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Can School-Based Interventions Break the Frustration Cycle? Efficacy and Limitations of Reading Remediation for Marginalized Philippine Adolescents

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Abstract — Persistent literacy deficits plague adolescents in underserved Philippine communities, especially rural areas like Siocon. This study evaluated a locally adapted 10-session Reading Reinforcement Program (RREP) targeting 27 identified struggling Grade 7 readers. Delivered over 20 hours, RREP utilized the Division Diagnostic Reading Test provided by the Department of Education Region IX, issued in 2019, to bolster decoding, fluency, and comprehension. Using a quasi-experimental pretest-posttest design, reading levels were measured via the attached scoring rubrics in the said Diagnostic Test materials. Results indicated statistically significant gains in oral reading accuracy (+7.76%, $p<0.001$) and comprehension (+11.00%, $p=0.004$). However, fluency improvement (+2.96 WPM) was not statistically significant ($p=0.203$). Crucially, 59.3% of participants remained at the frustration level post-intervention. Individual trajectories diverged sharply: while some improved, 33% saw comprehension scores drop, and significant accuracy gains for others coincided with substantial reading rate decreases, pointing to a fluency-accuracy trade-off. High attrition (49.1%) further limited program impact. While RREP showed potential, its short duration (20 hours) proved insufficient to overcome deep-seated literacy gaps. Meaningful, lasting progress demands interventions extending beyond 20 weeks, incorporating structured skill building, and tackling systemic inequities in educational access and support.

Keywords: Reading difficulties, reading remediation, literacy program, reading comprehension, reading fluency

I. INTRODUCTION

The Philippines faces a severe and enduring literacy crisis, disproportionately impacting marginalized youth in resource-poor communities. Alarmingly, the country ranked 77th out of 81 nations in the Organization for Economic Co-operation and Development (OECD's) assessment of 15-year-olds, starkly illustrating the scale of this emergency. World Bank data compounds this concern, classifying 90% of Filipino 10-year-olds as "learning poor"—unable to read and grasp simple text.

This crisis is especially acute in provinces like Zamboanga del Norte, where poverty afflicts over 42% of households (Philippine Statistics Authority, 2021), creating multifaceted barriers extending far beyond school walls. Chronic underfunding plagues educational infrastructure, qualified teachers are scarce, and age-appropriate reading materials in students' mother tongues are severely limited. Siocon municipality exemplifies these intertwined problems; historical neglect has resulted in 68% of Grade 7 students struggling to decode developmentally appropriate texts (SEAMEO INNOTECH, 2020).

Despite national efforts like the Every Child a Reader Program (ECARP) and Phil-IRI implementation, rural reading outcomes remain persistently low. A key weakness of these initiatives is their standardized design, often overlooking local linguistic diversity, cultural contexts, and acute resource constraints. Rural schools grapple with student-teacher ratios exceeding 1:45, insufficient instructional materials, and infrastructure deficits that critically undermine teaching quality.

Robust evidence indicates that effective reading interventions for struggling adolescents necessitate intensive, sustained support targeting multiple literacy components concurrently. Meta-analyses confirm that multicomponent programs addressing phonics, fluency, vocabulary, and comprehension yield moderate to large effects—if delivered with sufficient intensity and duration (Hall et al., 2023). However, most documented successful interventions require at least 20 weeks of systematic instruction, with daily sessions of 45-90 minutes (Burns et al., 2024).

Research specifically on fluency interventions for struggling secondary readers reveals distinct hurdles. While such instruction can boost reading rate and accuracy, gains are often modest and may not translate into better comprehension, particularly for students with severe deficits

(Stevens et al., 2017). The intricate link between fluency and comprehension intensifies in adolescents who may develop compensatory strategies favoring accuracy over speed—a phenomenon termed the "fluency-accuracy trade-off" (Burns et al., 2024).

The psychological toll of persistent reading failure on adolescents is profound. Middle school students struggling with basic literacy have typically endured years of academic setbacks, leading to plummeting motivation, learned helplessness, and school disengagement. This is magnified in high-poverty contexts where trauma-related stress can further impair cognitive processing and learning capacity.

