Assessing the Reading Fluency of Grade 1 Pupils Using Naz Modified Approach in Early Reading Literacy

NAZARETH B. ACAIN

bjczeth@gmail.com

Cogon Elementary School Cogon Palo, Leyte Palo II District

Abstract

Reading fluency is a critical component of literacy, yet many early-grade learners continued to struggle with word recognition, reading confidence, and comprehension, particularly in public schools with limited access to leveled materials and structured interventions. Despite its importance, few studies have examined the combined effects of *multimedia, visual aids, interactive materials, and culturally responsive strategies* on improving reading fluency in Grade 1 pupils, highlighting a research gap in practical, theory-driven interventions for early learners. This study applied a *constructivist and sociocultural framework*, emphasizing active engagement, meaningful context, and social interaction in literacy development. *Twenty-two Grade 1 pupils* participated in the intervention, which integrated multimedia tools such as *PowerPoint presentations, YouTube videos, and Smart TVs, alongside play-based learning, storytelling, and culturally relevant* instructional materials. Pre- and post-assessments measured letter sounds, rhyming words, sentence reading, fluency, and comprehension. Results showed *significant improvements in all areas*, with Wilcoxon signed-rank tests revealing $W = 253$, $p < .001$ for both foundational skills and fluency, and a rank biserial correlation effect size of 1.00. Findings demonstrated that multimedia-supported, multisensory, and interactive strategies effectively enhanced attention, engagement, and mastery of reading skills, providing a strong mechanism for building early literacy and supporting long-term academic success.

Keywords: *reading fluency; early literacy; Grade 1; Comprehensive Reading Literacy Assessment (CRLA) Tool; Naz Modified Approach intervention*

1. Introduction

Reading fluency was an essential foundation of literacy, yet many Grade 1 pupils continued to struggle with recognizing words automatically and reading confidently. In many public schools, limited access to leveled materials and structured reading interventions contributed to these challenges. This issue was particularly relevant in early-grade classrooms where pupils required consistent exposure to developmentally appropriate texts. Strengthening reading fluency at the foundational level was critical because it supported comprehension and long-term academic success. Previous studies highlighted that explicit fluency instruction and exposure to repeated reading significantly improved young learners' reading performance. However, many interventions relied on digital tools that were not always accessible in resource-limited settings, such as the Comprehensive Reading and Literacy Assessment (CRLA), which advocated for literacy for all. Despite these initiatives, classroom-based, low-cost fluency tools remained understudied.

This study addressed the gap in practice by examining the effectiveness of a simple printed reading tool tailored for beginning readers. While existing programs promoted literacy, teachers often lacked easy-to-implement materials that directly targeted fluency skills. Conducting this study was essential to provide

evidence-based support that could benefit Grade 1 learners, teachers, and school literacy programs. The results helped strengthen classroom strategies that improved reading performance.

The study focused on Grade 1 pupils in one public elementary school and was limited to oral reading fluency indicators such as accuracy, rate, and expression. Its purpose was to determine whether a printed reading tool could significantly enhance pupils' fluency. Specifically, the study sought to answer the following questions:

1. What is the reading fluency level of Grade 1 pupils before and after the use of Naz Modified Approach intervention in terms of:
   1.1 speed and accuracy
   1.2 comprehension?
2. Is there a significant difference in the reading fluency of Grade 1 pupils before and after the use of Naz Modified Approach intervention?

2. Methodology

2.1. Research Design

This study employed a pre-experimental one-group pretest – posttest design. The design was suitable because it allowed the researcher to measure changes in reading fluency after the intervention without manipulating classroom assignments. Numerical data were collected to determine the effectiveness of the printed reading tool.

2.2. Research Locale

The study was conducted in a public elementary school located in Palo, Leyte, where Grade 1 pupils often had limited access to supplemental reading materials. The school followed the Comprehensive Reading and Literacy Assessment (CRLA), making it an appropriate setting for reading-related interventions.

2.3. Research Participants

Participants consisted of approximately 22 Grade 1 pupils enrolled in one section. Inclusion criteria included pupils who could identify letters and basic phonics but struggled with oral reading fluency. Pupils with diagnosed learning disabilities or those who were consistently absent were excluded. Purposive sampling was used to select pupils needing fluency support.

