Impact of Contextualized Support in Reading on the Performance of Grade 1 Learners: A Paired T-Test Analysis

Ligaya M. Peril

Mahayag Elementary School, Division of Bayugan City, Caraga, Philippines Agusan Colleges Inc. M.H. Del Pilar St. Butuan City, Caraga. Philippines

Leonila P. Clamo, EdD

Department Of Education, Division Of Bayugan City, Caraga, Philippines Agusan Colleges Inc. M.H. Del Pilar St. Butuan City, Caraga. Philippines

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Abstract

The study determined significant difference in the levels of performance of the learners before and after the utilization of the contextualized support in reading. This employed a descriptive-evaluative research design to assess the effectiveness of contextualized support in reading on the performance of Grade 1 learners at Mahayag Elementary School, Bayugan City, Agusan del Sur. The descriptive component documented the learners' academic performance before and after the intervention. The study involved Grade 1 Section Gumamela, which comprised 38 learners (21 males and 17 females). A standardized pre-test and post-test in English Reading, developed by the Division of Bayugan City, was used to measure students' performance. A paired t-test (t=2.808, p=.013) revealed a significant improvement in Grade 1 learners' reading abilities after using contextualized reading support materials. The posttest mean score (m=21.76) was significantly higher than the pretest means (m=16.94), with posttest scores showing less deviation—all 17 learners who initially lacked mastery achieved at least a Proficient level after the intervention. The material contextualization, visual design, and cultural relevance fostered deeper understanding, engagement, and improved reading performance, aligning with research emphasizing the importance of contextually relevant instructional materials in enhancing learning and retention.

Index Terms: Contextualized support in reading, instructional materials, least learned competencies.

I.INTRODUCTION

Developing proficient reading skills is universally recognized as a cornerstone of academic success and a fundamental prerequisite for lifelong learning (Organization for Economic Co-operation and Development [OECD], 2018). Educational systems emphasize early literacy interventions to ensure young learners acquire the foundational skills necessary to navigate an increasingly text-based world and foster cognitive development (Snow, Burns, & Griffin, 1998). The ability to decode text and comprehend its meaning impacts academic achievement across subject areas and influences an individual's capacity for personal growth and societal participation. Recognizing this global imperative, educational research and policy initiatives worldwide focus on identifying practical pedagogical approaches and support systems to address the diverse literacy needs of young learners.

In the Philippine context, the Department of Education (DepEd) places a high premium on cultivating skillful and independent readers among its students. This national commitment is evidenced by legislative measures such as Republic Act No. 10157 (2012) and the "Kindergarten Education Act," which institutionalized preschool education as a crucial precursor to formal literacy instruction in Grade 1. This policy ensures that Filipino children enter primary education with foundational literacy skills, aligning with the understanding that early reading proficiency is a strong predictor of future academic success (Department of Education, 2019). Furthermore, DepEd has implemented various national programs and initiatives, including the "Every Child A Reader Program

(ECARP)" and "Project D.E.A.R (Drop Everything and Read)" (DepEd Memo 244 s. 2011), to strengthen reading capabilities in the early grades. However, national assessments such as the 2014 Early Grade Reading Assessment (EGRA) have indicated persistent challenges in foundational reading skills among Filipino learners, highlighting the need for continued and targeted interventions. Regionally, the DepEd CARAGA Region has responded to local reading difficulties, as evidenced by reading inventories in areas like the Division of Bayugan City, by implementing programs such as the "Arrest the Frustration Reading Program," which incorporates the Marungko Approach as a key instructional strategy.

Within this regional context and the broader national concern for early literacy, Mahayag Elementary School in Butuan City, Caraga, Philippines, faces challenges in developing reading proficiency among its Grade 1 learners. Observations within the school environment indicate that many of these young students from diverse linguistic and socio-economic backgrounds struggle with fundamental reading skills. These difficulties manifest as unfamiliarity with grapheme-phoneme correspondences, a lack of confidence in reading tasks, hesitation and confusion in letter recognition and sounds, and a tendency to rely on rote memorization rather than decoding strategies. These specific challenges within the local school context underscore the need for targeted and contextually relevant interventions to support these struggling readers.