Addressing these urgent challenges, this study piloted the Reading Reinforcement Program (RREP) in Siocon, Zamboanga del Norte, contributing to broader efforts to develop contextually relevant literacy solutions for underserved Filipino communities. RREP made use of the reading passages endorsed by the reading coordinator, while realistically acknowledging severe constraints on duration and intensity due to resource scarcity. The 10-session, 20-hour design, though far shorter than research recommendations, represented a pragmatic response to the real-world implementation hurdles facing schools in extreme poverty.

This research supports Sustainable Development Goal 4 (Quality Education) by investigating how affordable, culturally resonant strategies might foster literacy in underserved settings. It transparently addresses intervention constraints while documenting both successes and limitations, aiming to guide the development of more effective, sustainable literacy programs feasible within the Philippine context.

Specifically, this study was guided by the following research questions: (1) What are the pre- and post-intervention reading profiles of Grade 7 struggling readers in terms of oral reading accuracy, reading rate, and comprehension? (2) Is there a statistically significant difference between the pretest and posttest scores of participants across the three reading domains following RREP implementation? (3) What individual trajectories of improvement or regression are observed, and how do these reflect the fluency-accuracy trade-off within a resource-constrained intervention context?

Literature Review

Adolescents who struggle with basic literacy represent a particularly complex population for reading intervention, as their difficulties are often deeply entrenched following years of academic frustration. Foundational theoretical models have long sought to explain these difficulties. Gough and Tunmer's (1986) Simple View of Reading (SVR) proposed that reading comprehension (RC) is the product of two interdependent components: decoding (D) and linguistic comprehension (LC), formalized as RC = D × LC. This model posits that a deficit in either component—whether the inability to accurately recognize printed words or the inability to understand oral language—will result in reading comprehension failure. For struggling adolescent readers in the Philippines, the SVR framework suggests that effective remediation must simultaneously address both decoding gaps and comprehension weaknesses, as neglecting either component leaves the multiplicative product near zero. Expanding on this foundation, Kim's (2020) Direct and Indirect Effects Model of Reading (DIER) offers a more integrated, hierarchical framework. The DIER posits that reading comprehension is not merely a product but the outcome of complex interactions among multiple skills, including higher-order cognitive processes (e.g., inference, reasoning) and domain-general knowledge (e.g., vocabulary, grammatical knowledge). Kim (2020) argues that foundational skills like decoding and fluency indirectly support comprehension through their direct effects on more strategic processes, emphasizing that effective interventions must be multicomponent and address both automaticity and strategic thinking.

These theoretical frameworks align with empirical findings on persistent reading failure. Catts et al. (2015) provided foundational insights into the early identification of reading disabilities within Response to Intervention (RTI) frameworks, demonstrating that without systematic, sustained support, struggling readers rarely "catch up" to their peers. Their longitudinal work established that reading difficulties identified in early elementary grades tend to persist through secondary schooling when intervention intensity is insufficient. The severity of persistent reading failure is perhaps best captured by Wanzek and Vaughn (2019), who examined students demonstrating chronically low response to reading intervention, documenting that even with evidence-based instruction, a subset of struggling readers shows minimal improvement over time. Their research identified critical markers of persistent non-response, including severe fluency deficits below 50 words per minute (WPM) and accuracy rates beneath 85%, concluding that

students with such profiles require intervention durations substantially exceeding typical program lengths—often 20 weeks or more of daily instruction.

The meta-analytic synthesis by Hall et al. (2023) examined forty years of reading intervention research for elementary students with or at risk for dyslexia, establishing critical benchmarks for effective practice. Their comprehensive review found that multicomponent interventions addressing phonics, fluency, vocabulary, and comprehension simultaneously yield moderate to large effect sizes (Hedges' g = 0.52–0.78)—but only when delivered with sufficient intensity. This finding directly supports Kim's (2020) DIER proposition that reading is a hierarchical system where isolated skill training is insufficient without integration into meaningful reading practice. Hall et al. (2023) specifically cautioned that interventions operating below 60–90 minutes per session across fewer than 20 weeks produce substantially diminished returns, with many students showing improvement in isolated skills without achieving functional reading proficiency. Scammacca et al. (2015) conducted the definitive meta-analysis of interventions for struggling readers in grades 4–12, synthesizing studies spanning 1980 to 2011, and found that older struggling readers require more intensive interventions than younger students, with effect sizes diminishing as grade levels increase. Critically, Scammacca and colleagues identified that interventions lasting fewer than 20 sessions or totaling less than 40 instructional hours showed negligible effects on comprehension and fluency for secondary students, concluding that the gap between struggling adolescent readers and their peers widens without intervention that is both sufficiently intense and sustained.

