
IMPACT OF A HOME-BASED READING INTERVENTION ON THE READING PERFORMANCE OF GRADE 4–6 FRUSTRATION-LEVEL PUPILS IN THE 2ND DISTRICT OF COTABATO

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2. ABSTRACT

This study investigated the impact of a home-based reading intervention program on the reading performance of Grade 4–6 pupils identified as frustration-level readers in selected elementary schools in the 2nd District of Cotabato during the academic year 2025–2026. Using a pre-test and post-test quantitative design, the study assessed 166 pupil-respondents across three school sites—Malangag Elementary School, Ma. Caridad Elementary School, and Makalanga S. Guiambangan Elementary School—in the municipalities of Antipas, Arakan, and President Roxas. The Philippine Informal Reading Inventory (Phil-IRI) served as the primary assessment instrument. Pre-test results revealed that the majority of pupils (85.32% in reading comprehension; 58.68% in oral reading) were classified at the frustration reading level. Following a six-week home-based reading intervention guided by a teacher-made handbook with active parental involvement, post-test results showed dramatic improvements: 55.98% of pupils attained the independent reading level in comprehension and 62.54% in oral reading. The overall mean score increased from 11.17 (Instructional) to 19.08 (Instructional, upper range), with all three reading components showing statistically significant gains. A paired samples t-test confirmed a statistically significant difference ($t(165) = -30.88, p < .001$), leading to the rejection of the null hypothesis. These findings demonstrate that structured parental involvement in home literacy activities significantly improves elementary pupils' reading achievement.

3. KEYWORDS: *Reading intervention, parental involvement, Phil-IRI, frustration reading level, reading achievement, home-based literacy.*

4. INTRODUCTION

Reading is among the most fundamental academic skills, as it underpins learning across all subject areas and shapes long-term educational and professional trajectories. In the Philippine context, the persistent prevalence of frustration-level readers in elementary schools reflects a systemic literacy challenge requiring targeted and evidence-based intervention strategies. The Department of Education (DepEd) acknowledges that many Filipino pupils fail to reach age-appropriate reading proficiency, particularly in the post-pandemic period when modular distance learning significantly disrupted foundational literacy development (DepEd, 2018).

Parental involvement has been consistently identified as a key predictor of children's reading achievement. Research demonstrates that when parents engage in structured home literacy activities—including reading aloud, guided practice, and vocabulary building—children show measurable gains in reading fluency and comprehension (Fan & Chen, 2019; Melhuish et al., 2019; Sénéchal & LeFevre, 2019). Despite this evidence, many Philippine schools have yet to formalize parental involvement as a structured component of reading intervention programs.

This study responds to this gap by examining the quantitative impact of a six-week home-based reading intervention on the reading performance of Grade 4–6 frustration-level readers in selected schools in the 2nd District of Cotabato. Using the Phil-IRI as the pre- and post-test instrument, the study measured changes in reading comprehension, oral reading fluency, and overall reading level, and tested whether observed gains were statistically significant.

The study was guided by the following research questions: (1) What is the reading performance of pupils before the intervention program? (2) What is the reading performance of pupils after the intervention program? (3) Is there a significant difference between the performance of pupils before and after the intervention?

The null hypothesis posited that there is no significant difference between the reading performance of pupils before and after the reading intervention.

5. MATERIALS AND METHODS

Research Design

This study employed a quantitative pre-test and post-test design as Phase 1 of a larger sequential explanatory mixed-methods study (Creswell & Plano Clark, 2017). The quantitative component assessed pupil reading performance before and after the

implementation of a six-week home-based reading intervention facilitated by parents using a teacher-made handbook.

Locale and Participants

The study was conducted in three elementary schools in the 2nd District of Cotabato: Malangag Elementary School (Antipas), Ma. Caridad Elementary School (Arakan), and Makalanga S. Guiambangan Elementary School (President Roxas) during the academic year 2025–2026. Participants were 166 Grade 4–6 pupils identified as frustration-level readers based on their classroom advisers' Phil-IRI pre-test results. Purposive sampling was used to select pupils who met the frustration reading level criterion and whose parents consented to participate in the intervention.

