

Leaping Into Literacy: Enhancing Kindergarten Pupils' Reading Readiness For Grade – One Through The Leap Program

Eliza H. Naraja

College of Education, Cebu Technological University, Cebu City, Philippines

This study examined the effectiveness of the Literacy Enhancement and Play (LEAP) Program in improving the early literacy skills of kindergarten pupils in selected public schools in Talisay City for School Year 2025–2026. The LEAP Program integrates structured literacy instruction with purposeful play-based activities to strengthen foundational reading skills, including letter recognition, phonemic awareness, vocabulary development, and print awareness. Using a quasi-experimental one-group pre-test and post-test design, data were collected from 150 kindergarten pupils across Linao Elementary School, Lawaan Elementary School, and Dumlog Elementary School. Results revealed significant improvement in all literacy domains after the implementation of the LEAP Program, with letter recognition showing the greatest enhancement. Statistical analysis using paired sample t-tests confirmed a significant difference between pre-test and post-test scores, indicating the program's effectiveness in enhancing reading readiness. Grounded in Ehri's Orthographic Mapping Theory, Share's Self-Teaching Hypothesis, Vygotsky's Sociocultural Theory, and Piaget's Cognitive Development Theory, the study further explained how structured play and literacy engagement foster cognitive, linguistic, and social growth among young learners. The findings support the integration of play-based literacy instruction in kindergarten as a developmentally appropriate approach to bridge literacy gaps and prepare pupils for Grade One. Based on these results, a LEAP Comprehensive Learning Enhancement Plan was proposed to guide teachers, administrators, and policymakers in implementing effective, theory-driven literacy programs.

Keywords: Early Childhood Education, Play-Based Learning, Kindergarten Education, LEAP Program, Quasi-Experimental Design, Talisay City, Philippines.

I. Introduction

Early childhood is universally recognized as the most crucial stage in a child's development. It is during this period—especially from ages 4 to 6—that foundational skills in literacy begin to take shape, forming the basis for all future learning and academic achievement (Piasta, Petscher, & Justice, 2021; Omega & Alieto, 2019). At present, numerous reports highlight that many children struggle with reading and comprehension. This persistent issue in education can be attributed to the absence of strong foundational reading skills during kindergarten. As a result, learners experience significant reading gaps when they progress to Grade 1. Research indicates that children who fail to acquire basic literacy skills during these formative years often face persistent challenges as they progress through school, including poor reading comprehension, low academic performance, and decreased self-esteem (Kargiotidis & Manolitsis, 2023; Lonigan et al., 2021). Globally, literacy is regarded as a key indicator of educational quality and lifelong learning potential (UNESCO, 2023). Early reading proficiency not only predicts academic success but

also influences a child's cognitive, social, and emotional growth (Justice, Pullen, & Pence Turnbull, 2020). The early years, therefore, represent a window of opportunity where interventions can have the most lasting impact (National Early Literacy Panel, 2020; Hirsh-Pasek et al., 2020).

In the Philippine context, national assessments and various studies have revealed that a significant number of kindergarten pupils advance to Grade 1 without mastery of essential emergent literacy skills such as letter recognition, phonemic awareness, vocabulary development, and comprehension (Department of Education [DepEd], 2023; Save the Children Philippines, 2022). This readiness gap is even more pronounced in communities where access to quality early childhood education resources and programs is limited. As a result, many young learners begin Grade 1 unprepared, making it difficult for them to keep pace with the curriculum's increasing demands, which can lead to frustration, disengagement, and higher risks of academic failure (Omega & Alieto, 2019). The Department of Education's push for early literacy interventions underscores the urgent need to strengthen kindergarten instruction (DepEd, 2023). However, despite these initiatives, literacy gaps persist, suggesting that traditional, worksheet-based approaches are insufficient in addressing young children's developmental needs (Bodrova & Leong, 2021). This highlights the necessity for innovative, engaging, and theory-driven programs that can both teach and inspire.

Addressing this issue requires innovative approaches that align with the developmental needs of young children. Play-based learning has been widely acknowledged as a developmentally appropriate practice that nurtures children's cognitive, social, and emotional growth (Hirsh-Pasek et al., 2020; Weisberg, Hirsh-Pasek, & Golinkoff, 2021). When play is combined with intentional and structured literacy instruction, it creates a balanced learning environment that engages children actively and meaningfully (Piasta et al., 2021). Evidence shows that integrating literacy skills into play activities not only makes learning more enjoyable but also improves retention and application of reading concepts (Omega & Alieto, 2019). Emergent literacy research supports the idea that young children learn best through active, meaningful experiences (Justice et al., 2020). Thus, combining play with structured instruction ensures that learning remains developmentally appropriate while achieving measurable literacy outcomes (Bodrova & Leong, 2021; Piasta et al., 2021).

The Literacy Enhancement and Play (LEAP) Program was conceptualized as an intervention to bridge the gap between emergent literacy and Grade 1 readiness. Grounded in research-based strategies, the LEAP Program integrates structured literacy activities—such as guided reading, phonics, and storytelling—with purposeful play experiences that stimulate children's natural curiosity and creativity. By doing so, it aims to make early reading instruction not only effective but also responsive to the developmental characteristics of young learners (Omega & Alieto, 2019; Justice et al., 2020). The LEAP Program aligns with Sustainable Development Goal (SDG) 4, which advocates for inclusive and equitable quality education and promotes lifelong learning opportunities for all. By ensuring that kindergarten pupils acquire strong foundational literacy skills, the program contributes directly to the nation's broader goal of improving literacy rates and educational equity.