Stevens, Walker, and Vaughn (2017) provided a systematic synthesis of reading fluency interventions specifically for elementary students with learning disabilities, identifying phenomena directly relevant to understanding intervention outcomes. Their analysis revealed that fluency-focused interventions can produce gains in reading rate and accuracy, but these improvements often fail to transfer to comprehension—particularly for students with severe deficits. Stevens et al. documented the "fluency-accuracy trade-off," wherein students may strategically sacrifice reading speed to achieve higher accuracy, or conversely, maintain rate while miscues increase, stemming from limited automaticity in decoding. This trade-off can be understood through the lens of the Simple View of Reading (Gough & Tunmer, 1986): when decoding consumes excessive cognitive resources, no capacity remains for linguistic

comprehension, causing reading to break down. Stevens et al. (2017) strongly recommended integrating repeated reading protocols with corrective feedback to address both dimensions simultaneously. Burns et al. (2024) extended this line of inquiry through a meta-analysis specifically examining instructional level during reading fluency interventions, finding that individualized pacing based on ongoing progress monitoring significantly outperforms fixed-duration approaches, particularly for students reading below 70 WPM. They further documented that students requiring the most intensive support—those at frustration level—often need intervention cycles extending beyond 20 weeks, with daily 45–90 minute sessions incorporating repeated reading, listening passage preview, and performance feedback.

The most directly relevant evidence for adolescent populations comes from Vaughn et al. (2011), who examined intensive reading intervention for eighth-grade students with persistently inadequate response to previous instruction. This study established that even with daily 50-minute sessions delivered over an entire academic year (approximately 150 hours of instruction), nearly 40% of students remained below proficiency thresholds. Vaughn and colleagues identified fluency as the most resistant domain, with comprehension gains often failing to materialize until accuracy exceeded 90% and rate surpassed 70 WPM, establishing that dosage matters exponentially for students with the most severe deficits. Wexler, Vaughn, Roberts, and Denton (2018) specifically examined repeated reading and wide reading practice for high school students with severe reading disabilities, finding that students reading below 60 WPM and 80% accuracy showed minimal improvement from fluency interventions alone, requiring concurrent phonics instruction and explicit comprehension strategy training. They documented that even after intensive intervention, students often remained below grade-level benchmarks, suggesting that for the most severely affected adolescents, the goal may be functional literacy rather than grade-level proficiency.

While the intervention-focused literature establishes evidence-based practices, the Philippine Statistics Authority (2021) and SEAMEO INNOTECH (2020) provide essential contextual grounding for understanding why implementation fidelity remains challenging in resource-poor settings. The PSA's Family Income and Expenditure Survey documented poverty rates exceeding 42% in Zamboanga del Norte, creating conditions where basic needs often supersede educational engagement. SEAMEO INNOTECH's regional assessment identified systemic constraints—including student-teacher ratios exceeding 1:45, limited instructional

materials, and infrastructure deficits—that critically undermine intervention quality even when programs are well-designed. Scammacca et al. (2015) acknowledged that meta-analytic findings derive largely from well-resourced studies with trained personnel and consistent attendance—conditions rarely met in underserved Philippine communities.

