THE IMPACT OF PLAY-BASED LEARNING ON LITERACY SKILLS OF KINDERGARTEN LEARNERS

Bernadine Sarah E. Liwag,[1] Melinda F. Marquez[2]

[1] MAED ECD Student, University of Perpetual Help System DALTA - Las Piñas City
[2] Associate Professor, University of Perpetual Help System DALTA - Las Piñas City

ABSTRACT

This study investigates the impact of play-based learning on early literacy development in kindergarten students, emphasizing the significance of teacher training, the frequency of strategy application, and the efficacy of diverse play-based approaches. Key findings indicate that although play-based learning is recognized as advantageous, its inconsistent implementation is obstructed by variables including diverse teacher experience, insufficient professional development, and institutional constraints such as rigid curricula and resource scarcity. Educators typically note moderate effects on several aspects of early literacy, encompassing phonemic awareness, phonics, vocabulary, fluency, and comprehension, with a specific focus on the efficacy of techniques such as rhyming games, role-playing, and storytelling. Nevertheless, these actions are frequently not implemented consistently or methodically, thus constraining their potential advantages. The research emphasizes that the quality and strategic execution of play-based learning, rather than its frequency, are more vital for promoting literacy development. Thus, the study recommends an intervention strategy emphasizing specialized, ongoing professional development for educators, aimed at improving their skills in play-based approaches and supplying flexible resources. The proposal additionally endorses the creation of a digital platform for comprehensive training, continuous evaluation, and feedback systems to facilitate enduring enhancements. The research emphasizes the significance of teacher expertise, methodological variety, and a nurturing learning environment rather than the simple occurrence of play-based activities, advocating for specialized professional development and adaptable curriculum frameworks to enhance the efficacy of play-based learning in early literacy education.

KEYWORDS: *Frequency of Use, Games with Rules, Phonemic Awareness, Phonics, Play-based Learning, Rhyming Games*
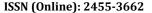
I. INTRODUCTION

Children are the future leaders and innovators, making it crucial to provide quality early childhood education that fosters their development. Bendini and Devercelli (2022) emphasize that effective early education is a vital investment for establishing strong foundations for lifelong learning. During early years, children have a remarkable capacity to learn, which should be nurtured through high-quality, enjoyable experiences. A key pedagogical approach in this sector is play-based learning, which enhances growth across various domains (Taylor & Boyer, 2020). The Omnibus Policy on Kindergarten Education mandates that programs be engaging and child-centered, promoting holistic development. Play is essential for healthy development, allowing children to explore their environment, build confidence, and develop problem-solving skills. Through diverse play-based activities, children become literate and prepared for formal education, while also gaining self-awareness and knowledge of their surroundings (Department of Education, 2016). Overall, play-based learning fosters emotional engagement and intrinsic motivation, laying the groundwork for lifelong learning.

Play is crucial for enhancing literacy skills in children, which is vital for their overall development and future success. Literacy serves as a foundation for academic achievement and various life skills. The Philippine Statistics Authority's 2024 Functional Literacy, Education, and Mass Media Survey reveals that 90% of Filipinos have Basic Literacy, while 70% demonstrate Functional Literacy, which includes advanced comprehension skills. A study indicated that children who attended compulsory kindergarten did not show significant advantages in basic skills by ages 11 to 13 compared to peers who did not attend. However, those who attended kindergarten were more likely to achieve complete functional literacy by early adolescence, suggesting that early education supports the development of additional skills later on (Abrigo & Francisco, 2024).

Literacy is essential for national development and is a key component of pre-primary education curricula, significantly impacting child development (Edwards, 2021). However, there is limited research on the effects of play-based learning on reading skills in early childhood education in the Philippines. Taylor and Boyer (2020) note that educators' engagement in play-based learning enhances their understanding and benefits their students. Keung and Fung (2021) highlight the influence of educators on children's play experiences and stress the importance of exploring preschool teachers' views on play-based learning to improve literacy skills. The current study aims to address the gap in understanding teachers' perceptions of literacy skill development in a play-based context, focusing on its impact on kindergarten students in Bacoor, Cavite.

The research utilizes Piaget's Cognitive Learning Theory, as noted by McArdle (2024), to examine its influence on play-based learning in early childhood education. Piaget emphasizes

that toddlers learn through active engagement with their surroundings, employing experiential inquiry for cognitive development, which involves processes like assimilation and accommodation. Additionally, Vygotsky's Social Learning Theory is referenced, highlighting the significance of social interaction in child development and the role of educators as facilitators in guiding children through tasks within their zone of proximal development, thereby enhancing skills such as literacy and numeracy (Veraksa et al., 2022). Both theorists assert that learning is an active process of knowledge construction (Nurhasnah et al., 2024). The study focuses on how kindergarten teachers implement play-based learning and its impact on early literacy skills among students.