Addressing this localized need, this research investigated the impact of contextualized support in reading on the performance of Grade 1 learners at Mahayag Elementary School through a paired t-test analysis. By developing and implementing supplementary reading materials specifically tailored to the observed challenges of these students and integrating them within the framework of the Marungko Approach, this study seeks to provide empirical evidence on the effectiveness of such a targeted intervention within this specific educational setting.

The findings of this research yielded valuable insights into the extent to which context-specific support can enhance foundational reading skills, ultimately contributing to improved reading performance among Grade 1 learners in Mahayag Elementary School and informing similar interventions in comparable local contexts.

II. RESEARCH ELABORATIONS

The study is anchored to Instructional design theory influenced by behaviorist and constructivist learning theories, each offering distinct perspectives on how learning occurs. Behaviorist theories, rooted in the works of B.F. Skinner and Ivan Pavlov, emphasize observable changes in behavior as the primary indicator of learning. It advocates for structured instruction, repetition, reinforcement, and clear objectives to shape learners' behaviors. In contrast, constructivist theories, inspired by scholars such as Jean Piaget and Lev Vygotsky, focus on the active construction of knowledge. Both emphasize that learners build understanding through experiences, interactions, and reflection, making meaning from their environment and prior knowledge. Thus, Instructional design theory integrates these approaches to create a balanced framework, ensuring that instruction is structured and adaptable to learners' needs. This alignment allows educators to develop effective learning environments that support skill acquisition while encouraging critical thinking and problem-solving (Reigeluth, 1999).

Reigeluth (1999) introduced and significantly advanced this concept through his work on systematic approaches to designing instructional materials. His seminal work, Instructional-Design Theories and Models: A New Paradigm of Instructional Theory, was published in 1983. This publication laid the foundation for understanding how instructional strategies could be systematically developed and adapted to diverse educational contexts. Reigeluth's contributions have shaped the field of instructional design, emphasizing learner-centered approaches and the alignment of instructional methods with specific learning goals. This theory provides structured guidance for creating educational experiences facilitating learning and development. Unlike learning theories, which describe learning, instructional design theories prescribe methods to enhance learning outcomes. These theories draw from various educational paradigms, including behaviorism, cognitivism, and constructivism, to inform strategies that align instructional materials with learners' needs and contexts. These theories aim to create efficient, effective, and engaging learning experiences by focusing on the systematic design of instruction. Charles Reigeluth notes, instructional design theories are goal-oriented, offering guidance on achieving specific learning objectives in diverse situations. The theory mentioned provides a comprehensive foundation for designing and implementing effective learning interventions. These theories offer a balanced framework that supports acquiring knowledge and the development of critical thinking, problem-solving, and adaptability, ensuring that learning is both impactful and sustainable.

Conceptual Framework of the Study

This study used ADDIE Model (Analysis, Design, Development, Implementation, Evaluation). This instructional design framework provides a systematic approach to developing educational materials. Each phase ensures that resources are thoroughly analyzed, designed, developed, implemented, and evaluated to meet learners' needs effectively (UIJRT, 2023). The ADDIE model is highly significant in the study on developing and validating contextualized support resources for Grade 1 learners as it provides a

systematic framework to ensure the resource's effectiveness and relevance. The learners' needs, curricular requirements, and contextual factors are identified in the Analysis phase, forming the foundation for the resource design. The Design phase ensures that learning materials align with the identified goals and are tailored to the first graders' developmental and cultural contexts. During the Development phase, the contextualized resources are created, incorporating expert feedback and aligning with educational standards. The Implementation phase allows the actual application of the materials in classrooms, enabling real-world testing and adaptation to ensure they meet learner needs effectively. Finally, the Evaluation phase assesses the materials' impact through pre-tests, post-tests, and qualitative feedback, ensuring continuous refinement and effectiveness of the resources. By using ADDIE, the study adopts a structured approach that enhances educational materials' quality, relevance, and adaptability (UIJRT, 2023; DepEd Order No. 32, 2015).