The converging evidence from this literature review, grounded in both theoretical and empirical research, establishes several principles that directly inform the rationale for conducting the present study. Theoretically, Gough and Tunmer's (1986) Simple View of Reading provides a foundational lens: struggling adolescent readers in the Philippines likely face deficits in both decoding and linguistic comprehension, requiring interventions that address both multiplicative components rather than focusing on one in isolation. Complementing this, Kim's (2020) Direct and Indirect Effects Model of Reading suggests that effective remediation must target the hierarchical pathways from foundational skills to higher-order comprehension, recognizing that fluency gains alone will not translate into better understanding without explicit strategy instruction and vocabulary development. Empirically, Hall et al. (2023) and Scammacca et al. (2015) agree that effective adolescent reading interventions require a minimum of 20 weeks with 45–90 minute daily sessions to produce meaningful, sustained gains. Stevens et al. (2017) and Burns et al. (2024) document the fluency-accuracy trade-off as an expected outcome when interventions lack simultaneous, coordinated instruction in both domains, a phenomenon that aligns with the Simple View's prediction that decoding inefficiency undermines comprehension. Vaughn et al. (2011) and Wexler et al. (2018) establish that even optimally designed interventions leave a substantial proportion of severely struggling adolescents below proficiency, with persistent reading difficulties representing a cumulative deficit that cannot be remediated through brief interventions.

However, a critical research gap emerges from this literature: the overwhelming majority of existing intervention studies—and the theoretical models underpinning them—have been developed and tested in well-resourced educational contexts with trained personnel, consistent attendance, and adequate instructional materials. Neither the Simple View of Reading (Gough & Tunmer, 1986) nor the DIER (Kim, 2020) has been systematically validated with struggling adolescent readers in high-poverty, multilingual settings where instructional language (English) differs from home languages, where chronic underfunding compromises intervention fidelity, and where irregular attendance is normative. There is a marked scarcity of empirical research

examining the efficacy of reading interventions for struggling adolescents in severely resource-limited settings—specifically in rural Philippine communities where poverty rates exceed 40%, student-teacher ratios surpass 1:45, and systemic constraints routinely compromise intervention fidelity. Furthermore, no existing studies have systematically documented how the fluency-accuracy trade-off manifests among Filipino adolescents reading in English as a second language within high-poverty contexts, nor have researchers established minimum effective intervention dosages for students who begin remediation below 50 WPM and 70% accuracy in such environments. This gap is particularly problematic because contextual factors—economic instability, irregular attendance, limited instructional materials, the absence of trained reading specialists, and linguistic mismatches between home and school languages—may fundamentally alter how both theoretical models (e.g., the relative weighting of decoding versus comprehension components) and evidence-based interventions perform when translated from controlled research settings to real-world Philippine schools. The present study was therefore conducted to address this gap by evaluating a locally adapted reading intervention implemented under authentic resource constraints in Siocon, Zamboanga del Norte, documenting both its efficacy and limitations, and generating contextualized evidence to guide the development of feasible, sustainable literacy programs for marginalized Filipino adolescents.

II. METHODOLOGY

This study employed a quasi-experimental one-group pretest-posttest design to evaluate outcomes of the College of Teacher Education's extension initiative: “Reading Reinforcement Extension Program for High Schoolers -- Phase 1 (Assessment with Intervention)”. This design allowed measurement of changes in student reading performance pre- and post-intervention where a control group was impractical. The research site was a partner secondary school in Siocon, Zamboanga del Norte, selected due to its ongoing collaboration with the university where the primary author is employed.

The school's Reading Coordinator nominated 53 Grade 7 students identified as struggling readers based on existing records. However, irregular attendance meant only 27 students (50.9%

of the initial sample) completed the full intervention cycle and took the posttest. Consequently, analysis focused solely on this final cohort.

The intervention consisted of ten structured tutorial sessions designed to strengthen foundational reading skills. Each session lasted two hours, scheduled every Tuesday or Thursday from 2:30 PM to 4:30 PM to avoid regular classes and accommodate the coordinator's limited availability (constrained by Friday meetings/early dismissals). The reduced session count reflected logistical realities: a packed school calendar and the necessity of the Reading Coordinator's presence at all sessions. Instructional strategies emphasized proven practices targeting decoding, fluency, and comprehension.