The study used the Input-Process-Output (IPO) model to identify the impact of play-based learning on kindergarten learners' literacy skills. The model consisted of three frames: input, process, and output. Input presented indicators affecting play-based learning utilization, strategies used by teachers, and observations of five pillars of early literacy. Process included questionnaire development, validation, reliability testing, data collection, interpretation, and analysis. Output presented the proposed play-based learning program for enhancing early literacy among kindergarten learners.

The study examined the impact of play-based learning on kindergarten learners' literacy skills in eight public elementary schools in District 2, Division of Bacoor, Cavite. The research involved 65 kindergarten teachers and used a descriptive research design to gather information. The study focused on variables affecting play-based learning utilization, such as years of teaching, training, frequency of use, and type of approach. It also examined the impact of play-based activities on letter-sound recognition, phoneme identification, blending and segmenting sounds, and automaticity. The findings were used to develop a play-based learning program for kindergarten learners.

1.1 Statement of the Problem

1. What are the indicators that affect the utilization of play-based Learning among kindergarten learners in terms of Teachers' Years of Teaching, Teachers' Training, Frequency of Use, and Type of Play-Based Learning Approach?
2. What is the composite mean on the play-based learning strategies are commonly used by teachers to develop early literacy among kindergarten learners regarding Rhyming Games, Word Games, Role Playing, Games with Rules, and Story Telling?
3. What is the composite mean on the Impact of a play-based learning approach on early literacy development in kindergarten learners based on the observation of the teachers in terms of the five pillars of early literacy such as Phonemic awareness, Phonics, Vocabulary, Fluency, and Comprehension?
4. Is there a significant difference in the Impact of a play-based learning approach on early literacy development among kindergarten learners, as observed by teachers, based on the five pillars of early literacy and indicators

affecting the utilization of play-based learning among kindergarten learners?
5. Is there a significant relationship between the frequency of use of the play-based learning approach and the Impact of the play-based learning approach on the early literacy development of kindergarten learners, based on the observation of the teachers in terms of the five pillars of early literacy?
6. What action plan may be developed based on the findings of the study?

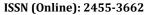## 2. REVIEW OF RELATED LITERATURE

Reyes and Dacillo (2021) reveals that beginner educators are more receptive to technology integration, but experienced teachers may demonstrate resistance owing to entrenched methods or inadequate training. Bernardo et al. (2023) contend that continuous professional development tailored to experience levels enhances engagement and the practical application of innovative strategies, such as digital storytelling, in early education.

Moya and Mendoza (2022), shows that educators who had frequent and recent training in early childhood pedagogy displayed increased engagement and creativity in their classroom practices. Torres and Garcia (2021) assert that regular capacity-building workshops enhance the linkage between theoretical understanding and practical application, especially in integrating technology like digital storytelling inside play-based frameworks.

Dizon and Santos (2023) confirms that regular participation in play-based activities improves children's social interaction and expressive language skills. Reyes and Cruz (2021) similarly found that kindergarten pupils participating in structured Play more than twice weekly demonstrated improved language learning and storytelling skills. These studies demonstrate that sustained and deliberate play-based training, especially when integrated with resources like digital storytelling, can significantly improve early reading outcomes.

Işıkoğlu and Güzen (2024) demonstrates that digital storytelling activities significantly improve children's receptive, expressive, and narrative language abilities, highlighting the effectiveness of integrating technology with imaginative Play. Rahiem (2021) posited that digital storytelling enhances engagement and communication, making narratives more compelling and dramatic, particularly beneficial in indoor settings.

The notion that rhyming fosters phonological awareness, which is critical for language learning and literacy skills, is supported by the study conducted by Kenjaboyeva and Xurramova in 2023. Callen (2024) contends that rhymes augment phonemic awareness, memory, and Vocabulary, making them indispensable tools in educational contexts. The National Association for the Education of Young Children (NAEYC) advocates for authentic, play-based activities, like rhyming games, to improve preschoolers' language development (Gritt & Standish, 2024).

Nordin et al. (2024), carried out a literature review and found that vocabulary games significantly enhance learners' vocabulary acquisition, motivation, and engagement, supports the findings. Bustrillo et al. (2024) similarly found that word games significantly improve vocabulary acquisition, leading to enhanced language competency among students. Khadijah et al. (2021) developed an educational gaming application called "Word Tree," which showed significant efficacy in improving reading skills in early childhood learners.

Alotaibi's (2024) systematic review and meta-analysis support the conclusion that game-based learning has a modest to considerable Impact on cognitive, social, emotional, motivational, and engagement outcomes in early childhood education. Morales et al. (2024) showed that digital game-based learning enhances student engagement and vocabulary retention, particularly for communicative proficiency. Furthermore, Guo (2024) emphasized the importance of game-based pedagogy in developing early reading skills, highlighting methods for effective implementation and the essential Role of educators.