Unlike traditional program evaluations that merely measure effectiveness, this study also investigates the theoretical mechanisms explaining how and why the LEAP Program enhances literacy development. It is grounded on key reading development theories such as Ehri's Theory of Orthographic Mapping, which explains how children form permanent word representations by connecting phonemes, graphemes, and

meaning; Share's Self-Teaching Hypothesis, which posits that successful decoding through print exposure fosters independent word learning; and Vygotsky's Sociocultural Theory, which emphasizes that literacy emerges through social interaction, scaffolding, and guided participation within the Zone of Proximal Development. These frameworks collectively describe how structured literacy, coupled with play-based engagement, facilitates phonological awareness, word recognition, and comprehension. Thus, the LEAP Program is not only evaluated for its effectiveness but also analyzed in terms of its theoretical coherence—how engagement, practice, and scaffolding interact to promote orthographic mapping and reading fluency. By integrating these theoretical perspectives, the study provides a comprehensive understanding of how structured play can foster both cognitive and socio-emotional aspects of early literacy.

This study is undertaken to assess and explain the effectiveness of the LEAP Program in enhancing the early literacy skills of kindergarten pupils. Beyond determining statistical improvement, it explores the mediating roles of child engagement, instructional dosage, and teacher fidelity as mechanisms that influence learning outcomes. It seeks to determine whether the combination of structured literacy strategies and play-based activities can significantly improve pupils' abilities in letter-sound recognition, phonemic awareness, vocabulary building, and reading comprehension. Specifically, this study seeks to examine how and why the LEAP (Literacy Enhancement and Play) Program enhances early reading skills among kindergarten pupils in selected public schools in Cebu for the School Year 2025–2026. The study goes beyond measuring effectiveness to understand the mechanisms through which structured literacy and play-based learning promote phonemic awareness, letter-sound recognition, vocabulary, and print awareness. The findings of this research will serve as the basis for crafting a LEAP Comprehensive Learning Enhancement Plan that integrates theory-driven literacy instruction and play-based strategies for use by teachers, school administrators, and curriculum planners. This plan aims to ensure that more pupils transition to Grade 1 with the foundational literacy competencies and motivation necessary for sustained academic success.

In line with this, the study aims to describe the demographic profile of kindergarten pupils in terms of age, sex, and prior exposure to literacy activities, and to determine their levels of early reading skills before and after participating in the LEAP Program. These skills include letter recognition, phonemic awareness, vocabulary development, and print awareness. It further seeks to identify which specific reading skill shows the greatest improvement following the intervention and to determine whether there is a relationship between the pupils' demographic profile and their improvement in early reading skills. The study also aims to examine whether there is a significant difference in the pupils' early reading performance before and after exposure to the LEAP Program in terms of letter recognition, phonemic awareness, vocabulary development, and print awareness. Finally, it endeavors to propose a LEAP Comprehensive Learning Enhancement Plan based on the study's findings to further strengthen kindergarten pupils' early literacy development. By addressing these questions, this research offers an in-depth analysis of how structured literacy instruction integrated with play-based learning can transform early reading education and promote foundational literacy mastery among young learners.

The insights gained from this study will provide valuable data for kindergarten teachers, school administrators, and curriculum developers. The ultimate goal is to develop practical, theory-driven, evidence-informed approaches that can be implemented in early childhood classrooms to ensure that more children transition into Grade 1 equipped with the necessary literacy skills and the confidence to succeed in their educational journey. By systematically evaluating and theorizing the LEAP Program, this study

aims to advance the understanding of play-integrated structured literacy within the Philippine context, offering both empirical evidence and a localized theoretical framework for early reading development. Ultimately, this study aims to contribute to the growing body of literature on early literacy intervention, providing an educational model that merges play, structure, and theory for sustainable literacy improvement among Filipino children.

II. Review of Related Literature and Studies

This study is firmly grounded in Ehri's Theory of Orthographic Mapping and Share's Self-Teaching Hypothesis, which together provide the cognitive foundation for understanding how children learn to read. Orthographic mapping refers to the process of forming permanent links between the visual forms of words (graphemes), their pronunciations (phonemes), and meanings in memory, allowing for instant word recognition (Ehri, 2024). Share's Self-Teaching Hypothesis complements this by explaining how children, through repeated successful decoding, teach themselves new words and gradually expand their orthographic lexicon. Both theories highlight that early literacy instruction must provide consistent opportunities for decoding, phonemic awareness, and meaningful exposure to print—conditions that are central to the design of the LEAP Program.