Reading proficiency was assessed using the localized Division Diagnostic Reading Test, following 2019 guidelines issued by DepEd Region IX for diagnostic testing of incoming Grade 7 students. This tool includes 24 standardized reading passages with rubrics for evaluating oral accuracy, reading rate/expression, and comprehension. Proficiency was classified using standard levels: Frustration, Instructional, Independent. Trained student-tutors administered the pretest to all 53 initial participants to establish baselines. The identical test passages were administered post-intervention to the 27 students meeting attendance requirements. It is important to note that the same reading passages from the Division Diagnostic Reading Test served both as instructional materials during the intervention sessions and as the basis for posttest assessment. This decision was deliberate and pragmatic, as the limited availability of DepEd-endorsed, locally normed reading materials in Siocon constrained the use of alternate forms. While this approach may introduce practice effects—whereby repeated exposure to the same passages inflates posttest scores on accuracy and comprehension—the persistently low posttest averages (66.28% accuracy; 66.93% comprehension) and the significant proportion of students (59.3%) remaining at the frustration level suggest that such effects, if present, were minimal and did not substantively alter the overall pattern of findings. Nonetheless, readers are cautioned to interpret the magnitude of gains conservatively in light of this limitation.

Data analysis involved evaluating individual scores across accuracy, fluency, and comprehension domains using the rubrics. Gains were calculated as raw score differences and percentage increases from pretest to posttest. The number of students advancing to a higher proficiency level (e.g., Frustration to Instructional) was also determined. Descriptive statistics

(means, standard deviations) were used; paired-samples t-tests ($p < 0.05$) assessed the significance of observed differences. Ethical standards were upheld by assigning participant code identifiers during data collection and reporting.

III. RESULTS AND DISCUSSION

The Reading Reinforcement Program (RREP) for struggling Grade 7 readers in Siocon yielded mixed outcomes, particularly in oral reading fluency (Table 1). Class-level improvements were modest: average oral reading accuracy rose by 7.76 percentage points (from 58.52% to 66.28%), and average miscues dropped by 5.18 errors. Despite this progress, the class average remained far below DepEd's 90% instructional accuracy benchmark, underscoring persistent decoding struggles. Individual responses varied dramatically. Student 2 achieved near-perfect accuracy (99.1%) but saw their reading rate plummet by 30.2%. Conversely, Student 4 demonstrated balanced gains in both accuracy (+9.93%) and rate (+34%).

TABLE 1
ORAL READING ACCURACY

Student	Total Miscues		Oral Reading Accuracy (%)		Profile Shift
	Pre	Post	Pre	Post	Pre → Post
1	59	43	38.00	38.00	Frustration → Frustration
2	7	1	95.40	99.10	Frustration → Independent
3	13	4	91.40	95.50	Frustration → Frustration
4	28	5	88.14	98.07	Frustration → Instructional
5	23	33	72.20	75.00	Frustration → Frustration
- -	- -	- -	- -	- -	- -
Class Avg.	**40.81**	**35.63**	**58.52**	**66.28**	**N/A**

The fact that 59.3% of students remained at the frustration level post-intervention highlights the entrenched nature of reading difficulties in secondary learners. Current research indicates students with persistent deficits may stabilize rather than accelerate their reading relative to peers, even with intensive daily support. The class's average post-intervention reading rate of 45.26 WPM is critically low compared to research benchmarks for Grade 7, emphasizing the need for sustained, multicomponent interventions (Hall et al., 2023). Hall et al.'s (2023) meta-analysis

of four decades of reading intervention research confirms that programs simultaneously addressing phonics, fluency, and comprehension yield moderate to large effects for struggling readers—but only with adequate intensity and duration. RREP's modest gains suggest more comprehensive approaches are needed.

TABLE 2
READING COMPREHENSION

Student	Comprehension (%)		Change	Direction
	Pre	Post	% Points	
1	60.00	90.00	+30.00	↑ Significant
2	50.00	100.00	+50.00	↑ Significant
3	80.00	20.00	-60.00	↓ Critical
4	40.00	60.00	+20.00	↑ Moderate
5	60.00	40.00	-20.00	↓ Regression
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Class Avg.	**55.93**	**66.93**	**+11.00**	**↑ Overall**

RREP produced mixed comprehension outcomes (Table 2). While the class average improved by 11 percentage points (55.93% to 66.93%), this masked significant individual differences. Students 1 and 2 made substantial gains (+30% and +50%), suggesting effective meaning-making strategies. However, Student 3's comprehension plummeted from 80% to 20% despite improved decoding accuracy (91.4% to 95.5%), indicating excessive focus on word recognition hindered understanding. This pattern aligns with cognitive processing research showing students often struggle to coordinate decoding and comprehension simultaneously, especially during intensive interventions. Student 5's 20% comprehension decline, coupled with a 43.5% increase in miscues, exemplifies shallow processing where decoding problems impede meaning construction (Catts et al., 2015).