Sukmakarti's (2024) systematic literature evaluation, which indicated that storytelling activities, including two-way contact and allowing youth to reiterate or discuss narratives, improve their understanding of language structure and Vocabulary. Surya and Pratiwi (2023) recorded significant progress in young children's language acquisition, Comprehension, and narrative skills through traditional and digital storytelling methods.

Heidecker's (2021) found that kindergarten students who used play-based materials like letter tiles and literacy games had significant improvements in their Phonics and phonemic awareness. Patria (2023) found that incorporating games into phonics instruction increased student motivation and engagement, hence enhancing learning outcomes. Pyle et al. (2024) emphasized that teacher-guided Play improves early literacy by allowing educators to steer Play towards academic objectives, such as Phonics.

Uyanik and Kandir (2020), demonstrating that educational Play significantly improves preschool-aged children's language and communication skills. Alat et al. (2022) similarly discovered that storytelling improved children's vocabulary acquisition in authentic contexts when combined with dramatic play activities. Bresson et al. (2024) demonstrated that the integration of digital storytelling tools with guided Play enhanced children's expressive language and elevated the occurrence of newly acquired Vocabulary during social Play.

De Naeghel et al. (2021), demonstrating that incorporating repeated reading into interesting situations, including dramatized reading and digital storytelling, enhances Fluency in young learners by enhancing word recognition and confidence. Rasinski et al. (2022) contended that performance-oriented reading activities, such as reader's theater and role-playing games, improve Fluency by making reading expressive, social, and enjoyable. Moran et al. (2023) demonstrated that incorporating digital resources into play-based reading routines enhances Fluency and significantly increases student engagement in reading, particularly in high-frequency word recall and expressive reading.

Neuman et al. (2022), shows that narratives combined with play-based activities enhance children's Comprehension by making abstract language concepts more concrete and accessible. Kucirkova and Rowsell (2021) highlighted that digital storytelling platforms enhance children's profound involvement with narrative structure and meaning, especially when integrated with creative Play. Moreover, Yang and Wu (2023) found that young learners participating in dramatic reading and role-play have significantly improved Comprehension, especially in understanding narrative events and themes.

Roskos and Neuman (2021), emphasizing how deliberate play activities significantly improve kids' Phonics, Vocabulary, and comprehension development. Korat and Falk (2022) found that the amalgamation of digital storytelling with educator-led dialogue and role-playing improves phonemic awareness and narrative understanding. Lee and Lee (2023) similarly revealed that young learners engaged in phonics-based games had improved decoding and Fluency compared to those in traditional teaching environments.

Pyle et al.'s (2024), highlighting how directed Play, which strikes a balance between educator guidance and child autonomy, improves a variety of literacy skills, such as Vocabulary, print knowledge, and phonological awareness. Their research emphasizes that teacher-facilitated Play provides substantial opportunities for children to employ reading skills in genuine circumstances. Roche et al. (2024) similarly found that preschool instructors consider play-based approaches essential for the enhancement of language and literacy. Their research demonstrates that reflective practice and continuous professional development are crucial for the effective implementation of play-based methodologies in early childhood education. Toraman et al. (2023) illustrate that educational play environments significantly enhance children's reading, writing, listening, and speaking skills. The research demonstrates that play-based learning environments increase student motivation and reduce anxiety, leading to improved language skill development.

Sood & Patel (2023) demonstrates that educators engaged in targeted professional development in play-based learning methodologies showed notable improvements in their classroom practices, particularly in language and literacy. Kim and Lee (2021) noted that some types of play-based learning, such as narrative and dramatic Play, markedly improved Vocabulary and phonemic awareness in kindergarteners.

While frequent play-based activities in early childhood education are beneficial, their Impact on literacy development is not guaranteed, according to research by Vaughan et al. (2021). The authors emphasized that the quality of interactions during Play and their alignment with literacy aims were far more important predictors of language development than the mere quantity of activities. Miller & Thompson (2022) noted

that teacher involvement and structured play activities are crucial for play-based learning, but passive or unstructured Play may not produce measurable literacy benefits. Therefore, while enhancing play-based activities can facilitate language development, careful planning and strategic implementation are crucial to attain the desired outcomes.

II. RESEARCH METHODOLOGY
Research Design
The study utilized a descriptive research design with quantitative data to investigate the effects of play-based learning on literacy development in kindergarten students. This approach, as described by Creswell, aims to detail the characteristics of a population or phenomenon by addressing key questions. Data was gathered through surveys, interviews, and observations, leading to conclusive evaluations of specific hypotheses (Fluet, 2021). A self-constructed and validated survey questionnaire facilitated the quantitative analysis of the sample population (Bhandari, 2023). The primary focus was on identifying play-based learning strategies employed by teachers and their influence on literacy development in young learners.

Population and Sampling
The total population consisted of fifty-five (55) kindergarten teachers in public elementary schools in District 2, Division of Bacoor, Cavite, wherein the study employed the total enumeration technique to represent the respondents. There were eight participating elementary schools in this study, and all kindergarten teachers in each school served as the respondents.