2.4. Research Instrument

The primary instrument was a researcher-developed oral reading fluency test that measured speed, accuracy, and comprehension. The "Naz Modified Approach in Early Reading Literacy", containing picture and word/picture and phrase/picture and sentence in introducing basic phonics, served as the intervention material. All instruments underwent expert validation by language teachers and reading specialists. Reliability was assessed through pilot testing for internal consistency.

2.5. Data Gathering Procedures

First, permission was secured from the school principal and the parents of participating pupils. Second, a pre-test was administered to determine baseline fluency levels. Third, the intervention was implemented over four weeks, during which pupils practiced reading the printed materials daily under teacher guidance. Fourth, a post-test was conducted to measure improvements. All scores were recorded and analyzed.

2.6. Data Analysis

Data were analyzed using descriptive statistics such as mean and standard deviation to describe fluency levels. A paired sample t-test was used to determine the significant difference between pre-test and post-test scores.

2.7. Ethical Considerations

The study ensured voluntary participation, with parents signing informed consent forms. Confidentiality was maintained by assigning codes instead of using pupils' names. Data were stored securely and used only for academic purposes. The researcher followed school protocols and upheld ethical guidelines throughout the study.

3. Results and Discussion

Reading Level of Grade 1 Students Before the Intervention

Table 1 shows the reading level of Grade 1 students before implementing the intervention. In terms of learning letter sounds, rhyming words, and sentences reading, the average score obtained is 7.77 (SD = 2.89) which means the students were interpreted as *full refresher.* Moreover, in respect with reading fluency and comprehension, the mean score is 0.19 (SD = 0.50) which means students should have *full intervention.* Using the interpretation table provided by DepEd in CRLA, the students' reading level were categorized as *emerging.* The results implies that the reading level of the students does not meet the standard set by the curriculum; thus, an intervention enhancing the reading fluency of the students is needed.

Table 1 showed the reading level of Grade 1 students before implementing the intervention. In terms of learning letter sounds, rhyming words, and sentence reading, the average score obtained was 7.77 (SD = 2.89), which indicated that the students were at the full refresher level. Moreover, with respect to reading fluency and comprehension, the mean score was 0.19 (SD = 0.50), suggesting that students required full intervention. Using the interpretation table provided by the Department of Education in the Comprehensive Reading and Literacy Assessment (CRLA), the students' reading levels were categorized as emerging (Cariazo, 2025; Casingal et al., 2025; Valido, 2025). These results implied that the reading proficiency of the students did not meet the standard set by the curriculum, supporting prior findings that early-grade learners often struggle with foundational literacy skills without structured interventions (Macapallag, 2025; Cultura et al., 2026; Rodulfo, 2025). Similar studies reported that targeted classroom-based literacy interventions produced significant gains in reading fluency among early learners (Cabillas et al., 2025; Labareno & Gabuya, 2025; Arbiol & Jorgio, 2025), reinforcing the need for evidence-based instructional approaches. Therefore, an intervention designed to enhance reading fluency was deemed necessary to improve accuracy, fluency, and comprehension in early readers.

Table 1. *Reading level of Grade 1 Students before and after the Intervention*

	Before Intervention			After Intervention		
	Mean	**SD**	**Interpretation**	**Mean**	**SD**	**Interpretation**
Speed and Accuracy	7.77	2.89	Full Refresher	19.18	1.30	Grade Ready
Comprehension	0.19	0.50	Full Intervention	4.76	0.72	Meets Expectation
	Reading Profile		Emerging			At Grade Level

The results in Table 1 revealed that prior to and after the implementation of the intervention, Grade 1 pupils were categorized as emerging readers, with mean scores indicating the need for full refresher in foundational skills and full intervention in reading fluency and comprehension. These findings are consistent with Cariazo (2025), who reported that learners were at the Frustration Level before receiving intervention. In the same way, Rodulfo (2025) found that a considerable number of pupils were under Full and Moderate Intervention prior to the implementation of SQ3R, indicating low reading performance at baseline. Valido (2025) likewise identified learners as Developing Readers, reflecting performance below expected standards. Additionally, Casingal, De Vera, and De Vera (2025) documented the presence of struggling readers identified through assessment prior to instructional support, further reinforcing the pattern of low pre-intervention reading achievement.