Most teachers use the Marungko Approach as a tool to improve their learners' reading performance in the beginning reading. In this perception, Grade-I teachers are challenged when it comes to the reading performance, most especially in the beginning reading of the learners. Finding out a solution to this crucial situation, the researcher used an effective way like Marungko Approach as a tool for the improvement of learners reading performances. In this study using Marungko Approach provides a structured and effective method of teaching reading foundational skills to early-grade learners. This approach emphasizes phonemic awareness by introducing letters and their corresponding sounds in a logical sequence that promotes the formation of syllables and simple words. Its implementation ensures that learners gradually build their reading proficiency through repetitive and engaging activities tailored to their developmental readiness. By integrating the Marungko Approach into contextualized support resources, the study seeks to address first-grade learners' specific linguistic and cultural needs, making reading instruction more accessible and meaningful. The alignment of this approach with the study underscores its potential as a pedagogical tool for enhancing literacy outcomes in young learners. Gurotayo (2020) mentioned that in reading accuracy, there tools that can be used to develop students' reading skills. Department provides module used by the students who have difficulty in reading and each school has programs to address reading problems of some students. This process promotes the creation of effective, learner-centered resources that address Grade

III.RESEARCH METHODOLOGY

This study employed a descriptive-evaluative research design to assess the effectiveness of contextualized support in reading on the performance of Grade 1 learners at Mahayag Elementary School, Bayugan City, Agusan del Sur. The descriptive component documented the learners' academic performance before and after the intervention. In contrast, the evaluative component analyzed the impact of contextualized reading materials developed based on the least learned competencies. This dual approach provided both informative results and critical reflections on the effectiveness of the intervention. The study was conducted at Mahayag Elementary School in Barangay Mahayag, Bayugan City, known for its strong agricultural and educational contributions within the Caraga Region.

The study involved Grade 1 Section Gumamela, which comprised 38 learners (21 males and 17 females). Since there was only one Grade 1 section, the researcher used a complete enumeration with parental and school approval, including all students in the study. A standardized pre-test and post-test in English Reading, developed by the Division of Bayugan City, was used to measure students' performance. Based on the results, contextualized reading materials were created to address the least learned competencies identified in the third quarter of the school year 2024–2025. These materials were evaluated using the DepEd LRMDS evaluation checklist. The test instruments were validated by subject experts and used across the Division. The contextualized materials were quality-checked through a multi-level validation process to ensure alignment with learning standards and appropriateness for self-paced learning.

Approval from the school principal and parents was secured before data collection. A pre-test was administered at the start of the intervention period, followed by a one-week use of contextualized reading materials. A post-test was then given to assess performance improvement. Data were organized and analyzed using frequency counts, percentage distribution, and a paired sample t-test to determine the significance of the difference between pre-test and post-test scores.

III. RESULTS AND DISCUSSION

This section details the academic performance of Grade 1 learners as measured by pre- and posttest results. Notably, a paired t-test analysis confirmed a statistically significant positive improvement in their performance levels following the implementation of contextualized reading support.

Performance level of the Grade 1 learners, as assessed by the pretest

Table 1 shows the performance level of the Grade 1 learners, as assessed by the pretest; the result reveals that most students demonstrated strong academic readiness

Table 1 Performance Level of the Grade 1 Learners as Assessed by the pretest

Proficiency Ranges	Frequency	Percent	Descriptive Rating
81-100%	21	55.3	Advanced
61 - 80%	7	18.4	Highly Proficient
41 -60 %	7	18.4	Proficient
21 - 40%	2	5.3	Approaching Proficient
1 - 20%	1	2.6	Beginner
Total	38	100.0	

Out of 38 learners, 21 or 55.3% attained scores within the 81–100% range, earning an "Advanced" rating. Meanwhile, 7 learners (18.4%) each were classified as "Highly Proficient" and "Proficient," indicating that a substantial portion of the class is performing above average. A smaller number, 2 learners (5.3%), fell under the "Approaching Proficient" category, while only 1 learner (2.6%) was rated as a "Beginner," showing minimal understanding of the assessed skills. Overall, the results suggest that most Grade 1 learners possess a solid foundational grasp of the subject, although targeted support may be necessary for a few students who are still developing their proficiency. It can be noted that in the pretest, there were 21 learners who were at the advanced level of performance. In the intervention, the remaining 17 were given emphasis, and only their performances will be presented in the post-test data.