Respondents of the Study
The study involved 55 kindergarten teachers from eight public elementary schools in District 2, Division of Bacoor, Cavite, selected using the total enumeration method. The respondents included teachers from Niog Elementary School, Zapote Elementary School, Talaba Elementary School, Bayanan Elementary School, Gawaran Elementary School, Ligas 1 Elementary School, San Nicolas Elementary School.

Research Instrument
The study used a questionnaire to assess the impact of play-based learning on kindergarten learners' literacy development. It analyzed factors such as year of learning, teachers' training, frequency of use, and learning strategies. The questionnaire also assessed the impact of play-based learning on early literacy development, focusing on phonemic awareness, phonics, vocabulary, fluency, and comprehension. A four-point scale was used for quantitative data collection.

Data Gathering Procedure
The researcher followed standard research procedures to collect data for a study. They obtained permission from the Schools Division Office in Bacoor, attached endorsement letters, and obtained approval from school heads. The questionnaires were distributed to kindergarten teachers, who were given one to two weeks to answer. The collected data were analyzed using SPSS, and conclusions and recommendations were drawn. The intervention program was developed based on the study's findings.

Statistical Treatment
The study used statistical treatments to analyze data on play-based learning among kindergarten learners. It used frequency and percentage distributions to determine indicators, weighted mean to identify common strategies, and paired t-tests to assess the impact on early literacy development. Pearson's r was used to determine if there was a significant relationship between the frequency of use and its impact on early literacy development.

Ethical Consideration
The researcher ensured intellectual property laws were followed by proper citation and referencing, maintaining anonymity for respondents' safety and data confidentiality. Ethical research principles were followed, ensuring data was used solely for educational purposes. Approved endorsement letters and permits from the Division Office of Bacoor, Cavite and higher educational institutions were attached to the questionnaire.
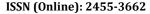
III. RESULTS AND DISCUSSION
Indicators Affect the use of Play-Based Learning A\among Kindergarten Learners in terms of Teachers' Years of Teaching, Teachers' Training, Frequency of Use, and Type of Play-Based Learning Approach

Table 1 Indicators that affect the Utilization of Play-Based Learning among Kindergarten Learners in terms of Years of Teaching

	Frequency	Percent
5 years and below	10	18.2
6-10 years	17	30.9
11-15 years	8	14.5
16-20 years	10	18.2
21 years and above	10	18.2
Total	**55**	**100.0**

Table 1 shows the distribution of kindergarten teachers by years of experience is consistent, with 6-10 years being the majority. Teachers with 5 years or fewer, 16-20 years, and 21 years or more represent proportional percentages. This diversity demonstrates different pedagogical viewpoints and practical knowledge regarding play-based learning methodologies. Mid-

career teachers may be more adaptable to modern techniques, while beginner teachers may lack confidence or experience. Policy and training should consider these disparities.

The research conducted by Reyes and Dacillo (2021) reveals that beginner educators are more receptive to technology integration, but experienced teachers may demonstrate resistance owing to entrenched methods or inadequate training. Bernardo et al. (2023) contend that continuous professional development tailored to experience levels enhances engagement and the practical application of innovative strategies, such as digital storytelling, in early education.

Table 2 Indicators that affect the Utilization of Play-Based Learning among Kindergarten Learners in terms of Teachers' Training

	Frequency	Percent
0	4	7.3
1-3	24	43.6
4-6	18	32.7
7-9	7	12.7
10 and above	2	3.6
Total	**55**	**100.0**

Table 2 illustrates the distribution of teacher training in play-based learning. The majority of kindergarten teachers have received between one and six training workshops, with the majority attending one to three sessions and a third attending four to six. However, the intensity and regularity of these training opportunities vary significantly, suggesting an inconsistent professional development environment for kindergarten teachers. This lack of consistent and comprehensive training may lead to teachers lacking confidence, contemporary strategies, or practical skills to effectively implement play-based learning and digital storytelling techniques in early childhood classrooms. It is crucial for educational stakeholders, particularly in the Philippine setting under DepEd, to institutionalize systematic and progressive training programs.
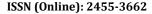
The results are supported by the research conducted by Moya and Mendoza (2022), which shows that educators who had frequent and recent training in early childhood pedagogy displayed increased engagement and creativity in their classroom practices. Torres and Garcia (2021) assert that regular capacity-building workshops enhance the linkage between theoretical understanding and practical application, especially in integrating technology like digital storytelling inside play-based frameworks.

Table 3 Indicators that affect the Utilization of Play-Based Learning among Kindergarten Learners in terms of Frequency of Use

	Frequency	Percent
Once a week	3	5.5
Twice a week	15	27.3
Three times a week	33	60.0
Everyday	4	7.3
Total	**55**	**100.0**

Table 3 shows that 60% of kindergarten teachers use play-based learning three times weekly, while 27.3% use it biweekly, 7.3% daily, and 5.5% only once weekly. This suggests that despite its importance, its daily implementation remains limited due to factors like curricular inflexibility, time constraints, inadequate resources, or insufficient training. The research emphasizes the need for enhancing everyday play integration in the Philippine educational context, which can be achieved through legislation, training, and contextual resources.

