied socio-economic backgrounds, providing a relevant context for examining diverse reading abilities. A purposive sampling technique was employed to select participants identified as coping, deficit, or non-readers based on initial reading assessments conducted using the Philippine Informal Reading Inventory (Phil-IRI) and teacher-developed evaluation tools. This selection ensured that the intervention directly targeted learners with demonstrated reading difficulties, thereby strengthening the study's practical and instructional relevance.

Instrument

The primary data collection instrument was a teacher-made reading assessment administered as both a pre-test and a post-test. The instrument consisted of 40 items distributed across three reading passages designed to measure vocabulary development, grammar usage, reading fluency, and reading comprehension (including literal, inferential, and critical levels). All reading selections were researcher-developed to ensure alignment with the study objectives and the competencies targeted by Project CRaDLE.

To establish content validity and clarity, the instrument underwent expert validation by three experienced educators specializing in English instruction. A pilot testing phase was subsequently conducted to refine item construction, eliminate ambiguities, and ensure suitability for the target respondents. Reliability analysis of pilot test results confirmed the internal consistency and stability of the instrument. These procedures ensured that the assessment tool met acceptable standards of validity and reliability, thereby supporting the accuracy and credibility of the data collected.

Procedure

The study followed a structured and systematic procedure to ensure methodological rigor and consistency in data collection. Initially, research instruments and intervention materials were developed and validated. These included pre-test and post-test assessments, guided reading materials, worksheets, and activity sheets aligned with the competencies addressed by Project CRaDLE. Validation ensured that all materials were pedagogically appropriate, clear, and aligned with intended learning outcomes.

Subsequently, a pre-test was administered to establish baseline reading proficiency levels of the participants. The results informed the design and implementation of the intervention by identifying specific areas of difficulty. Project CRaDLE was then implemented over a defined period through structured activities such as guided reading sessions, peer-assisted learning, and teacher-facilitated comprehension exercises. These activities were designed to address learners' needs and promote incremental improvement in reading skills.

Following the intervention, a post-test was administered to measure changes in reading proficiency. Additional data, including observational notes and learners' academic records, were systematically collected to support interpretation. The entire process ensured the generation of valid and reliable data for evaluating the effectiveness of the intervention.

Data Analysis

Data were analyzed using both descriptive and inferential statistical techniques to address the research objectives comprehensively. Descriptive statistics, including mean and standard deviation, were used to summarize learners' reading performance and examine variability across vocabulary, grammar, fluency, and comprehension domains. Performance levels were also categorized into proficiency bands to facilitate meaningful interpretation of learners' competencies.

Inferential analyses were conducted to determine the significance and magnitude of observed changes. The paired samples t-test was used to assess differences between pre-test and post-test scores under parametric assumptions, while the Wilcoxon Signed-Rank Test was employed when normality assumptions were violated. To complement these tests, effect sizes were calculated using Cohen's *d* and rank biserial correlation to determine the practical significance of improvements. Additionally, the Kruskal–Wallis test and Dunn's post hoc analysis were utilized to examine group differences based on class program.

The ADDIE (Analyze–Design–Develop–Implement–Evaluate) model guided the overall evaluation of Project CRaDLE, ensuring systematic alignment between instructional design, implementation, and outcome assessment. This framework strengthened the methodological coherence of the study and supported a structured evaluation of the intervention’s effectiveness.

Ethical Considerations

Ethical standards were strictly observed throughout the conduct of the study. Informed consent from parents and assent from student participants were obtained prior to data collection, ensuring that participation was voluntary and based on a clear understanding of the study’s purpose and procedures. Confidentiality and anonymity were maintained by coding participants’ identities and securing all data in protected storage systems.

Cultural sensitivity was also upheld by ensuring that research instruments and instructional materials were contextually appropriate and free from bias, thereby promoting equitable participation. Furthermore, transparency was maintained in the use of AI-assisted tools during the preparation of selected research components. All outputs generated with the aid of such tools were critically reviewed and validated by the researcher to ensure accuracy, minimize bias, and maintain scholarly integrity. These measures collectively ensured adherence to established ethical principles in educational research.