Instrument

The Philippine Informal Reading Inventory (Phil-IRI), a standardized DepEd assessment tool, was used to measure pupils' reading performance across three components: reading comprehension, oral reading fluency, and overall reading level. Scores were classified into three levels: Frustration (1.00–10.99), Instructional (11.00–20.99), and Independent (21.00–30.00).

Intervention

The intervention consisted of structured home-based reading activities guided by a teacher-made handbook distributed to parents. The handbook provided age-appropriate reading materials and activity guides targeting phonics, sight word recognition, vocabulary development, oral reading fluency, and reading comprehension. Parents facilitated the reading sessions with their children for a period of six weeks.

Data Collection Procedure

Phil-IRI pre-tests were administered by classroom advisers prior to the intervention to establish baseline reading performance. Following the six-week intervention period, post-tests were administered using the same Phil-IRI instrument. Pre-test and post-test data were encoded and analyzed by the researcher.

Statistical Analysis

Descriptive statistics (frequency, percentage, and mean scores) were computed to describe reading performance at pre-test and post-test. A paired samples t-test was used to determine

whether the difference between pre-test and post-test scores was statistically significant at the 0.05 alpha level.

6. RESULTS AND DISCUSSION

Pre-Test Reading Performance

Table 1 presents the reading comprehension performance of pupils before the intervention.

Table 1. Reading Comprehension Performance – Pre-Test.

Reading Comprehension Level	Frequency	Percentage (%)
Frustration	221	85.32
Instructional	31	11.96
Independent	7	2.70
Total	259	100%

Pre-test results revealed that the overwhelming majority of pupils (85.32%, $n = 221$) were classified at the frustration reading level in comprehension, with only 11.96% at the instructional level and 2.70% at the independent level. These findings align with OECD (2019) reports documenting widespread below-grade reading proficiency, and with Rasinski (2017), who explains that pupils at the frustration level typically lack the foundational skills necessary for independent meaning construction from text.

Table 2 shows the oral reading performance prior to intervention.

Table 2. Oral Reading Performance – Pre-Test.

Oral Reading Level	Frequency	Percentage (%)
Frustration	152	58.68
Instructional	67	25.86
Independent	40	15.44
Total	259	100%

In oral reading, 58.68% of pupils were at the frustration level, with only 15.44% demonstrating independent oral reading competence. DepEd (2018) notes that pupils at this level frequently struggle with accuracy, rate, and expression, which negatively affects comprehension and overall academic performance.

Table 3 presents the pre-test overall reading levels.

Table 3. Overall Reading Level – Pre-Test.

Reading Level	Frequency	Percentage (%)
Frustration	158	61.01
Instructional	63	24.32
Independent	38	14.67
Total	259	100%

The overall pre-test reading level distribution showed 61.01% of pupils at the frustration level, consistent with findings from Pulog (2026) and Casingal and Balaba (2026), who documented similar high concentrations of frustration-level readers in Philippine elementary schools prior to intervention.

Table 4 summarizes the pre-test mean scores across all reading components.

Table 4. Pre-Test Overall Reading Performance – Mean Scores.

Component	Mean Score	Classification
Reading Comprehension	10.28	Frustration
Oral Reading	11.43	Instructional
Reading Level	11.81	Instructional
Overall Mean	11.17	Instructional

The overall pre-test mean score of 11.17 placed pupils at the instructional level, though reading comprehension individually registered at the frustration level ($M = 10.28$). This uneven profile is consistent with Rasinski's (2017) observation that pupils may demonstrate emerging oral reading while still struggling significantly with comprehension.

Post-Test Reading Performance

Table 5 presents post-test reading comprehension results following the six-week intervention.

Table 5. Reading Comprehension Performance – Post-Test.

Reading Comprehension Level	Frequency	Percentage (%)
Frustration	12	4.63
Instructional	102	39.38
Independent	145	55.98
Total	259	100%

Post-test results demonstrated a dramatic improvement in reading comprehension. The proportion of frustration-level readers dropped from 85.32% to 4.63%, while 55.98% attained the independent reading level. This significant shift aligns with Elleman and Oslund (2019), who found that explicit comprehension instruction results in significant gains in pupils' ability to construct meaning from texts.