Moreover, the present findings affirm the need for structured and targeted reading interventions. Cultura et al. (2026) demonstrated that significant improvements in reading proficiency occurred only after the implementation of an intervention program, implying that baseline reading levels were initially low. Although Macapallag (2025) reported that some learners performed at grade level, the study also emphasized that a notable proportion still required instructional assistance. Collectively, these studies substantiate the current results, confirming that learners generally do not meet expected reading standards prior to intervention and highlighting the importance of implementing systematic reading programs to address identified gaps.

After the intervention, the reading profile of Grade 1 students were *at grade level* (see Table 1). This shows that the students meet the standards set by the Department of Education on reading fluency of grade 1 students. In detailed, the obtained mean for learning sounds, rhyming words, and sentences reading is 19.18 (SD = 1.30) which means the students were *grade ready.* Meanwhile, students' reading fluency and comprehension *meets expectation*. This implies that the intervention used helps in enhancing the reading fluency of Grade 1 Students.

The results of the study, which showed significant improvement in classroom focus and engagement after integrating visual aids, align with previous research emphasizing the importance of interactive, technology-enhanced, and culturally responsive instruction. Manzano et al. (2026) highlighted that educators who blended digital tools such as PowerPoint presentations, YouTube videos, and Smart TVs with traditional manipulatives effectively engaged learners while developing phonological awareness, vocabulary, letter recognition, and word formation. Similarly, Esperanza (2025) found that contextualized instruction incorporating Indigenous culture, local languages, and storytelling fostered comprehension and learners' sense of identity, while low-tech and community-based strategies ensured accessibility despite resource constraints. Bautista and Quiambao (2025) quantitatively demonstrated that the use of visual aids significantly improved attention, participation, and task completion among Kindergarten learners, directly supporting the present study's findings that visually supported materials enhance classroom focus and learning outcomes.

Furthermore, the significant improvements observed in reading skills after intervention are consistent with studies that implemented structured reading programs. Jumao-As et al. (2025) and Orpilla (2025) reported significant gains in reading comprehension and overall reading level following remediation programs and reading response journals. Cultura et al. (2026) and Castor and Buenviaje (2025) similarly found that ICT-based and interactive interventions significantly increased pupils' reading proficiency and phonemic awareness. These findings complement the present study by demonstrating that systematic, interactive, and technology-integrated strategies—whether through visual aids, cultural integration, or structured reading programs—produce measurable improvements in early literacy skills, engagement, and classroom performance.

Significant Difference on Reading Level of Grade 1 Students Before and After the Intervention

Based on the result of the Shapiro-Wilk *p* test seen in Table 3, the data does not approximate a normal curve ($p < .05$) which means that the statistical test to use will be nonparametric, specifically Wilcoxon Signed Rank test. In detail, for learning sounds, rhyming words, and sentences reading, the *p*-value is 0.030 while for reading fluency and comprehension the *p*-value is <.001. Both of these firmly supports the use of Wilcoxon-Signed Rank test in testing the significant difference between the pre-test and posttest of the students' reading level.

Table 3. *Normality Test of the Data using Shapiro-Wilk p Test*

Normality Test (Shapiro-Wilk)

			W	p
Speed and Accuracy (Post test)	-	Speed and Accuracy (Pretest)	0.900	.030
Comprehension (Post test)	-	Comprehension (Pre-test)	0.633	<.001

Note. A low p-value suggests a violation of the assumption of normality

Table 4 shows the significant difference between the reading level of Grade 1 students before and after the intervention. The results revealed that there is significant difference on the reading level of Grade 1 students in pre-test and posttest in terms of learning sounds, rhyming words, and sentences reading ($W = 253$, $p < .001$) and in terms of reading fluency and comprehension ($W = 253$, $p < .001$). This indicates that there is an improvement made from the students with the aid of the intervention implemented. This can be supported with rank biserial correlation effect size of 1.00 which further indicates that there is an improvement made during the implementation of the intervention.