Results and Discussion

Reading is a complex cognitive process of decoding symbols in order to construct or derive meaning. It is a means of language acquisition, of communication, and of sharing information and ideas. Like all languages, it is a complex interaction between the text and the reader, which is shaped by the reader’s prior knowledge, experiences, attitude, and language community, which is culturally and socially situated. The reading process requires continuous practice, development, and refinement. Its goal is understanding. In order to understand a print, one must be able to decode the words on the page and to extract meaning. Comprehension is the goal of reading. Successful comprehension enables readers to acquire information, to experience and be aware of other worlds, to communicate successfully, and to achieve academic success.

Reading Proficiency of Grade 7 Students in Pre-Test

In today’s educational context, where no student is to be left behind, every content area teacher has a responsibility to help students access, read, and understand texts successfully and productively. To achieve this end, there is a felt need to enhance the existing academic reading instructional strategies, determine ways to increase the reading achievement of students, and therefore to decrease or eradicate the number of students who are identified at risk, struggling, or below level.

Table 1. Status of Reading Proficiency of Grade 7 Students in Pre-Test

Aspects	NI	Mean	SD	PL	Int.
Vocabulary Development	10	7.800	0.88289	78	P
Grammar Usage	10	4.325	1.22762	43.25	D
Reading Fluency	10	8.325	1.3085	83.25	P
Comprehension Literacy and Information Text	10	7.775	1.74661	77.75	P
Average	10	28.225	1.2914	70.5625	AP

Note. NI = Number of Items; SD = Standard Deviation; PL = Percentage Level; Int. = Interpretation; D = Developing; AP = Approaching Proficiency. The following scale was used for interpretation: 0–24.9 = Beginning (B); 25.0–49.9 = Developing (D); 50.0–74.9 = Approaching Proficiency (AP); 75.0–100.0 = Proficient (P)

Table 1 presents the status of reading comprehension of Grade 7 students across four key aspects: Vocabulary Development, Grammar Usage, Reading Fluency, and Comprehension Literacy and Informational Text. The data indicate that students scored highest in Reading Fluency (Mean = 8.325, PL = 83.25, P) and Vocabulary Development (Mean = 7.800, PL = 78, P), both falling under the Proficient category. Grammar Usage received the lowest score (Mean = 4.325, PL = 43.25, D), which is interpreted as Developing. The overall average across all aspects was 28.225, translating to a percentage level of 70.56, which corresponds to Approaching Proficiency. This provides a clear snapshot of students’ current reading comprehension abilities, highlighting their strengths and areas that need improvement.

Analyzing the data further, it is evident that students perform best in aspects that involve vocabulary and fluency, suggesting familiarity with word meanings and the ability to read smoothly. However, Grammar Usage presents a notable challenge, indicating gaps in understanding sentence structures and rules of language. The standard deviation values show variability in performance, with Comprehension Literacy and Informational Text having the highest SD (1.74661), which implies that while some students excel, others struggle significantly. This uneven distribution highlights the need for differentiated instruction that addresses individual student needs.

From these results, it can be inferred that Grade 7 students possess foundational reading comprehension skills, particularly in areas that rely on memorization or practice, such as vocabulary and reading fluency. The lower score in Grammar Usage suggests that students may understand words and sentences individually, but have difficulty applying grammatical rules consistently in writing or interpreting complex texts. The Approaching Proficiency average reflects that while students are performing satisfactorily overall, they have not yet achieved full mastery in all aspects of reading comprehension, indicating a need for targeted interventions to address weaker areas.

These findings are consistent with the research on adolescent reading development. Studies by Grabe and Stoller (2018) highlight that

vocabulary acquisition and reading fluency are often easier for students to develop through exposure to reading materials and repeated practice. In contrast, grammar skills typically lag without explicit instruction and reinforcement. Similarly, Decena (2021) identified poor vocabulary and unfamiliar words as major deterrents to comprehension. When students encounter texts filled with unfamiliar vocabulary, they tend to lose interest, which negatively impacts understanding. Larasati (2019) also noted that students tend to perform better on literal comprehension tasks compared to inferential or evaluative tasks, indicating a need for scaffolded instruction that builds toward higher-order skills.