The Literacy Enhancement and Play (LEAP) Program operationalizes these theoretical principles by integrating structured literacy instruction with purposeful play experiences. Within this framework, children engage in phonemic awareness activities such as blending, segmenting, and rhyming, which strengthen phonological processing. They also participate in grapheme–phoneme games and letter recognition tasks that develop automatic decoding. Through storytelling, vocabulary play, and contextual reading activities, children encounter words repeatedly in meaningful contexts, thereby reinforcing orthographic mapping. This process moves learners through Ehri's developmental phases—from early decoding toward fluent, automatic sight-word reading—while simultaneously engaging them through play, interaction, and discovery. The LEAP framework extends beyond cognitive explanations to include sociocultural and developmental perspectives. Vygotsky's Sociocultural Theory (1978) emphasizes that learning occurs through social interaction, collaboration, and guided support within the learner's Zone of Proximal Development (ZPD). In this context, play becomes a powerful medium through which teachers and peers scaffold children's language and literacy growth. Guided reading, storytelling, and play dialogues reflect the social nature of literacy development, where the teacher serves as a more knowledgeable other who gradually withdraws support as the child gains independence.

Piaget's Cognitive Development Theory (1962) provides a developmental rationale for using play in early literacy instruction. According to Piaget, children in the preoperational stage (ages 2 to 7) think symbolically and learn best through concrete, hands-on experiences. By embedding literacy concepts within symbolic and imaginative play, LEAP allows children to explore letters, sounds, and words in ways that align with their cognitive development and natural curiosity. Behaviorist principles, particularly B. F. Skinner's concepts of reinforcement and repetition, also underpin the LEAP approach. Structured literacy sessions incorporate positive feedback, practice, and reward systems that reinforce desired reading behaviors and strengthen fluency. Repetition of tasks—such as decoding drills, phonics games, and word recognition exercises—promotes mastery through operant conditioning, where successful performances are encouraged and sustained.

By incorporating these theoretical perspectives, the LEAP Program not only identifies what is effective in early literacy instruction but also elucidates the mechanisms and rationale behind it. Orthographic mapping and self-teaching describe the mental mechanisms of word learning from a cognitive perspective. Vygotsky's theory situates literacy growth within social interaction and scaffolding from a sociocultural perspective. Piaget clarifies how play supports symbolic reasoning from a developmental perspective. Skinner's principles describe how reinforcement and feedback sustain literacy behaviors from a behavioral perspective. These frameworks collaboratively establish a multidimensional model of reading development that involves the interaction of engagement, guided practice, and feedback to generate measurable literacy gains.

This theoretical integration also aligns with Philippine educational mandates that emphasize play-based and developmentally appropriate instruction. Republic Act No. 10157 (Kindergarten Education Act of 2012) designates kindergarten as the foundation of basic education and highlights play as a primary learning modality. Republic Act No. 10533 (Enhanced Basic Education Act of 2013) reinforces the use of literacy and numeracy strategies that are age-appropriate and mother-tongue-based, while DepEd Order No. 47, s. 2016 reiterates that play should be the central method of learning in early childhood classrooms. These legal and policy frameworks provide both the justification and support for implementing a theory-driven program such as LEAP within the Philippine context. Despite these frameworks, persistent literacy gaps remain, as national studies report varying levels of reading proficiency, resource shortages, and limited home literacy support (Bautista, 2017; SEAMEO INNOTECH, 2018). The LEAP Program, anchored in both theory and context, responds to these challenges by bridging structured literacy and play-based engagement.

Early literacy is the cornerstone of lifelong learning and academic success. Longitudinal studies demonstrate that preschool emergent literacy skills—such as phonological awareness, vocabulary, and print knowledge—significantly predict later reading and spelling achievement through the primary grades (Jiménez, Pimentel, & Martínez, 2024). Preschool oral language skills are likewise uniquely associated with literacy outcomes (Jin et al., 2020), highlighting the importance of early, intentional literacy instruction. Emergent literacy refers to the gradual development of reading and writing knowledge through daily experiences. Syntheses in reading science identify phonological awareness, phonics, vocabulary, fluency, and comprehension as the five essential components that scaffold the transition from emergent to conventional literacy (Ehri, 2020; Petscher et al., 2020). These must be taught explicitly and systematically while remaining developmentally appropriate (NAEYC, 2020). Play serves as a dynamic and natural context for early literacy learning. Teacher-guided play in kindergarten strengthens children's language and literacy skills (Pyle, Wickstrom, Gross, & Kraszewski, 2024), and meta-analytic evidence shows that guided play can equal or surpass direct instruction on academic outcomes (Skene et al., 2022). Similarly, play-based learning positively influences cognitive, motivational, and engagement outcomes (Alotaibi, 2024). These findings affirm that when structured literacy instruction is paired with play, learning becomes more holistic—addressing both the cognitive processes of decoding and the socio-emotional joy of discovery.

Guided interaction within the Zone of Proximal Development aligns with research showing that scaffolded play supports symbolic reasoning, oral language, and print awareness (Pyle et al., 2024; Skene et al., 2022). Such learning experiences reflect Vygotsky's assertion that literacy development is socially mediated and that children construct knowledge most effectively through collaborative engagement.

Structured literacy emphasizes explicit, systematic, and sequential teaching of foundational reading components such as phonemic awareness and decoding (Ehri, 2020). Evidence strongly favors a blended approach: combining explicit literacy instruction with guided play yields greater literacy gains than either method alone (Pyle et al., 2024; Skene et al., 2022).