Critically, the final average comprehension score (66.93%) fell well below the 80% threshold for independent reading proficiency. This gap points to persistent challenges in higher-order skills like inference and critical evaluation. The finding that 33% of participants experienced comprehension declines reinforces evidence that fluency development alone is insufficient; explicit comprehension strategy instruction is vital, especially for students lacking decoding

automaticity. These results support meta-analyses showing multicomponent interventions combining foundational skills and strategic comprehension instruction yield stronger outcomes for struggling middle school readers than single-focus approaches (Scammacca et al., 2016).

Fluency outcomes revealed concerningly mixed and limited progress (Table 3). The class average increased minimally by 2.96 WPM (42.30 to 45.26 WPM, +7.0%). Student 2's case is illustrative: despite achieving near-perfect accuracy (99.1%), their reading rate dropped sharply by 30.2%, demonstrating the fluency-accuracy trade-off where cognitive resources are over-allocated to decoding. Students 1, 2, and 3 all saw rate decreases, while only Students 4 and 5 showed gains (+34.0% and +87.5% respectively). The persistently low rates—four of five profiled students reading below 67 WPM post-intervention—highlight a major barrier to comprehension, as research indicates rates below 70 WPM typically prevent sufficient cognitive resources from being allocated to meaning (Stevens et al., 2017).

TABLE 3
READING FLUENCY (RATE)

Student	Reading Rate (WPM)		Change (WPM)	% Change
	Pre	Post		
1	47	32	-15	↓ -31.9%
2	96	67	-29	↓ -30.2%
3	75	63	-12	↓ -16.0%
4	53	71	+18	↑ +34.0%
5	32	60	+28	↑ +87.5%
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Class Avg.	42.30	45.26	+2.96	↑ +7.0%

The overall class average of 45.26 WPM remains critically low compared to established Grade 7 benchmarks (approx. 150 WPM needed for adequate comprehension). This severe fluency deficit profoundly compromises comprehension and academic performance across subjects. The variable outcomes align with recent meta-analyses suggesting fluency interventions for struggling secondary readers demand sustained, intensive instruction over extended periods to yield meaningful gains. Syntheses indicate interventions lacking sufficient intensity or duration show

inconsistent effectiveness for Grades 6-12 (Burns et al., 2024). These findings underscore the necessity for comprehensive, multi-tiered approaches simultaneously targeting accuracy and rate development, delivered with adequate intensity to overcome entrenched difficulties.

TABLE 4
READING PROFILE CLASSIFICATION

Profile	Pre-test Count	Post-test Count	Net Change	% of Class
Independent	0	2	+2	7.4%
Instructional	0	9	+9	33.3%
Frustration	27	16	-11	59.3%

Modest shifts occurred in reading profile classifications: 40.7% of participants (11 students) moved from frustration level to higher tiers—two reaching independent status and nine reaching instructional level. However, the persistence of 59.3% (16 students) at frustration level post-intervention underscores the severity of their initial deficits and the difficulty of remediation. That no students began at instructional or independent level highlights the profound nature of their challenges, consistent with research showing students with significant decoding/comprehension gaps require intensive, prolonged intervention for meaningful progress. The nine students reaching instructional level represent important gains, though they still require teacher support, indicating a partial intervention response (Catts et al., 2015).

Crucially, most students remained below Phil-IRI's minimum criteria for instructional-level performance (90% word accuracy, 59% comprehension). This aligns with longitudinal research indicating struggling secondary readers often need over 20 weeks of intervention for stable literacy gains. The observed classification patterns support the understanding that adolescent reading difficulties are complex, requiring differentiated approaches based on individual profiles. Recent research suggests students remaining at frustration level post-initial intervention may need intensified, individualized support targeting specific deficits, while those reaching instructional level require ongoing Tier 2 support to consolidate gains (Sleeman et al., 2022).