Meanwhile, Miñosa et al. (2019) highlighted gender-related differences in oral comprehension, with females outperforming males, though no significant differences were found in silent reading comprehension. From a behavioral perspective, Jones (2023) correlated effective study habits and strong knowledge of the alphabetic principle with improved reading comprehension outcomes, emphasizing the interplay between habits, decoding, and understanding.

The results can also be explained through theoretical frameworks. Bruner's Theory of Reading Remediation (as cited in the study of Rashotte, 2021) underscores the need for structured, scaffolded instruction tailored to learners' cognitive levels. The theory's principles of acquisition, transformation, and evaluation align with the intervention's focus on vocabulary development, grammar usage, fluency, and comprehension improvement through systematic support and guided practice.

Development of the Project CRADLE

The development of Project CRADLE (Comprehension, Reading Accuracy, Decoding, Literacy Enhancement) was guided by the Modified ADDIE Model, which provided a systematic framework for creating, refining, and implementing the intervention. By focusing on the phases of Analyze, Design, Develop, Implement, and Evaluate, the project was constructed based on the actual learning needs of the Grade 7 learners, the reading challenges documented in the school, and the instructional gaps that required intervention. The ADDIE process ensured that the intervention was evidence-based, learner-responsive, and capable of producing measurable improvements in reading comprehension.

Analyze. The analysis phase began with identifying the specific reading problem within the school. Preliminary data from the English department, classroom observations, and diagnostic reading activities revealed that many Grade 7 learners were performing below the expected proficiency level in vocabulary development, grammar usage, reading fluency, and comprehension. Several learners struggled with decoding unfamiliar words, reading with appropriate phrasing, and making sense of short passages. These difficulties affected their academic performance across subjects, indicating a need for a structured reading intervention. To confirm the extent of the problem, a pre-test was administered using leveled reading passages and comprehension indicators. The results established clear baseline data that highlighted the learners' weaknesses, confirming the need to develop an intervention specifically tailored to address reading accuracy, fluency, and comprehension. **Design.** In the design phase, the structure, appearance, and content of the Project

CRADLE was outlined in detail. The intervention was conceptualized as a series of guided reading sessions consisting of leveled texts, fluency-building activities, comprehension tasks, and teacher-led modeling components. Each session included explicit reading strategies such as repeated reading, echo reading, partner reading, and sentence pyramid drills. The design also included measurable objectives, such as improving decoding accuracy, increasing reading speed to match natural speech, enhancing phrasing and intonation, and deepening comprehension of short texts. Once the initial structure of CRADLE was drafted, it was submitted for expert validation to English teachers and reading specialists. Validators reviewed the materials for clarity, appropriateness, alignment with competencies, and developmental suitability. Their comments and recommendations guided revisions to improve the accuracy, readability, and sequencing of the intervention materials.

Develop. In the development phase, I transformed the design into fully prepared materials ready for classroom use. Each component of Project CRADLE was carefully produced, including short passages for repeated reading, echo-reading scripts, poems, sentence pyramids, guided questions, comprehension worksheets, and teacher guides. The selection of reading texts was based on themes relevant to Grade 7 learners, ensuring engagement while addressing vocabulary and comprehension skills. Activity sheets were drafted to reinforce each reading strategy, and teacher scripts were developed to standardize modeling and feedback procedures. After drafting, the materials underwent refinement based on validator input, ensuring that instructions were clear, text difficulty was appropriate, and comprehension questions addressed literal, inferential, and evaluative levels. The development process also involved creating pre-test and post-test instruments and arranging the sequencing of sessions to ensure progressive improvement in reading skills.