The research conducted by Dizon and Santos (2023) confirms that regular participation in play-based activities improves children's social interaction and expressive language skills. Reyes and Cruz (2021) similarly found that kindergarten pupils participating in structured Play more than twice weekly demonstrated improved language learning and storytelling skills. These studies demonstrate that sustained and deliberate play-based training, especially when integrated with resources like digital storytelling, can significantly improve early reading outcomes.

Table 4 Indicators that affect the Utilization of Play-Based Learning among Kindergarten Learners in terms of Type of Play-Based Learning Approach

	Frequency	Percent
Indoor Play	22	40.0
Outdoor Play	6	10.9
Imaginative Play	9	16.4
Structured Play	6	10.9
Free Play	12	21.8
Total	**55**	**100.0**

Table 4 shows the frequency of play-based learning methodologies used among kindergarten pupils. Indoor play is the most common, accounting for 40.0% of the total. Free play is the most common, with 21.8% of the total. Imaginative play is the most common, with 16.4%. Outdoor play and structured play are the least common, indicating a balanced integration of physical exercise and learning opportunities. This distribution suggests that early childhood education environments promote safety and spontaneous exploration, while focusing on autonomy and self-directed learning.

The research studied by Işıkoğlu and Güzen (2024) demonstrates that digital storytelling activities significantly improve children's receptive, expressive, and narrative language abilities, highlighting the effectiveness of integrating technology with imaginative Play. Rahiem (2021) posited that digital storytelling enhances engagement and communication, making narratives more compelling and dramatic, particularly beneficial in indoor settings.

Composite mean on the play-based learning strategies are commonly used by teachers to develop early literacy among kindergarten learners regarding Rhyming Games, Word Games, Role Playing, Games with Rules, and Story Telling.

Table 5 Composite Mean on the Play-based Learning Strategies are commonly used by teachers to develop early literacy among kindergarten learners in terms of Rhyming Games, Word Games, Role Playing, Games with Rules, and Story Telling

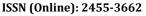|	Mean	Std. Deviation	Verbal Interpretation
Rhyming Games	3.14	0.23	Sometimes
Word Games	3.20	0.25	Sometimes
Role Playing	3.19	0.31	Sometimes
Games With Rules	3.20	0.26	Sometimes
Story Telling	3.17	0.28	Sometimes
PLAY-BASED LEARNING STRATEGIES COMMONLY USED BY TEACHERS	**3.18**	**0.13**	**Sometimes**

Legend: 4 - 3.50 - 4.00 Always   3 - 2.50 - 3.49 Sometimes   2 - 1.50 - 2.49 Rarely.   1 - 1.00 - 1.49 Never

Table 5 shows the Composite Mean on the Play-based Learning Strategies are commonly used by teachers to develop early literacy among kindergarten learners in terms of Rhyming Games, Word Games, Role Playing, Games with Rules, and Story Telling.

Kindergarten educators use various play-based learning strategies to improve early reading in students. The mean score for each approach is 3.18, with Word Games and Games with Rules having the highest mean scores. Role Playing, Storytelling, and Rhyming Games are the most common. However, teachers struggle to incorporate these strategies more often due to curriculum limitations, limited resources, and

insufficient professional development opportunities. Improving teacher training and providing sufficient resources could improve the frequency and success of play-based practices, potentially enhancing reading outcomes for kindergarten students.

The importance of rhyming and game-based learning in enhancing phonological awareness and language development is emphasized in recent studies. Kenjaboyeva and Xurramova (2023) highlight that rhyming supports phonological awareness, crucial for literacy. Callen (2024) adds that rhymes improve phonemic awareness, memory, and vocabulary, making them vital in education. The NAEYC advocates for

play-based activities, such as rhyming games, to foster preschoolers' language skills (Gritt & Standish, 2024).

Further supporting this, Nordin et al. (2024) found that vocabulary games boost vocabulary acquisition and engagement, while Bustrillo et al. (2024) confirmed that word games enhance language competency. Khadijah et al. (2021) developed "Word Tree," an educational app that effectively improves reading skills in early learners. Alotaibi's (2024) meta-analysis indicates that game-based learning positively impacts various outcomes in early childhood education. Morales et al. (2024) demonstrated that digital game-based learning enhances engagement and vocabulary retention. Guo (2024) stressed the role of game-based pedagogy in developing early reading skills.

Additionally, Sukmakarti (2024) found that storytelling activities improve language understanding and vocabulary, while Surya and Pratiwi (2023) reported significant advancements in young children's language.