TABLE 5
COMPOSITE PROGRESS SUMMARY

Metric	Pre-test Avg	Post-test Avg	Change	% Improved
Oral Accuracy (%)	58.52	66.28	↑ +7.76	74.1%
Comprehension (%)	55.93	66.93	↑ +11.00	66.7%
Reading Rate (WPM)	42.30	45.26	↑ +2.96	63.0%
Miscues	40.81	35.63	↓ -5.18	59.3%

RREP generated quantifiable, yet limited, progress across key literacy domains for these Grade 7 struggling readers. Comprehension showed the largest improvement (+11.00 percentage points), followed by oral accuracy (+7.76 percentage points). Reading fluency exhibited minimal gains (+2.96 WPM). Critically, all post-intervention averages remained substantially below benchmarks: comprehension (66.93% < 80% independent), accuracy (66.28% < 90% instructional), and rate (45.26 WPM ≈ 70% below expected). The persistence of 59.3% at frustration level, alongside significant individual variability, indicates that while some students benefited, most continued facing fundamental challenges in reading automaticity and comprehension integration (Wanzek & Vaughn, 2019).

These findings raise concerns about the depth and sustainability of gains. The 40.7% who advanced from frustration level may show only surface-level improvements. Pronounced fluency deficits, exemplified by Student 2's rate decline despite high accuracy, underscore the complex interplay between cognitive load and skill integration during intervention. This aligns with meta-analytic evidence indicating struggling middle school readers require intensive, multicomponent interventions (phonics, fluency, comprehension) delivered over extended periods. RREP's limited gains suggest a Phase 2 intervention should include: structured phonics for students below 90% accuracy; intensive fluency practice (e.g., timed repeated reading) for those under 50 WPM; and explicit metacognitive strategy instruction to ensure comprehension gains reflect genuine understanding, not compensatory behaviors (Hall et al., 2023).

TABLE 6
T-TEST RESULTS FOR PRE-TEST AND POST-TEST VARIABLES

Variable	t-value	p-value	Significant?	Interpretation
Total Miscues	-2.803	0.009	**Yes**	Significant reduction in errors.
Oral Reading Score	4.442	<0.001	**Yes**	Significant improvement in reading accuracy.
Comprehension	3.177	0.004	**Yes**	Significant improvement in understanding.
Reading Rate (WPM)	1.305	0.203	No	No significant change in reading speed.

Statistical analysis confirmed significant improvements in three of four literacy domains. RREP yielded statistically significant reductions in total miscues ($t = -2.803$, $p = 0.009$), gains in oral reading accuracy ($t = 4.442$, $p < 0.001$), and improvements in comprehension ($t = 3.177$, $p = 0.004$), indicating progress in foundational skills and text understanding. However, reading rate showed no significant change ($t = 1.305$, $p = 0.203$), representing a critical limitation. The accuracy and comprehension gains align with research showing structured literacy interventions can enhance decoding and meaning-making in struggling secondary readers, though the magnitude of change varied considerably among participants, reflecting the complexity of adolescent reading development amid persistent difficulties (Wexler et al., 2018).

The paradox of significant gains in isolated metrics alongside limited holistic progress—evidenced by 59% remaining at frustration level—highlights fundamental challenges in designing interventions for secondary struggling readers. While foundational skills improved measurably, the lack of fluency gains creates a critical barrier to independent reading development, as rate significantly impacts comprehension and academic performance. This pattern aligns with meta-analyses showing reading interventions for upper elementary/secondary students often produce statistically significant but educationally limited effects, particularly when failing to integrate component skills into fluent, automatic reading. The combination of statistical significance with persistent functional difficulties signals the need for intensified, longer-duration interventions

explicitly targeting the simultaneous coordination of accuracy, rate, and comprehension (Scammacca et al., 2016).