Teacher-facilitated play integrated with literacy activities has been shown to enhance vocabulary, print awareness, and narrative development among kindergarten learners (Pyle et al., 2024). Skene et al. (2022) found that guided play equals or exceeds traditional instruction in early academic outcomes, while Alotaibi (2024) highlighted its positive effects on motivation and engagement. In the Philippine context, Omega and Alieto (2019) explored the perspectives of Filipino early childhood educators and found that play-based literacy instruction fosters creativity, engagement, and deeper comprehension. Teachers emphasized that play is not merely a recreational tool but a meaningful pedagogical strategy that sustains interest in reading while promoting language development. Their findings directly align with the LEAP Program's design, which situates structured literacy within playful, socially interactive learning environments. Local research echoes these outcomes. School-based action studies report significant improvements in phonological and reading skills when literacy instruction is embedded in play-based contexts (Rañada, 2025; Colinares & Derasin, 2023). Department of Education initiatives such as Brigada Pagbasa (DepEd, 2022) complement these classroom interventions by promoting community-based literacy recovery programs. Collectively, these studies validate the LEAP Program's multidimensional model that integrates explicit literacy instruction, guided play, and community engagement to promote sustainable reading development.

The theories, literature, and studies that have been reviewed collectively confirm that effective early literacy instruction is both structured and playful, specific yet engaging, and deeply rooted in both cognitive science and sociocultural understanding. The LEAP Program integrates these dimensions into a cohesive framework that fosters intrinsic motivation, orthographic fluency, and deciphering skills through meaningful, guided play. It is a revolutionary, research-based solution to the fundamental literacy challenges that exist in the Philippine educational system. It provides a comprehensive approach that converts reading from a mechanical skill into a cognitively empowering, socially rooted, and enjoyable experience. In spite of the abundance of global research that emphasizes the advantages of play-based literacy instruction, there are only a few empirical studies in the Philippine context that specifically investigate how these methods can be systematically incorporated into kindergarten classrooms to improve emergent literacy. This discrepancy emphasizes the necessity of locally adapted, evidence-based initiatives, such as the LEAP initiative, that not only correspond to the developmental requirements of Filipino students but also address the curriculum and policy requirements of early education.

III. Methodology

3.1 Research Method

This study utilized a quasi-experimental research design, specifically employing a one-group pre-test and post-test approach. Under this design, the LEAP (Literacy Enhancement and Play) Program was implemented with a purposively selected group of kindergarten pupils. Their early reading skills were measured prior to the intervention (pre-test) and reassessed after its implementation (post-test) to evaluate significant changes. This design was selected as it allows the researcher to assess the effectiveness of an educational intervention in its natural classroom context without manipulating external variables (Creswell & Creswell, 2023). Both descriptive and inferential statistical methods were utilized to analyze

and interpret the results, providing empirical evidence of the LEAP Program's impact on early literacy development.

3.2 Participants

The participants of the study were 150 kindergarten pupils enrolled during School Year 2024–2025 in three selected public elementary schools within the Department of Education (DepEd) Talisay City Division. These schools were chosen for their diverse learner populations, active parent and community involvement, and willingness to support literacy-based interventions. A purposive sampling technique was used to ensure that only pupils who completed both the pre-test and post-test assessments and fully participated in the LEAP Program were included in the analysis. This sampling approach ensured that the study accurately measured the program's effect on the same learners throughout the intervention period. The sample represented a range of learner profiles, providing comprehensive insights into how the LEAP Program addressed varying literacy needs across public-school contexts.

3.3 Data Collection Tools

The Kindergarten Literacy Skills Checklist (KLSC) is the main instrument used to assess the early literacy performance of kindergarten pupils in this study. It is designed to evaluate four major components of literacy development: Letter Recognition, Phonemic Awareness, Vocabulary Development, and Comprehension. The assessment was conducted individually with each pupil, and results were recorded by the assessor using a standardized scoring rubric.

Each students' profile was documented, including their name, age, date assessed, and the name of the assessor. The checklist applied a three-point numerical rating scale to measure literacy performance. A score of 2 (Performs Independently) indicated that the pupil consistently demonstrated the skill without assistance. A score of 1 (Performs with Assistance) signified that the pupil showed emerging skill but required some support or prompting. A score of 0 (Does Not Perform the Skill) was given when the pupil did not yet show evidence of the skill even with help.

The **Letter Recognition** section assessed the pupil's ability to identify and match letters. Indicators included recognizing uppercase and lowercase letters, matching uppercase to lowercase forms, identifying letters in one's own name, and distinguishing between similar-looking letters such as b and d or p and q. The **Phonemic Awareness** section measured the pupil's ability to identify and manipulate sounds in words. This involved recognizing beginning, medial, and ending sounds, blending sounds to form simple words, and segmenting words into individual sounds.

In the **Vocabulary Development** section, the pupil's ability to use and understand words was evaluated. This component included naming common objects correctly, using action words appropriately, categorizing items such as animals, foods, or household objects, using descriptive words like colors, sizes, and shapes, and applying new vocabulary words in complete sentences.

The **Comprehension** section assessed the pupil's understanding of short stories and oral language. Learners were asked to answer simple "who," "what," and "where" questions after a story, retell key details, make simple predictions about story events, identify the main idea or central thought, and relate story events to their own personal experiences.

For each learner, scores were recorded under each literacy component, with a maximum of 10 points per category, yielding a total possible score of 40 points. The overall score was converted into a percentage mastery level by dividing the total score by 40 and multiplying by 100. This percentage determined the descriptive rating and verbal interpretation of the pupil's performance.