Pyle et al.'s (2024) research supports the conclusion by highlighting how directed Play, which strikes a balance between educator guidance and child autonomy, improves a variety of literacy skills, such as Vocabulary, print knowledge, and phonological awareness. Their research emphasizes that teacher-facilitated Play provides substantial opportunities for children to employ reading skills in genuine circumstances. Roche et al. (2024) similarly found that preschool instructors consider play-based approaches essential for the enhancement of language and literacy. Their research demonstrates that reflective practice and continuous professional development are crucial for the effective implementation of play-based methodologies in early childhood education. Toraman et al. (2023) illustrate that educational play environments significantly enhance children's reading, writing, listening, and speaking skills. The research demonstrates that play-based learning environments increase student motivation and reduce anxiety, leading to improved language skill development.

Composite Mean on the Impact of a play-based learning approach on early literacy development in kindergarten learners based on the observation of the teachers in terms of the five pillars of early literacy such as Phonemic awareness, Phonics, Vocabulary, Fluency, and Comprehension.

Table 6 Composite Mean on the Impact of a Play-based Learning Approach on Early Literacy Development in Kindergarten learners based on the observation of the Teachers in terms of the five pillars of early literacy such as Phonemic awareness, Phonics, Vocabulary, Fluency, and Comprehension.

	Mean	Std. Deviation	Verbal Interpretation
Phonemic Awareness	3.24	0.29	Moderate Impact
Phonics	3.27	0.29	Moderate Impact
Vocabulary	3.23	0.33	Moderate Impact
Fluency	3.20	0.33	Moderate Impact
Comprehension	3.29	0.33	Moderate Impact
IMPACT OF PLAY-BASED LEARNING APPROACH TO EARLY LITERACY DEVELOPMENT OF KINDERGARTEN LEARNERS	**3.25**	**0.14**	**Moderate Impact**

Legend: 4 3.50 - 4.00 High Impact   3 2.50 - 3.49 Moderate Impact   2 1.50 - 2.49 Low Impact
1 1.00 - 1.49 No Impact

Table 6 shows the composite mean on the Impact of a play-based learning approach on early literacy development in kindergarten learners based on the observation of the teachers in terms of the five pillars of early literacy such as Phonemic awareness, Phonics, Vocabulary, Fluency, and Comprehension.

The study evaluates the moderate impact of play-based learning on early literacy development in kindergarten students. Comprehension was the highest score, followed by phonics and phonemic awareness. Vocabulary and fluency had moderate mean values. The study suggests that play-based learning methods, including rhyming games, storytelling, dramatic play, and structured phonics activities, support all essential elements

of early literacy. However, the study suggests that their effectiveness could be improved by incorporating digital technologies like interactive narrative applications and vocabulary development platforms.

Heidecker (2021) demonstrated that kindergarten students using play-based materials, such as letter tiles and literacy games, significantly improved their phonemic awareness and phonological skills. Tipan (2023) similarly found that play-based activities enhanced letter sound fluency and blending skills. Dobles and Marquez (2025) noted that educators view play-based learning as effective for promoting phonemic awareness, including skills like recognizing letter sounds and

rhyming. Additionally, Patria (2023) reported that incorporating games into phonics instruction increased student motivation and engagement, leading to better learning outcomes. Pyle et al. (2024) emphasized that teacher-guided play can enhance early literacy by aligning play with academic goals, particularly in phonics.

Uyanik and Kandir (2020) found that educational play enhances preschool children's language and communication skills. Alat et al. (2022) noted that storytelling, when paired with dramatic play, boosts vocabulary acquisition. Bresson et al. (2024) showed that digital storytelling tools combined with guided play improve expressive language and vocabulary use during social play. De Naeghel et al. (2021) indicated that repeated reading in engaging contexts, such as dramatized reading and digital storytelling, enhances fluency by improving word recognition and confidence. Rasinski et al. (2022) argued that performance-oriented reading activities, like reader's theater, make reading more enjoyable and expressive, thus improving fluency. Moran et al. (2023) demonstrated that integrating digital resources into play-based reading routines enhances fluency and student engagement, particularly in high-frequency word recall. Neuman et al. (2022) concluded that narratives combined with play-based activities improve comprehension by making abstract concepts more tangible. Kucirkova and Rowsell (2021) emphasized that digital storytelling platforms deepen children's engagement with narrative structure when integrated with creative play. Lastly, Yang and Wu (2023) found that dramatic reading and role-play significantly enhance comprehension, particularly

The study by Roskos and Neuman (2021) supports the conclusion by emphasizing how deliberate play activities significantly improve kids' Phonics, Vocabulary, and comprehension development. Korat and Falk (2022) found that the amalgamation of digital storytelling with educator-led dialogue and role-playing improves phonemic awareness and narrative understanding. Lee and Lee (2023) similarly revealed that young learners engaged in phonics-based games had improved decoding and Fluency compared to those in traditional teaching environments.
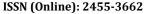
Significant difference in the Impact of a play-based learning approach on early literacy development among kindergarten learners, as observed by teachers, based on the five pillars of early literacy and indicators affecting the utilization of play-based learning among kindergarten learners.