Table 6 presents oral reading post-test results.

Table 6. Oral Reading Performance – Post-Test.

Oral Reading Level	Frequency	Percentage (%)
Frustration	18	6.94
Instructional	79	30.52
Independent	162	62.54
Total	259	100%

Oral reading performance improved substantially, with 62.54% of pupils reaching the independent level post-intervention. Hattie (2017) corroborates these findings, noting that structured literacy interventions yield strong effects particularly in fluency and accuracy.

Table 7 shows post-test reading level distribution.

Table 7. Overall Reading Level – Post-Test.

Reading Level	Frequency	Percentage (%)
Frustration	23	8.88
Instructional	89	34.37
Independent	147	56.75
Total	259	100%

The post-test reading level results revealed that 56.75% of pupils attained the independent reading level—a dramatic shift from the pre-test baseline of 14.67%. Rico (2026) and Baluyot et al. (2026) similarly documented significant post-test improvements in Filipino pupils following structured reading interventions.

Table 8 presents the post-test mean scores across all reading components.

Table 8. Post-Test Overall Reading Performance – Mean Scores.

Component	Mean Score	Classification
Reading Comprehension	18.03	Instructional
Oral Reading	19.66	Instructional
Reading Level	19.54	Instructional
Overall Mean	19.08	Instructional

Post-test mean scores showed marked improvements across all components, with an overall mean of 19.08—a gain of nearly 8 points from the pre-test mean of 11.17.

Significant Difference Between Pre-Test and Post-Test Performance

Tables 9 through 12 present the paired samples t-test results for each reading component and the overall comparison.

Table 9. Paired Samples t-Test: Reading Comprehension.

Test	Mean	SD	t	df	p
Pretest	10.28	4.13	-24.10	165	< .001
Posttest	18.03	4.27			

Table 10. Paired Samples t-Test: Oral Reading.

Test	Mean	SD	t	df	p
Pretest	11.43	4.05	-23.86	165	< .001
Posttest	19.66	3.97			

Table 11. Paired Samples t-Test: Reading Level.

Test	Mean	SD	t	df	p
Pretest	11.81	5.29	-21.26	165	< .001
Posttest	19.54	4.64			

Table 12. Paired Samples t-Test: Overall Reading Performance.

Test	Mean	SD	t	df	p
Pretest	11.17	3.65	-30.88	165	< .001
Posttest	19.08	3.64			

Paired samples t-test results confirmed statistically significant improvements in all reading components. The overall t-value of -30.88 ($df = 165$, $p < .001$) provides strong evidence that the observed gains were not due to chance. The null hypothesis—that there is no significant

difference between pre-test and post-test reading performance—is therefore rejected. These findings corroborate Elleman and Oslund (2019), Connor et al. (2018), and Dorado and Medina (2022), who collectively affirm that structured reading interventions produce significant, measurable literacy gains in elementary pupils.

The magnitude of improvement observed across all three Phil-IRI components underscores the effectiveness of the parental involvement framework as a viable and impactful literacy strategy. Consistent with Bronfenbrenner's (1979) Ecological Systems Theory, the family microsystem—when activated through structured tools such as the teacher-made handbook—exerts a powerful and measurable influence on children's reading achievement.

7. CONCLUSION

This study demonstrates that a six-week home-based reading intervention program, implemented through active parental involvement and guided by a teacher-made handbook, produced statistically significant and educationally meaningful improvements in the reading performance of Grade 4–6 frustration-level readers in the 2nd District of Cotabato. Pre-test baseline data confirmed critically low reading proficiency among the majority of pupil-respondents. Post-test data, analyzed through paired samples t-tests, showed significant gains across reading comprehension, oral reading, and overall reading level, rejecting the null hypothesis with a high degree of statistical confidence ($p < .001$).

These findings affirm that when parents are equipped with structured literacy tools and guided by clear intervention frameworks, they can serve as effective reading scaffolds for their children. The study supports the institutionalization of parental involvement-based reading programs in Philippine public elementary schools as a core, rather than supplementary, literacy strategy. Future studies should investigate the long-term durability of these gains and the optimal design features of parent literacy handbooks for diverse socioeconomic contexts.

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