The interpretation of performance levels followed the standard rating scale. Pupils who achieved 90–100% were rated as Outstanding, demonstrating excellent proficiency in early literacy skills. Those with scores ranging from 75–89% were rated Very Satisfactory, showing strong performance with only minor gaps. Pupils who scored between 60–74% received a Satisfactory rating, meeting basic expectations but requiring reinforcement. Lastly, those who scored below 60% were rated as Needs Improvement, indicating the need for targeted support and remediation in specific literacy areas.

3.4 Data Collection Procedure

The data collection procedure was implemented in three systematic stages to guarantee research integrity, ethical conformance, and consistency. The researcher adhered to the Data Privacy Act of 2012 (RA 10173) by conducting orientation meetings with teachers, obtaining official authorization from the DepEd Division Office and school principals, and obtaining informed consent from parents during the preliminary stage. The Kindergarten Literacy Skills Checklist (KLSC) was administered as a pre-test during the data gathering stage to establish baseline literacy levels. The LEAP Program, which comprised structured literacy instruction and purposeful play-based activities to improve phonemic awareness, vocabulary, and print knowledge, was implemented for eight to ten weeks. The integrity of implementation was guaranteed by the continuous monitoring of classroom observations and teacher records. Lastly, the same KLSC was administered as a post-test in the post-survey stage to track literacy development. The collected data were methodically encoded, tabulated, and statistically analyzed with the help of a statistician to guarantee objectivity and precision.

3.5 Data Analysis

Data were analyzed using both descriptive and inferential statistical methods to guarantee a thorough interpretation of the results. The pupils' literacy progress was summarized by computing the mean and standard deviation of their pre-test and post-test scores. A paired sample t-test was utilized to determine the statistical significance of the observed score differences, thus confirming the efficacy of the LEAP Program (Field, 2020). Mean gain scores were computed to determine which literacy components demonstrated the most significant improvement, while frequency counts and percentages were employed to summarize mastery levels across specific literacy skill areas. The rigor, reliability, and validity of the study's conclusions were preserved by conducting all analyses at a 0.05 level of significance.

Table 2
Age and Sex

Profile Variable	Category	f	%
Age (in years)	5 years old	48	32.00
	6 years old	98	65.30
	7 years old	4	2.70
	Total	150	100.0
Sex	Male	78	52.0
	Female	72	48.0
	Total	150	100.0

IV. Results

The age and sex of the respondents are depicted in this table. The predominant age group among the learners was six years old, accounting for 65.3% (98), followed by five-year-olds at 32% (48), and a minor representation of seven-year-olds at 2.7% (4). The respondents were nearly evenly divided by sex, with 52% (78) males and 48% (72) females.

Table 3- Prior Exposure to Literacy Activities

Type of Prior Literacy Exposure	f	%
Attended daycare or nursery prior to kindergarten	56	37.3
Attended reading programs or tutorials	21	14.0
Engaged in home-based literacy (storytelling, alphabet games)	38	25.3
No prior literacy exposure	35	23.4
Total	150	100.0

Table 3 illustrates the distribution of pupils based on their previous engagement in literacy-related activities prior to entering kindergarten. The results indicate that the majority of learners, 37.3%, participated in daycare or nursery before entering kindergarten, while 25.3% participated in home-based literacy activities, including alphabet games and narration. In contrast, 14% of the participants engaged in structured reading programs or seminars, while 23.4% revealed that they had no prior literacy experience.

**Table 4- Mean Gain Scores in Early Reading Skills Before and After the LEAP Program
(n=150)**

Literacy Component	Pre-Test Mean	Post-Test Mean	Mean Gain
Letter Recognition	7.45	10.68	3.23
Phonemic Awareness	6.32	9.45	3.13
Vocabulary Development	7.89	10.72	2.83
Print Awareness	5.68	8.62	2.94
Overall Mean	6.84	9.87	3.03

As shown in Table 4, the pre-test mean scores ranged from 5.68 to 7.89 across all components, while post-test means ranged from 8.62 to 10.72. The highest mean gain was observed in Letter Recognition (3.23), followed by Phonemic Awareness (3.13), Print Awareness (2.94), and Vocabulary Development (2.83). The computed overall mean gain of 3.03 indicates a general enhancement in pupils' literacy skills following the implementation of the LEAP Program.

Table 5-Test of Specific Reading Skill that Shows the Greatest Improvement Following the Intervention

Literacy Component	Mean Difference (Post-Pre)	t-Computed	t-Critical ($\alpha = 0.05$)	p-Value	Significance
Letter Recognition	3.23	18.62	1.91	0.000	Significant

Table 5-Test of Specific Reading Skill that Shows the Greatest Improvement Following the Intervention

Literacy Component	Mean Difference (Post-Pre)	t-Computed	t-Critical ($\alpha = 0.05$)	p-Value	Significance
Phonemic Awareness	3.13	17.90	1.93	0.000	Significant
Vocabulary Development	2.83	15.77	1.90	0.000	Significant
Print Awareness	2.94	16.85	1.95	0.000	Significant