Table 7 Test of significant difference in the Impact of a play-based learning approach to early literacy development of kindergarten learners based on the observation of the teachers in terms of the five pillars of early literacy when grouped according to indicators that affect the utilization of play-based learning among kindergarten learners.

	t	df	Sig. (2-tailed)	Decision	Remarks
Years in Teaching on Play-Based Learning Approach - Play-based Learning Strategies Commonly Used by Teachers	-1.591	54	0.117	Accept	Not Significant
Number of Attended Trainings on Play-Based Learning Approach - Play-Based Learning Strategies Commonly Used by the Teachers	-4.306	54	0.000	Reject	Significant
Frequency of Using Play-based Learning Approach - Play-based Learning Strategies Commonly Used by the Teachers	-5.298	54	0.000	Reject	Significant
Type of Play-based Learning Approach Frequently Used - Play-based Learning Strategies Commonly Used by the Teachers	-2.513	54	0.015	Reject	Significant

Table 7 displays the significance difference in the Impact of a play-based learning approach on early literacy development among kindergarten learners, as observed by teachers, based on the five pillars of early literacy and indicators affecting the utilization of play-based learning among kindergarten learners.

The study reveals that the duration of teaching experience does not significantly impact the implementation of play-based learning methods among kindergarten learners. However, the quantity of attended trainings, frequency of employing these methods, and the type of play-based learning approach used significantly affect their application. Teachers who participated in extensive training and frequently employed play-based learning were more likely to implement these tactics effectively. The nature of the play-based learning method also significantly influenced the frequency with which teachers employed these strategies. The study suggests that professional development and training in play-based learning methodologies

are essential for improving classroom execution. Investing in ongoing teacher training and developing a structured play-based curriculum may enhance the effectiveness of these tactics.

The research conducted by Sood & Patel (2023) demonstrates that educators engaged in targeted professional development in play-based learning methodologies showed notable improvements in their classroom practices, particularly in language and literacy. Kim and Lee (2021) noted that some types of play-based learning, such as narrative and dramatic Play, markedly improved Vocabulary and phonemic awareness in kindergarteners.

Significant relationship between the frequency of use of the play-based learning approach and the Impact of the play-based learning approach on the early literacy development of kindergarten learners, based on the observation of the teachers in terms of the five pillars of early literacy.

Table 8 Correlation between the frequency of use of the play-based learning approach and the Impact of the play-based learning approach on the early literacy development of kindergarten learners, based on the observation of the teachers in terms of the five pillars of early literacy

		Impact of Play-based Learning Approach to Early Literacy Development of Kindergarten Learners
Frequency of Using the Play-based Learning Approach	Pearson Correlation	-0.013
	Sig. (2-tailed)	0.923
	N	55

Table 8 displays the significance relationship between the frequency of use of the play-based learning approach and the Impact of the play-based learning approach on the early literacy development of kindergarten learners, based on the observation of the teachers in terms of the five pillars of early literacy.

The Pearson correlation between play-based learning methods and early literacy development in kindergarten students is minor, with a -0.013 correlation coefficient. The p-value is 0.923, which is above the 0.05 significance level. The sample size (N = 55) suggests that the frequency of use does not significantly affect early literacy development. The study suggests that the quality, type, and approach of play-based learning activities are more important than the frequency. Educators should prioritize intentionality and depth in their play-based learning methodologies, considering factors like teacher proficiency, learning environment quality, and digital storytelling integration.

While frequent play-based activities in early childhood education are beneficial, their Impact on literacy development is not guaranteed, according to research by Vaughan et al. (2021), which supports the conclusion. The authors emphasized that the quality of interactions during Play and their alignment with literacy aims were far more important predictors of language development than the mere quantity of activities. Miller & Thompson (2022) noted that teacher involvement and structured play activities are crucial for play-based learning, but passive or unstructured Play may not produce measurable literacy benefits. Therefore, while enhancing play-based activities can facilitate language development, careful planning and strategic implementation are crucial to attain the desired outcomes.

Action plan may be developed based on the findings of the study
RATIONALE
The proposed intervention strategy focuses on teacher training, implementation frequency, and play-based tactics to improve early literacy development in kindergarten students. The study found that years of experience did not significantly influence play-based learning execution. The plan emphasizes capacity-building through organized training, flexible teaching resources, and diverse instructional strategies like digital storytelling and thematic play. The absence of a significant relationship between play-based learning frequency and reading outcomes emphasizes the importance of quality over quantity in educational practice. The initiative aligns with the Department of Education's goal to improve early grade skills through engaging, inclusive, and evidence-based methods.
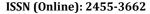
"Enhancing Play-based Learning Strategies for Early Literacy Development"