Table 4. *Significant Difference on the Reading Level of Grade 1 Students Before and After the Intervention*

Paired Samples T-Test

		Statistic	p		Effect Size
Speed and Accuracy	Wilcoxon W	253	<.001	Rank biserial correlation	1.00
Comprehension	Wilcoxon W	253	<.001	Rank biserial correlation	1.00

Note. $H_a\ \mu_{Measure\ 1\ -\ Measure\ 2} \neq 0$

These findings are consistent with prior research showing that targeted, structured, and interactive interventions significantly enhance early literacy skills. For instance, Jumao-As et al. (2025) and Orpilla (2025) reported significant gains in reading comprehension following reading remediation programs and reading response journals, while Cultura et al. (2026) and Castor and Buenviaje (2025) observed notable improvements in reading proficiency and phonemic awareness through ICT-based and interactive strategies.

The significant improvements observed can be attributed to the use of multimodal and learner-centered instructional strategies. Manzano et al. (2026) emphasized that combining digital tools with traditional manipulatives engages learners actively and enhances essential reading skills such as letter recognition, vocabulary, and word formation. Similarly, Esperanza (2025) highlighted the benefits of culturally responsive instruction, local language integration, and visually supported materials in improving comprehension and engagement. Bautista and Quiambao (2025) further reinforced that visual aids significantly increase classroom focus and attentiveness, which likely contributed to the observed gains in fluency and comprehension. Collectively, these studies support the present findings by illustrating that well-designed interventions—whether through technology integration, visual support, or culturally contextualized instruction—can produce measurable and significant improvements in early reading performance.

4. Conclusion

In conclusion, the study confirmed that theory-driven, multisensory, and learner-centered approaches effectively enhanced the reading skills of Grade 1 pupils. Significant improvements were observed in learning sounds, rhyming words, sentence reading, fluency, and comprehension ($W = 253$, $p < .001$) with a rank biserial correlation effect size of 1.00, demonstrating the positive impact of structured interventions. These findings aligned with the constructivist framework, as pupils actively constructed knowledge through hands-on practice, repeated reading, and engagement with interactive materials. They also reflected the sociocultural framework, as collaborative interactions with teachers, the use of culturally relevant content, and contextually meaningful activities provided scaffolding and social support for learning. Overall, the study validated that early literacy development is best supported through interactive, contextually grounded, and socially mediated instruction, highlighting that intervention informed by constructivist and sociocultural principles can produce measurable improvements in young learners' reading fluency and comprehension.

5. Recommendations

Based on the significant improvements observed in students' reading skills after the intervention, it is

recommended that educators consistently incorporate interactive and multisensory strategies, such as visual aids, digital tools, manipulatives, and culturally relevant materials, into early literacy instruction. Schools should provide ongoing professional development to equip teachers with the skills and confidence to effectively implement these strategies and adapt instruction to meet diverse learners' needs. Additionally, ensuring access to both low- and high-tech resources can help maintain engagement and support differentiated learning. Policymakers and school administrators should prioritize programs that integrate theory-driven, learner-centered, and culturally responsive practices to sustain reading proficiency, foster student motivation, and improve overall literacy outcomes in the foundational grades.

Acknowledgements

The researcher sincerely expresses gratitude to Leyte Normal University (LNU) and its Community Extension Services Office, particularly through the PURPPLE (Profound Understanding of Research Production and Publication for Learning Educators) Extension Project, for their invaluable support in the completion of this study. Deep appreciation is extended to the Department of Education Leyte Division, under the leadership of Schools Division Superintendent Dr. Mariza S. Magan, for fostering a strong culture of research and professional development. Special recognition is given to Dr. Fabiana P. Peñeda, one of the Project Leaders of the PURRPLE Project, for her visionary leadership, mentorship, and unwavering commitment to strengthening educators' research competence. The researcher also acknowledges the collaborative support of PURPPLE mentors - Prof. Ma. Christina G. Llego, Prof. Lorena M. Ripalda, Prof. Kathy N. Garcia, Mr. Raymond C. Negros and Ms. Majalla A. Abriol. To my supportive husband Charlie Boy E. Acain and Children Bryn Jersy B. Dela Peña, Jamaica B. Dela Peña, Chelsea B. Acain and Chezca B. Acain, whose dedication contributed to the successful implementation of the project. Finally, sincere appreciation is extended to the teacher-participants and the entire community of Cogon Elementary School for their active participation, cooperation, and valuable insights that made this study possible.