Implement. The implementation phase involved administering Project CRADLE to the selected Grade 7 participants. Implementation took place over scheduled reading sessions, where learners used the developed materials while engaging in structured reading tasks. Each session followed a consistent flow beginning with teacher modeling, followed by guided practice, peer-assisted reading, and independent attempts. During implementation, students practiced repeated reading of short passages, participated in echo reading and choral reading, and worked on comprehension activities after each text. The teacher provided continuous monitoring, corrective feedback, and encouragement, ensuring fidelity to the instructional strategies. The implementation addressed the learners' identified weaknesses by providing repeated exposure to reading stimuli and opportunities for guided interpretation, which helped improve decoding, fluency, and comprehension.

Evaluate. The evaluation phase assessed the effectiveness of Project CRADLE by administering the post-test and comparing the results



with the pre-test scores. The same indicators—vocabulary, grammar usage, reading fluency, and comprehension—were used to measure growth. Statistical tools such as mean scores, percentage gain, and the Wilcoxon Signed-Rank Test ($p < .001$) were employed to determine whether improvements were statistically significant. Results showed measurable increases in vocabulary, reading fluency, and comprehension, while grammar usage demonstrated a statistically significant gain, indicating a strong positive influence of the intervention. These findings validated the effectiveness of Project CRADLE and provided actionable insights for refining and sustaining the intervention in future iterations.

Through the systematic application of the ADDIE Model, Project CRADLE was developed as a responsive and data-driven reading intervention tailored to the needs of Grade 7 learners. Each phase—from identifying the school’s reading challenges in the Analyze stage, to crafting and validating the instructional structure in the Design stage, to producing and refining the materials in the Develop stage, to carrying out structured lessons in the Implement stage, and finally assessing effectiveness in the Evaluate stage—ensured that the program was grounded in evidence and aligned with learners’ actual skill deficits. The iterative nature of the ADDIE process allowed the intervention to be continuously improved as new data emerged, contributing to its overall success in enhancing students’ vocabulary, fluency, grammar usage, and reading comprehension. This comprehensive approach not only validated the effectiveness of Project CRADLE but also established a strong foundation for sustaining and further refining the program in future academic cycles.

Reading Proficiency of Grade 7 Students in Post-Test

Reading plays a pivotal role in the realm of education and is crucial to equip students with the skills needed to become proficient readers and holistic communicators. It involves an intricate and dynamic process of decoding transcriptive symbols and meaningful sounds to create and activate meaning, schemata, or prior knowledge of a language and content. In reading, it not only involves the spoken interpretation of the letters and sounds but also encompasses recognizing structures to dissect chunk information into comprehensible information.

Table 2. Status of Reading Proficiency of Grade 7 Students in Post-Test

Aspects	NI	Mean	SD	PL	Int.
Vocabulary Development	10	8.050	1.06096	80.5	D
Grammar Usage	10	5.475	1.43201	54.75	D
Reading Fluency	10	8.500	1.01274	85	D
Comprehension Literacy and Information Text	10	8.100	1.7067	81	AP
Average	10	30.375	1.3031	75.3125	D

Note. NI = Number of Items; SD = Standard Deviation; PL = Percentage Level; Int. = Interpretation; D = Developing; AP = Approaching Proficiency. The following scale was used for interpretation: 0–24.9 = Beginning (B); 25.0–49.9 = Developing (D); 50.0–74.9 = Approaching Proficiency (AP); 75.0–100.0 = Proficient (P).

Table 2 presents the post-intervention or current level of reading comprehension of Grade 7 students across four aspects: Vocabulary Development, Grammar Usage, Reading Fluency, and Comprehension Literacy and Informational Text. The table indicates that students scored highest in Reading Fluency (Mean = 8.500, PL = 85, D) and Comprehension Literacy and Informational Text (Mean = 8.100, PL = 81, AP), showing strong performance in these areas. Vocabulary Development also showed a high mean score (Mean = 8.050, PL = 80.5, D). Grammar Usage, however, had the lowest mean (Mean = 5.475, PL = 54.75, D), which is classified as Developing. The overall average across all aspects was 30.375, corresponding to a percentage level of 75.31, interpreted as Developing. This indicates a moderate improvement in reading comprehension, though certain aspects still require support.