Table 5 displays p-values of 0.000 for all literacy components, which are less than the 0.05 significance level. This suggests that the pre-test and post-test mean scores were statistically significant in all areas. Letter Recognition had the highest mean difference of 3.23 and a t-value of 18.62, suggesting that pupils have made significant progress in their ability to identify and recognize alphabet letters. A mean difference of 3.13 and a t-value of 17.90 were observed in Phonemic Awareness, indicating a significant improvement in the recognition and manipulation of individual sounds in spoken syllables. Print Awareness demonstrated a mean difference of 2.94 and a t-value of 16.85, indicating a greater understanding of the organization of text and print conventions. The smallest mean gain of 2.83 with a t-value of 15.77 was observed in Vocabulary Development, indicating that vocabulary growth progressed at a slightly slower rate than in other literacy domains, despite the fact that improvement occurred. In general, the findings indicate that the LEAP Program significantly enhanced the performance of pupils in all literacy components, with Letter Recognition exhibiting the most significant improvement.

Table 6-Relationship Between Pupils' Demographic Profile and Improvement in Early Reading Skills (n = 150)

Demographic Variable	r / Value	rpb p-Value	Interpretation	Verbal Description
Age	-0.162	0.048	Significant	Negligible Relationship Negative
Sex	0.092	0.236	Not Significant	No Relationship
Prior Exposure to Literacy Activities	0.458	0.000	Significant	Moderate Relationship Positive

Table 6 indicates that pupils' progress in early reading skills was moderately positively correlated ($r = 0.458$, $p = 0.000$) with their prior exposure to literacy activities, which was one of the three demographic variables. This suggests that children who participated in pre-kindergarten literacy activities, such as storytelling, alphabet games, or daycare attendance, exhibited more significant reading development subsequent to the LEAP Program. Conversely, age demonstrated a negligible negative correlation ($r = -0.162$, $p = 0.048$), whereas sex did not exhibit a significant correlation ($r = 0.092$, $p = 0.236$) with literacy improvement.

Table 7- Test of Significant Difference in Pupils’ Early Reading Skills Before and After the LEAP Program (n = 150)

Literacy Component	Pre-Test Mean	Post-Test Mean	Mean Difference (Post–Pre)	t-Computed	t-Critical ($\alpha = 0.05$)	p-Value	Decision	Interpretation
5.1 Letter Recognition	7.45	10.68	3.23	18.62	1.96	0.000	Reject Ho	Significant
5.2 Phonemic Awareness	6.32	9.45	3.13	17.90	1.96	0.000	Reject Ho	Significant
5.3 Vocabulary Development	7.89	10.72	2.83	15.77	1.96	0.000	Reject Ho	Significant
5.4 Print Awareness	5.68	8.62	2.94	16.85	1.96	0.000	Reject Ho	Significant
Overall Early Reading Skills	6.84	9.87	3.03	19.42	1.96	0.000	Reject Ho	Significant

Table 7 presents the test of significant difference in pupils’ early reading skills before and after the implementation of the LEAP Program with a total of 150 participants. The results show that for Letter Recognition, the pre-test mean score was 7.45, while the post-test mean increased to 10.68, yielding a mean difference of 3.23 with a t-computed value of 18.62, greater than the t-critical value of 1.96 at a 0.05 level of significance. This indicates that pupils demonstrated improved ability to recognize letters after the program. For Phonemic Awareness, the pre-test mean was 6.32 and the post-test mean was 9.45, resulting in a mean difference of 3.13 and a t-computed value of 17.90. This suggests an enhanced capacity of pupils to identify and manipulate sounds in spoken words. In Vocabulary Development, the pre-test mean of 7.89 increased to 10.72 in the post-test, showing a mean difference of 2.83 and a t-computed value of 15.77, implying that pupils gained a broader understanding of word meanings after the intervention. For Print Awareness, the pre-test mean of 5.68 rose to 8.62 in the post-test, with a mean difference of 2.94 and a t-computed value of 16.85, signifying improvement in pupils’ understanding of print concepts and text organization. Lastly, the overall early reading skills increased from a pre-test mean of 6.84 to 9.87, with a mean difference of 3.03 and a t-computed value of 19.42. The p-value of 0.000 across all components indicates that the improvements were statistically significant at the 0.05 level. This means that the LEAP Program had a significant positive effect on pupils’ early reading skills.

V. Discussion

The results suggest that the majority of the pupils were within the kindergarten age range as established by the Department of Education, which indicates that they were developmentally prepared for structured play-based literacy instruction. Equitable participation in literacy activities is also facilitated by a proportionate distribution of boys and girls, which enables learners to benefit equally from social and interactive learning environments. Pyle et al. (2024) state that the maintenance of gender balance in early literacy classrooms encourages learners to develop confidence and collaborate as they participate in guided play and reading tasks. Colinares and Derasin (2023) highlighted that play-based literacy methods enhance motivation, vocabulary, and phonemic awareness for both male and female pupils. In addition, Lonigan, Shanahan, and Cunningham (2021) discovered that early literacy interventions are most effective

when implemented during the developmental window of ages five to six, as this period is a critical stage for the development of foundational language and reading skills.