The findings from the pretest results, when analyzed through the lens of the ADDIE Model (Analysis, Design, Development, Implementation, and Evaluation), suggest important implications for instructional planning and learner support. In the Analysis phase, the data highlights that while a majority of Grade 1 learners are performing at advanced and proficient levels, there remains a small group that requires targeted intervention. This calls for a Design phase that includes differentiated instruction and remediation strategies tailored to diverse learning needs. During the Development phase, appropriate learning materials and activities must be created to address both high-performing learners and those who need additional support. In the Implementation phase, teachers can deliver these strategies through engaging and inclusive classroom instruction. Lastly, the Evaluation phase should involve continuous monitoring of learners' progress to ensure that interventions are effective and adjustments are made as necessary. Overall, the ADDIE Model provides a systematic approach to enhancing learning outcomes based on the performance data gathered.

The pretest results of the Grade 1 learners indicate that while a majority are performing at advanced levels, a subset requires targeted instructional support. This aligns with recent studies emphasizing the effectiveness of explicit or direct instruction methods in enhancing learners performance, particularly among those who are struggling. Flores (2020) suggest that learning outcomes should be the topmost priority of the teachers, and the implementation of a direct instruction strategies have reported significant improvements in literacy and numeracy outcomes, even among disadvantaged student populations. These findings suggest that adopting structured, teacher-led instructional approaches can be instrumental in addressing diverse learning needs and elevating overall academic achievement.

The table 2 shows performance posttest results of the Grade 1 learners, which reveal a positive improvement in their academic performance following the intervention or instructional period.

Table 2 Performance Level of the Grade 1 Learners as Assessed by the Posttest

Proficiency Ranges	Frequency	Percent	Descriptive Rating	
81-100%	5	29.4	Advanced	
61 - 80%	8	47.1	Highly Proficient	
41 -60 %	4	23.5	Proficient	
21 - 40%	0	0	Approaching Proficient	
1 - 20%	0	0	Beginner	
Total	17	100.0		

Out of 17 learners, 5 students (29.4%) reached the Advanced level, while the majority, 8 learners (47.1%), achieved a Highly Proficient rating. Additionally, 4 learners (23.5%) were categorized as Proficient, indicating a solid understanding of the lesson content. Notably, there were no learners in the Approaching Proficient or Beginner categories, suggesting that all students demonstrated at least

a satisfactory grasp of the subject matter. This upward trend in performance implies the effectiveness of the learning materials or teaching strategies used and reflects an encouraging level of mastery and comprehension among the learners.

The posttest results of the Grade 1 learners, indicate a significant enhancement in academic performance. In the Analysis phase, the identification of learners' needs informed the creation of targeted instructional strategies. The Design and Development phases focused on crafting contextualized support materials tailored to these needs. During Implementation, these materials were effectively delivered, leading to improved learner outcomes. The Evaluation phase's post-test results demonstrated significant academic growth, with all students achieving a minimum rating of 'Proficient.' Notably, there was a substantial increase in the proportion of students reaching the 'Highly Proficient' and 'Advanced' performance levels. This positive outcome aligns with recent research, such as the study by Siburian et al. (2023), which validates the effectiveness of incorporating intervention materials into the learning process. These materials appear to provide crucial support across diverse educational contexts, enhancing adaptability and demonstrably improving student learning outcomes.

Table 3 shows the result of the paired t-test between the pretest and posttest performances of the learners.

Table 3 Paired t-test results in the level of performances of the learners before and after the utilization of the contextualized reading support

tiic	Contextualized	caumg support				
Test	Mean Score	Std Deviation1	t-value	p-value	Decision on Ho	
						Interpretation
Pretest	16.94	4.848				
			2.808	.013	Reject Ho	Significant

The mean score of the learners in the pretest (m=16.94) is lower than the mean score in the posttest (m=21.76). It can also be observed that in the pretest, the learners' scores were more diverged (SD=4.848) than in the posttest (SD=4.221). This indicates that during the pretest, the reading ability of the learners deviated more from the mean score, with more of them obtaining the lowest level. In the posttest, their scores tend to converge near the mean score, with those in the lower levels now located alongside those in the higher levels. The t-value of 2.808 at p=.013 shows a significant improvement in the learners' performances after utilizing the contextualized reading support materials. That is, there is a significant difference between the pretest and posttest performances of the learners. Thus, the null hypothesis is rejected. The 17 learners identified as not yet mastered the competencies in the pretest have now attained the Proficient to the Advanced level after utilizing the contextualized reading support materials. This finding shows that the contextualized reading support materials effectively improved the learners' reading abilities. The contextualization in the design of these materials made it possible for the learners to associate words with their experiences in their immediate surroundings.