A closer look at the data reveals that students demonstrated stronger performance in areas related to vocabulary, fluency, and comprehension of informational texts, indicating that these skills may have been reinforced through consistent reading exposure and practice. Grammar usage remained the most challenging component, suggesting that learners continued to struggle with applying grammatical rules accurately in various reading contexts. Variations in students’ comprehension abilities also became evident, reflecting differences in how effectively they processed and interpreted text. These patterns highlight the importance of differentiated instruction to address individual learning gaps more effectively.

From the results, it can be inferred that while students generally demonstrate satisfactory reading comprehension skills, their overall performance is still classified as Developing. Strengths are evident in vocabulary, fluency, and comprehension of informational texts, but weaknesses in Grammar Usage may hinder full proficiency. The data suggest that targeted interventions, particularly in grammar instruction, are necessary to ensure students achieve higher proficiency levels across all aspects of reading comprehension. In addition, increased engagement, such as reading diverse materials and utilizing digital tools, could significantly improve their reading proficiency.

These findings are supported by previous research, such as Yuliany et al. (2022), who demonstrated that the Team-Pair-Solo strategy helped students gradually master reading comprehension by practicing it in stages—from collaborative to individual application. The progressive structure of this strategy made comprehension more manageable and engaging. Adding to this, Jazareno and Fortes (2023) discovered that while students performed better in Filipino reading tasks, their English comprehension remained at instructional or frustration levels. This highlights the role of language proficiency in reading comprehension development. Likewise, Deluao et al. (2022) validated the use of the 4Rs (Read, Retell, React, Reflect) strategy in enhancing Grade 8 learners’ comprehension, affirming that structured and reflective strategies foster deeper engagement with texts.

The results can also be understood through educational theories. Rosenblatt's Transactional Theory (as cited in the study of Marhaeni, 2016) views reading as a dynamic transaction between the reader and the text, where meaning is co-constructed. Each transaction is a unique experience in which meaning is constructed as the reader and text continually act and are acted upon by each other. This perspective highlights the importance of engaging learners in reflective and personal interaction with the text, encouraging active participation and interpretation, which is vital in developing deeper comprehension skills. Thus, teachers must show students how to use what they read and what they know to build meaning.

Difference between the Reading Proficiency of Grade 7 Students before and after the Implementation of Project CRaDLE

Reading is a gateway to acquiring knowledge and exploring the world. It is a thinking process, integral to learning, as it enlightens students' minds and facilitates the acquisition of new ideas. Reading fluency not only enhances academic achievement across subjects but also fosters cognitive development and student engagement. It is important to strengthen comprehension skills to enable learners to grasp complex texts effectively.

Table 3. *Difference between the Reading Proficiency of Grade 7 Students before and after the Implementation of Project CRaDLE.*

<i>Aspects</i>	<i>Wilcoxon W</i>	<i>df</i>	<i>p-value</i>	<i>Interpretation</i>
Vocabulary Development	170.5	36	0.297	NS
Grammar Usage	83.5	36	<.001	S
Reading Fluency	149.5	36	0.505	NS
Comprehension Literacy and Informational Text	250	36	0.280	NS

Note. *p-value interpretation: p > 0.05 = Not Significant (NS), p < 0.05 = Significant (S).*

Table 3 presents the results of the Wilcoxon Signed-Rank Test, which examined whether there were significant differences in the reading comprehension of Grade 7 students before and after the implementation of Project CRaDLE. Four aspects were assessed: Vocabulary Development, Grammar Usage, Reading Fluency, and Comprehension Literacy and Informational Text. The results indicate that Grammar Usage was the only aspect showing a statistically significant difference ($p < .001$, S). In contrast, Vocabulary Development ($p = 0.297$, NS), Reading Fluency ($p = 0.505$, NS), and Comprehension Literacy and Informational Text ($p = 0.280$, NS) did not show significant changes after the intervention.