The results suggest that a significant number of pupils had some form of early literacy experience prior to enrolling in formal education, despite the fact that nearly one-fourth of them began kindergarten without such exposure. Claes et al. (2024) assert that the home literacy environment has a substantial impact on the reading aptitude of children, as the availability of books and the frequency of reading interactions at home increase motivation and comprehension. Similarly, Galea et al. (2025) discovered that language and vocabulary development among preschool children are significantly correlated with home-based shared book reading, thereby underscoring the significance of early parental involvement. Furthermore, Cipolletti et al. (2025) emphasized that the development of meaningful word acquisition and concept formation is facilitated by explicit vocabulary instruction through shared reading in early childhood programs. These results confirm that foundational literacy skills are influenced by both institutional (daycare, reading programs) and informal (home-based literacy) experiences. On the other hand, children who have not previously encountered this material may necessitate more rigorous and differentiated instruction during the initial phases of kindergarten in order to bridge the readiness gap. The principles of early literacy development, which prioritize early exposure and interactive engagement as critical factors in fostering later reading success, are consistent with this

The efficacy of integrating explicit instruction with play-based activities in early reading instruction is evidenced by the consistently positive gains observed across all literacy domains. Ehri's (2020) research underscores that systematic phonics instruction enhances letter-sound associations and enables orthographic mapping, which are critical processes in early decoding. Consequently, the greatest increase in letter recognition is consistent with these findings. Petscher et al. (2020) also emphasize that structured code-based instruction substantially improves word-level reading skills, which explains the substantial improvement in both letter and phoneme recognition among LEAP participants. Piasta, Petscher, and Justice (2021) assert that the integration of direct phonological teaching with engaging, meaningful practice results in enhanced phonological processing, which is corroborated by the improvement in phonemic awareness. Through repetitive, interactive exposure, the program's inclusion of engaging phoneme blending and segmentation activities likely facilitated the internalization of sound patterns by children. Additionally, the benefits of incorporating literacy learning into meaningful language experiences are evident in the clear increases in vocabulary and print awareness. Justice et al. (2020) discovered that contextualized vocabulary instruction and dialogic reading significantly enhance children's word knowledge. Pyle et al. (2024) and Skene et al. (2022) also report that guided play activities foster a more profound engagement with print materials and improve the conceptual understanding of written language. In conclusion, the 3.03 overall mean gain indicates that the LEAP Program effectively balanced explicit instruction and active learning, a strategy that is consistent with contemporary literacy research. This research emphasizes that playful, guided learning environments can promote motivation, comprehension, and long-term literacy growth (Ehri, 2020; Piasta et al., 2021; Pyle et al., 2024; Skene et al., 2022). The findings attest to the substantial enhancement of kindergarten pupils' reading preparedness through early literacy interventions that are based on both cognitive and sociocultural principles.

The efficacy of explicit instruction in reinforcing letter-sound correspondence is underscored by the substantial enhancement in letter recognition. Ehri (2020) underscored that proficiency in alphabetic symbols is a fundamental prerequisite for fluent reading. Similarly, Lonigan, Shanahan, and Cunningham (2021) discovered that structured literacy programs that emphasize letter knowledge significantly improve decoding abilities in early readers. Enhanced phonemic awareness serves as an additional indicator of the efficacy of incorporating sound-based learning into interactive courses. Dobles and Marquez (2025)

demonstrated that the auditory discrimination abilities of children are substantially enhanced by phonemic manipulation activities that are embedded in playful contexts. Skene et al. (2022) stated that guided play facilitates the internalization of phonological patterns by learners through meaningful engagement and repetition. The significance of exposure to authentic language experiences is also emphasized by the increase in print awareness and vocabulary development. Justice, Pullen, and Pence Turnbull (2020) noted that children who participate in classroom environments that are both print-rich and conversational exhibit a greater understanding of the use of vocabulary and text structures. Pyle et al. (2024) also emphasized that teacher-facilitated play provides children with dynamic opportunities to investigate words, symbols, and meaning-making. The LEAP Program's balanced approach, which integrates structured literacy instruction with experiential, play-based learning, effectively improved children's early literacy skills, as these findings collectively confirm. The consistent significance observed across all literacy components is consistent with recent evidence indicating that hybrid, interactive literacy models result in greater improvements in foundational reading competencies (Alotaibi, 2024; Piasta et al., 2021; Pyle et al., 2024). The significance of a well-developed home literacy environment (HLE) in the development of early language and reading skills is emphasized by the positive correlation between prior literacy exposure and reading advancement. Children who have participated in reading-related activities prior to their formal education frequently arrive at kindergarten with enhanced vocabulary, phonological awareness, and print concepts, which gives them an advantage during structured interventions (Bigozzi et al., 2023; Claes et al., 2024). Literacy gains throughout early childhood are substantially predicted by HLE variables, including shared reading, access to print materials, and literacy-rich interactions (Esmaeeli, 2023). In addition, the outcome is consistent with the findings of Piasta et al. (2023), who observed that children who have previously experienced emergent literacy are more likely to respond favorably to targeted reading interventions as a result of their familiarity with foundational literacy structures. These experiences improve children's ability to participate in instructional activities that are meaningful, particularly those that incorporate supervised practice and play; an approach that is fundamental to the LEAP Program. The developmental readiness of younger children may be the reason for the negligible negative correlation between age and literacy advancement. When introduced to structured literacy instruction within a play-based framework, younger children demonstrate faster skill acquisition (Kendeou et al., 2023). However, the lack of a substantial correlation with gender indicates that literacy development is largely unaffected by gender disparities, which is in accordance with the most recent discoveries in early literacy research (Piasta et al., 2023). Overall, these results serve as confirmation that the efficacy of school-based interventions is enhanced by early exposure to literacy-rich environments. Programs such as LEAP, which reinforce children's prior experiences through scaffolded literacy tasks, guided interaction, and play, achieve the most favorable results when home and school literacy practices are mutually reinforcing.