AI Acknowledgements

The researcher acknowledges the use of artificial intelligence (AI) tools, specifically ChatGPT, in assisting with language refinement, organization of ideas, and enhancement of academic writing throughout the preparation of this manuscript. The AI tool was utilized to improve clarity, grammar, structure, and coherence of the text while ensuring alignment with scholarly standards. All interpretations, analysis, conclusions, and final decisions remain the intellectual responsibility of the researcher.

References

Arbiol, J. M., & Jorgio, F. C. (2025). *Reading Recovery Program: Experiences of Early Childhood Education (ECE) teachers*. International Journal of Research and Innovation in Social Science.

Bautista, C. V., & Quiambao, C. H. (2025). Effects of Visual Aids on Classroom Focus in Early Childhood Education Settings. *Available at SSRN 6070427*.

Cabillas, A. J. Q. B., Patigayon, M. S., & Baluyos, G. R. (2025). *Enhancing reading fluency among Grade 1 learners through the use of "READ Tiles": A memory-based learning approach*. International Journal of Research in Science and Innovation (IJRISS).

Cariazo, C. J. (2025). Factors Affecting The Reading Skills Of Grade 4 Learners: A Basis For A Reading Intervention Plan. *Aloysian Interdisciplinary Journal of Social Sciences, Education, and Allied Fields*, *1*(6), 251-259.

Casingal, C. P., De Vera, C. M. C., & De Vera, J. A. O. (2025). *From Struggling to Accelerated Readers: A Pre-Post Evaluation of School-Based Reading Intervention Effectiveness Among Grade 4 Filipino Students*.

Castor, J. C., & Buenviaje, L. C. DIGITIZED READING MATERIAL AN INTERACTIVE TOOL ON PHONEMIC AWARENESS AND READING COMPREHENSION SKILLS.

Cultura, J. F., Algonas, K. C. T., Canomay, K. M. B., & Goloran, R. B. (2026). Boosting the Reading Skills of Primary Learners in the Philippines: The Impact of an Innovative ICT-Based PLAY Strategy. In *Exploring Innovations in Educational Technology: The ICEIT'25 Collection: Advancing Knowledge and Practice* (pp. 151-160). Singapore: Springer Nature Singapore.

Esperanza, E. C. TEACHING STRATEGIES AND INSTRUCTIONAL MATERIALS IN TEACHING INDIGENOUS LEARNERS: BASIS FOR MODULE DEVELOPMENT.

Jumao-As, J., Fuentes, J. L., Lacar, L., Fuertes, G. J., Erag, C., & Tagaylo, C. (2025). Reading Remediation Program and Grade 4 Pupils' Reading Comprehension. *Asian Journal of Education and Social Studies*, *51*(6), 365-377.

Labareno, M. T. O., & Gabuya, R. J. B. (2025). *Support family literacy activities and first graders' reading achievement*. International Journal of Research and Innovation in Social Science.

Macapallag, E. (2025). Reading Comprehension Skills of Learners Among Medium Schools: A Basis for A Reading Enhancement Plan. *Aloysian Interdisciplinary Journal of Social Sciences, Education, and Allied Fields*, *1*(6), 260-270.

Manzano, M. H. C., Liwayway, C. V., Edd, L. Z., De, L. B., & Tabunda, D. A. EXPLORING KINDERGARTEN TEACHERS'PRACTICES IN USING TECHNOLOGY IN TEACHING READING: A TRANSCENDENTAL PHENOMENOLOGICAL APPROACH.

ORPILLA, M. G. (2025). Improving Reading Comprehension Level of Grade 6 Through the Implementation of Reading Response Journals.

Rodulfo, J. G. (2025). *Effectiveness of SQ3R in Improving the Level of Reading Comprehension of Grade Three–Masinop Pupils in Genitligan Elementary School, SY 2024–2025*.

Valido, J. P. R. (2025). *Teaching Practices in Reading Skills of Primary Grade Learners and Class Reading Performance in Filipino: Foundation for an Enhanced Reading Instructional Program*. *Reading, 8*(02).

Villanueva, A. (2025). *Ana Hernandez* (Doctoral dissertation, CALIFORNIA STATE UNIVERSITY SAN MARCOS).