The analysis reveals that Project CRaDLE had a noticeable impact on Grammar Usage, suggesting that the program helped students improve their ability to understand and apply grammatical rules. However, the lack of significant differences in Vocabulary Development, Reading Fluency, and Comprehension Literacy and Informational Text suggests that the intervention did not produce measurable changes in these areas within the study period. This could indicate that these skills were already relatively strong before the intervention, or that the duration and focus of the program were not sufficient to create significant changes in those aspects.

From these findings, it can be inferred that Project CRaDLE is particularly effective in addressing students' grammatical skills, a known area of weakness as observed in the pre-test results. The non-significant changes in other areas suggest that while the program may have reinforced existing strengths, substantial improvement was most evident where students initially demonstrated challenges. This indicates that targeted instructional interventions, like Project CRaDLE, may yield the greatest benefits when applied to specific skills that require focused support.

These results are similar to the study of Vanderberg et al. (2020), who found that repeated reading strategies significantly improved oral reading fluency and comprehension accuracy. Echoing this, Therrein (2020) concluded that such strategies were effective for both students with and without learning disabilities. Reinforcing these outcomes, Roundy and Roundy (2019) reported gains in students' self-esteem, fluency, and words per minute using the same method. Similarly, Parra et al. (2023) observed marked improvements in accuracy, rate, and prosody among Grade 7 struggling readers after using repeated reading strategies. Moreover, De Jesus (2016) emphasized the efficacy of a five-staged reading intervention, which significantly improved comprehension among high school learners. This finding aligns with Caabay et al. (2024), who documented substantial growth in learners' reading proficiency—from frustration to instructional and independent levels—after intervention. Adding to this evidence, Deluao et al. (2022) demonstrated that the 4Rs strategy effectively enhanced comprehension among Grade 8 learners, while Caceres (2019) highlighted how well-designed reading modules helped struggling readers recognize key vocabulary and answer comprehension questions.

The results are also supported by Bruner's Theory of Reading Remediation (as cited in the study of Rashotte, 2021), which underscores the need for structured, scaffolded instruction tailored to learners' cognitive levels. The theory's principles of acquisition, transformation, and evaluation align with the intervention's focus on vocabulary development, grammar usage, fluency, and comprehension improvement through systematic support and guided practice. There is a need to improve students' reading comprehension, which is a core component of literacy and effective learning outcomes in secondary education. Developing a supplementary reading program, it would enhance educational quality and address learning gaps.

Effectiveness of Project CRaDLE in Enhancing the Reading Proficiency of Grade 7 Students

Creating literacy-rich environments is another strategy that can support reading development. A literacy-rich environment encompasses not only the availability of reading materials but also the promotion of reading-related activities and positive reading attitudes.

Classrooms and homes can be transformed into literacy-rich spaces by incorporating reading corners, establishing reading routines, and engaging students in interactive and meaningful literacy experiences.

Table 4. Effectiveness of Project CRADLE in Enhancing the Reading Proficiency of Grade 7 Students

<i>Aspects</i>	<i>Rank Biserial R</i>	<i>Interpretation</i>
Vocabulary Development	-0.216	small effect
Grammar Usage	-0.719	Large effect
Reading Fluency	-0.148	Large effect
Comprehension Literacy and Informational Text	-0.206	Large effect

Note. Interpretation of rank biserial correlation (r_{rb}) effect size: $r_{rb} = 0$ = negligible effect; $r_{rb} \pm 0.1-0.3$ = small effect; $r_{rb} \pm 0.3-0.5$ = medium effect; $r_{rb} > \pm 0.5$ = large effect (Kerby, 2014)

Table 4 presents the effectiveness of Project CRADLE in enhancing the reading comprehension of Grade 7 students using Rank Biserial Correlation (r_{rb}) as an effect size measure. The table shows that Grammar Usage had the largest effect ($r_{rb} = -0.719$, Large effect), while Vocabulary Development had a small effect ($r_{rb} = -0.216$, Small effect). Reading Fluency ($r_{rb} = -0.148$) and Comprehension Literacy and Informational Text ($r_{rb} = -0.206$) are also reported as large effects in the table, indicating varying degrees of influence across different reading comprehension aspects.