In particular, the pupil's capacity to identify and recall letters demonstrated substantial improvement following the intervention, as evidenced by the highest mean gain in letter recognition. Colinares and Derasin (2023) and Caballo et al. (2023) have reported comparable results, indicating that kindergarten learners' visual-symbol association and alphabet familiarity are considerably enhanced by play-based and contextualized learning strategies. The LEAP Program appears to have effectively enhanced the students' capacity to identify and manipulate individual sounds within words in the area of phonemic awareness. This is consistent with the conclusions of Dobles and Marquez (2025) and Rañada (2022), who emphasized that interactive, game-based, and aural literacy activities can effectively cultivate phonemic awareness. Moreover, Ehri (2020) observed that children's decoding abilities and sound-symbol correspondence are improved by systematic phonics instruction that is rooted in playful engagement. The

vocabulary development component also experienced a substantial improvement which is indicative of the fact that students were exposed to more contextual words during guided play and storytelling sessions. Ocampo and Bautista (2023) asserted that significant interactions and contextualized vocabulary instruction are fundamental to literacy development in early school in the Philippines. Alotaibi (2024) also confirmed that game-based literacy programs increase the motivation and word retention of young learners. Finally, print awareness demonstrated substantial improvements, indicating that the intervention effectively acquainted students with print concepts, including reading directionality and word boundaries. Pyle et al. (2024) and Lojero (2025) have suggested that teacher-facilitated play activities and environmental print exposure assist young learners in recognizing the functions and structure of print, thereby promoting reader readiness. This is a strong endorsement of the idea that developmentally appropriate, play-based literacy instruction leads to measurable learning outcomes, which is in accordance with the Omnibus Policy on Kindergarten Education of the DepEd (2016) and the NAEYC's (2020) framework for developmentally appropriate practice.

In conclusion, the findings of this study affirm the effectiveness of the LEAP Program in fostering early literacy development among kindergarten pupils through a balanced integration of explicit instruction and play-based learning. The consistent and significant improvements across all literacy domains—letter recognition, phonemic awareness, vocabulary development, and print awareness—demonstrate that structured yet engaging learning experiences can effectively build foundational reading competencies. The results underscore that literacy growth is not only influenced by classroom instruction but also by prior home literacy exposure, developmental readiness, and interactive engagement. Children who had early exposure to literacy activities exhibited stronger reading gains, validating the importance of aligning home and school efforts in promoting emergent literacy. The study's outcomes support the premise that developmentally appropriate, play-based approaches—anchored in guided exploration, social collaboration, and meaningful language use—enhance both motivation and comprehension. As a future educator, I recognize that these findings highlight the necessity of designing learning environments that nurture curiosity, sustain engagement, and respond to the individual needs of young learners. Programs like LEAP demonstrate that literacy instruction, when grounded in both cognitive science and sociocultural practice, can empower every child to become an eager and capable reader prepared for lifelong learning.

VI. Conclusion

The findings of this study provide compelling evidence that the LEAP Program serves as an effective and developmentally appropriate framework for enhancing the early literacy skills of kindergarten pupils. By integrating explicit phonics instruction with play-based and interactive learning experiences, the program successfully strengthened pupils' competencies across the core domains of early literacy—letter recognition, phonemic awareness, vocabulary development, and print awareness. These measurable gains affirm that structured yet engaging pedagogical approaches create optimal conditions for literacy acquisition during the critical developmental window of ages five to six. Moreover, the study underscores that literacy development is not solely a school-based endeavor but a collaborative process that begins within the home. The positive correlation between prior literacy exposure and reading advancement highlights the indispensable role of a literacy-rich home environment. When home-based literacy practices are reinforced by school interventions grounded in play, interaction, and guided exploration, children experience accelerated and sustained literacy growth. The negligible influence of age and gender on literacy outcomes further substantiates that effective instruction rather than demographic variables drives early reading success. This finding supports a more inclusive and equitable vision of literacy education,

one that affirms every child's potential to thrive when provided with responsive and engaging learning opportunities. In essence, the LEAP Program embodies the synthesis of cognitive rigor and joyful learning. It demonstrates that the most powerful literacy instruction is not confined to rote memorization but emerges from purposeful play, meaningful language experiences, and intentional scaffolding. As literacy remains the cornerstone of lifelong learning, the program's success reinforces the call for educational systems to adopt evidence-based, play-integrated frameworks that nurture both competence and curiosity in the earliest stages of education. Ultimately, this research contributes to the growing body of evidence advocating for a paradigm shift in early literacy pedagogy—one that situates structured instruction within a context of exploration, imagination, and engagement. The LEAP Program stands as a testament to the transformative power of developmentally appropriate practices in shaping not only proficient readers but also confident, motivated, and joyful learners prepared for the continuum of formal education and beyond.

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