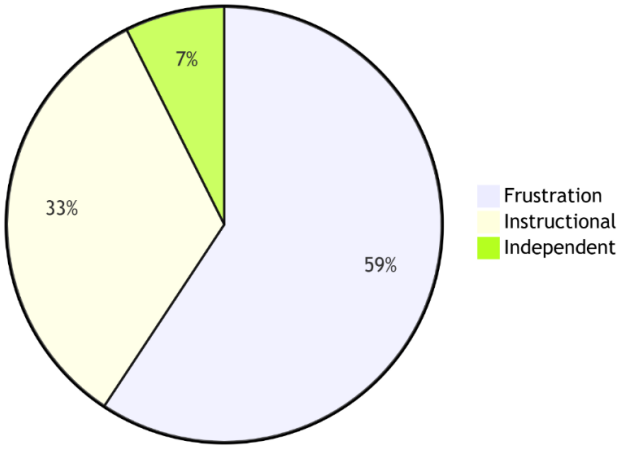

FIGURE 1
POST-TEST READING PROFILES (N=27)

The post-intervention proficiency distribution reveals profound and persistent literacy challenges: 59% (n=16) remained at frustration level despite targeted support. This large proportion echoes recent International Journal of Research and Scientific Innovation (2024) findings emphasizing that phonemic awareness and phonics instruction significantly impact learners with reading difficulties, particularly stressing that foundational decoding deficits demand intensive, systematic interventions extending well beyond typical timeframes. The majority persisting at frustration level, combined with only 33% advancing to instructional and a mere 7% achieving independence, reflects the complexity of secondary reading difficulties. As noted by Vaughn et al. (2012) and supported by contemporary evidence, these students often require more than 20 weeks of structured, intensive phonics instruction to make meaningful progress toward functional literacy.

These results highlight the urgent need for comprehensive, multi-tiered interventions addressing both foundational skills and the systemic educational challenges in low-resource communities. Recent action research (International Journal of Research and Innovation in Social Science, 2025) on improving fluency among frustration-level readers demonstrates the effectiveness of repeated reading interventions, supporting extended instructional time, intensive small-group teaching, and community-based reading mentorship as essential for sustainable

improvement. The distribution pattern observed here reflects broader systemic issues: schools in under-resourced settings experience frustration-level persistence rates triple the national average due to constraints on time, personnel, and intervention intensity. Immediate priorities must include significantly increasing instructional time for frustration-level students, integrating cognitive strategy instruction for instructional-level students, and establishing robust community reading mentor networks to support emerging independent readers.

IV. CONCLUSION

This study evaluated a localized reading intervention (RREP) aimed at disrupting the literacy failure cycle among marginalized Grade 7 learners in Siocon, Philippines. While yielding some gains—notably in comprehension (+11.00 percentage points) and decoding accuracy (+7.76 percentage points)—these improvements failed to meet national proficiency standards. Reading fluency remained critically underdeveloped (+2.96 WPM, not statistically significant), and a majority (59.3%) continued performing at the frustration level post-intervention. Individual trajectories diverged sharply: 33% experienced comprehension declines, and some students with improved accuracy showed substantial reading rate decreases—exemplifying the fluency-accuracy trade-off. These findings suggest that context-sensitive approaches alone are insufficient to overcome persistent literacy gaps. Without longer-term, more intensive instruction, the structural barriers facing learners in underserved settings prove formidable. This research contributes to Sustainable Development Goal 4 (Quality Education), demonstrating that meaningful literacy gains in disadvantaged contexts depend on interventions exceeding 20 weeks with explicit, systematic skill development.

Two major constraints shaped this study's outcomes: a high attrition rate (50.9% dropout) and the brief 10-session design. These limitations curtailed instructional depth and generalizability. Therefore, based on the evidence generated, the following recommendations are advanced. First, reading programs should run for more than 20 weeks with at least four sessions weekly, using systematic phonics for students below 90% accuracy and timed repeated reading for those below 50 words per minute. Second, explicit comprehension strategy instruction—including summarizing and questioning—must be integrated into fluency practice using shorter texts and 60-90 minute

sessions. Third, schools should request DepEd funding to produce local resources, train teachers, establish reading clinics, and regularly monitor progress using tools like Phil-IRI. Fourth, partnerships with organizations supporting SDG 4 should be pursued to fund reading initiatives, ensuring adequate books and proper mentor support. Future research should examine minimum effective dosage for Filipino adolescent struggling readers, evaluate long-term sustainability of gains, and test whether community-based mentorship can supplement school-based instruction without overburdening teachers. Only through such comprehensive, sustained approaches can school-based interventions hope to break the frustration cycle for marginalized Filipino youth.

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