The analysis of effect sizes demonstrates that Project CRADLE had the most substantial impact on Grammar Usage, confirming earlier findings from the Wilcoxon test (Table 4). The small effect in Vocabulary Development suggests that students' vocabulary skills were already relatively strong before the intervention, leaving less room for improvement. The moderate-to-large effects in Reading Fluency and Comprehension Literacy suggest that, while not statistically significant, the program may have contributed meaningfully to skill enhancement, particularly in areas that benefit from repeated practice and guided instruction.

From these results, it can be inferred that Project CRADLE is particularly effective in addressing students' weaknesses in Grammar Usage, demonstrating a large effect size. The small effect on Vocabulary Development reflects a limited improvement, likely because students had already achieved a higher baseline in this area. Overall, the Rank Biserial Correlation indicates that the intervention produced meaningful improvements in key aspects of reading comprehension, with the most pronounced changes occurring in areas of initial difficulty. The findings of the study suggest that the implementation of Project CRADLE had a positive effect on the reading comprehension skills of Grade 7 students.

The observed effects are consistent with previous research on literacy interventions. Tolentino et al. (2023) found that intervention effectiveness is strongly linked to teaching strategies and learner-centered materials. They also noted that challenges such as teacher workload and resource limitations influenced the success of reading programs. In line with this, Ladines (2022) observed high implementation levels in reading programs, particularly in the use of diversified instructional strategies and monitoring tools. These findings are echoed by Sancada (2022), who identified themes such as authentic tasks, trained facilitators, and remedial innovations as critical success factors in school reading initiatives. Additionally, Penaflor (2017) highlighted that after intervention, students' reading levels significantly improved, with many moving from frustration to instructional levels. However, he also cautioned that continuous practice and exposure to diverse texts are necessary for sustained improvement.

The results are also supported by Bruner's Theory of Reading Remediation (as cited in the study of Rashotte, 2021), which underscores the need for structured, scaffolded instruction tailored to learners' cognitive levels. The theory's principles of acquisition, transformation, and evaluation align with the intervention's focus on vocabulary development, grammar usage, fluency, and comprehension improvement through systematic support and guided practice. There is a need to improve students' reading comprehension, which is a core component of literacy and effective learning outcomes in secondary education. Developing a supplementary reading program, it would enhance educational quality and address learning gaps.

Conclusions

Based on the results of the pre-test, the students' reading proficiency before the intervention was generally low in vocabulary development, grammar usage, reading fluency, and comprehension. The study successfully developed Project CRADLE as a structured reading intervention program anchored on the ADDIE Model. The intervention included validated reading passages, guided practice activities, repeated reading exercises, sentence pyramids, comprehension sheets, and teacher-led modeling strategies designed to address the learners' identified reading gaps. The post-test results revealed an improvement in the students' reading proficiency after the implementation of Project CRADLE. Learners showed increased fluency, better vocabulary recognition, and enhanced comprehension. There was a statistically significant difference between the students' reading proficiency before and after the implementation of Project CRADLE. The extent of influence of Project CRADLE on the students' reading proficiency was found to be positive and meaningful. The intervention demonstrated effectiveness in improving vocabulary, fluency, grammar usage, and comprehension.

Include more interactive and culturally-relevant materials in the intervention to enhance student engagement and improve learning outcomes. Integrate diverse texts, multimedia resources, and real-life examples that appeal to the students' different cultural backgrounds and experiences. Focus on enhancing the higher-order thinking skills through activities and exercises that promote critical thinking, discussions that encourage questioning and reasoning, and tasks that involve evaluating arguments. Incorporate student-

centered approaches that promote their active participation, critical thinking, and collaborative learning. Make opportunities for students to discuss, analyze, and apply reading comprehension strategies in meaningful situations. Collaborate with teachers to establish professional development opportunities that focus on effective implementation strategies for Project CRaDLE. This will ensure that teachers are equipped with the necessary knowledge and skills to effectively deliver the program.

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