This finding implies the effectiveness of contextualized learning materials in enhancing reading skills. By grounding the content in the learners' local environment and familiar experiences, the materials helped learners better connect with the language, promoting more profound understanding and retention (Bautista & Razon, 2023). The materials' visual design and age-appropriate structure also played a crucial role in maintaining engagement and supporting various learning styles not jus learning styles but also help manage learning effectively (Flores, 2022). Moreover, integrating culturally relevant images, vocabulary, and scenarios increased motivation and made reading more meaningful and enjoyable, especially for early readers (Siburian et al., 2024). These elements combined to create a more inclusive and supportive learning experience, ultimately fostering confidence and improved performance in reading. Thungu (2021) asserts that instructional materials (IM) cater to the needs of students, satisfy the demands of various subjects, and support the overall teaching and learning experience. Similarly, Mwangi (2010) highlights that IM plays a crucial role in the educational process by improving retention and making learning more enduring. These materials engage and maintain learners' interest by offering direct experiences with the physical and social contexts surrounding them.

IV. CONCLUSIONS and RECOMMENDATIONS

The pretest results reveal key insights for improving instructional planning and providing appropriate learner support. In the Analysis phase, the data indicates that while most Grade 1 learners perform at advanced and proficient levels, a few still require targeted intervention. This necessitates a Design phase focused on creating differentiated instruction and remediation strategies for varying student needs. During the Development phase, creating learning materials and activities catering to high-achieving learners and those needing extra help is crucial. In the Implementation phase, teachers should apply these strategies through interactive and inclusive teaching methods. Finally, the Evaluation phase involves ongoing monitoring of student progress to ensure the effectiveness of interventions and make necessary adjustments. The findings based on the posttest results of Grade 1 learners indicate a marked improvement in academic performance following contextualized instructional materials developed through the ADDIE Model. All

learners progressed to at least the 'Proficient' 'level, with a significant portion achieving 'Highly Proficient' 'and 'Advanced' 'levels. This improvement reflects the effectiveness of the ADDIE framework in guiding the instructional process from the identification of learner needs (Analysis) to the design and development of tailored support materials, their classroom application (Implementation), and the assessment of outcomes (Evaluation). The structured approach ensured that interventions were data-driven, learner-centered, and responsive to specific challenges identified in the pretest. These findings affirm that the systematic application of the ADDIE Model can lead to substantial gains in academic performance, a result supported by recent studies highlighting success in various educational settings (Siburian et al., 2023).

A paired t-test (t=2.808, p=.013) revealed a significant improvement in Grade 1 learners' reading abilities after using contextualized reading support materials. The posttest mean score (m=21.76) was significantly higher than the pretest means (m=16.94), with posttest scores showing less deviation—all 17 learners who initially lacked mastery achieved at least a Proficient level after the intervention. The material contextualization, visual design, and cultural relevance fostered deeper understanding, engagement, and improved reading performance, aligning with research emphasizing the importance of contextually relevant instructional materials in enhancing learning and retention.

This study demonstrates the successful implementation of a targeted intervention program designed to improve the reading skills of Grade 1 learners. Initial assessments identified specific weaknesses in foundational phonological skills, informing the development of contextually relevant and engaging instructional materials in the analysis phase of the ADDIE Model To further enhance this intervention, teachers are encouraged to implement ongoing formative assessments to identify and address phonological skill gaps early, actively contribute to the refinement of materials through the ADDIE model, and explore technology integration for increased engagement. Administrators may prioritize establishing channels for teacher feedback on the practical application of materials and continue to utilize the ADDIE model for future curriculum development. Learners may provide feedback on the materials and teaching methods to contribute to ongoing improvement. Researchers may conduct a more in-depth analysis to pinpoint the intervention's most effective components and establish a continuous feedback loop incorporating student and teacher perspectives for sustained optimization.

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