Activity/Program	Objectives	Participants	Person Involved/Responsible	Timeline	Cost Estimate (PHP)	Remarks
1. Regional Play-Based Learning Training Workshops	To provide in-depth, standardized training on effective play-based strategies to kindergarten teachers	Kindergarten Teachers (Public Schools, 1 per school)	Regional Education Program Supervisor, DepEd Early Childhood Division	Quarterly (Every 3 months)	₱2,500,000 (₱500,000/workshop x 5 regions)	Includes training kits, meals, and honorarium for resource speakers
2. Development and Distribution of a Play-Based Strategy Toolkit	To equip teachers with structured and adaptable play-based learning models (e.g., role play, storytelling, rule-based games)	All Kindergarten Teachers	Curriculum Developers, Regional Learning Resource Centers	Within 6 months	₱1,000,000	Toolkit printed and digital versions; supports varied strategy use
3. School-Based Learning Action Cell (LAC) Sessions on Play-Based Implementation	To create regular, peer-driven knowledge sharing and strategy refinement	School Heads, Kindergarten Teachers	School LAC Coordinators	Monthly	₱150,000 (₱3,000/school x 50 schools)	Low-cost professional development using the DepEd LAC model
4. Pilot Implementation of Thematic Play-Based Modules (With Digital Integration)	To test and evaluate specific approaches (e.g., digital storytelling, manipulatives, dramatization)	Selected Kindergarten Teachers (10 pilot schools)	Research Team, ICT Coordinators, Regional Supervisor	1 School Year	₱500,000	Monitor which methods yield the highest learner engagement and Comprehension
5. Creation of a National Online Training Portal for Play-Based Learning	To offer self-paced, CPD-aligned courses for teachers unable to attend face-to-face training	All Interested Kindergarten Teachers Nationwide	DepEd ICT Division, NEAP, and Early Childhood Unit	12 Months Development	₱2,000,000	Can reach more teachers long-term; supports sustainability
6. Monitoring and Evaluation with Data Feedback Loop	To assess improvements and track effective strategies beyond frequency metrics	Regional and Division Supervisors, M&E Teams	Planning and Research Section, DepEd	Bi-annually	₱300,000	Data to be used for future program refinement and policy alignment

IV. CONCLUSION

The study reveals that play-based learning is widely used by kindergarten teachers to develop early literacy skills. However, the integration of these strategies is often inconsistent across schools, suggesting the need for more consistent use. Teachers generally find play-based learning to have a moderate impact on multiple areas of early literacy development. Sound-related games, tactile activities, musical activities, and storytelling enhance phonics, vocabulary, and reading fluency. However, more complex abilities like tone expression during oral reading

are still underdeveloped. The length of teaching experience does not significantly affect the use of play-based learning strategies. The frequency of play-based learning has a significant relationship with its impact on early literacy development. The study suggests that merely increasing the frequency of play-based activities does not guarantee significant improvements in literacy skills. The proposed intervention plan emphasizes teacher training, methodological diversity, and careful implementation to enhance early reading among kindergarten students.
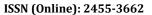
The study highlights the challenges kindergarten educators face in implementing play-based learning, including differences in teaching experience, inconsistent professional development, and institutional obstacles like insufficient resources and curricula. To overcome these issues, educational stakeholders, particularly in the Philippines, must provide targeted training and flexible resources for teachers to incorporate diverse play-based methodologies into daily classroom practices. The study also highlights the positive impact of play-based learning on early reading, including phonemic awareness, phonics, vocabulary, fluency, and comprehension. However, the full potential of play-based learning is unfulfilled due to variable execution. The study emphasizes the importance of organized training and curriculum support for teachers to effectively develop young learners' language development. The study concludes that the success of play-based learning in promoting literacy development depends on the quality and strategic execution of activities, rather than the frequency of application.

The recommendations for improving play-based learning in kindergarten education include creating a comprehensive professional development program for kindergarten teachers, offering specialized training to incorporate rhyming activities, word games, role-playing, rule-based games, and storytelling into daily instruction, providing continuous training for teachers to effectively incorporate targeted, engaging, and skill-specific play activities, prioritizing structured and continuous professional development initiatives for all teachers, and focusing on improving the quality of play-based learning by prioritizing teacher expertise through focused, continuous professional development. Establishing supportive learning settings with sufficient resources and adaptable curricula will enable teachers to use play-based tactics more efficiently, ultimately improving students' early literacy results.

REFERENCES

1. Alat, K., Akman, B., & Karabeyoglu, Y. (2022). *The effects of storytelling and drama-based play on preschool children's vocabulary development. Early Child Development and Care, 192(10), 1621–1633.* https://doi.org/10.1080/03004430.2020.1792279
2. Alotaibi, M. S. (2024). *Game-based learning in early childhood education: A systematic review and meta-analysis. Frontiers in Psychology.* https://doi.org/10.3389/fpsyg.2024.1307881Frontiers+1PubMed+1
3. Bendini, M., & Devercelli, A. (2022). *Quality early learning: nurturing children's potential. World Bank Publications.*
4. Bernardo, M. A., Santos, J. E., & Tamayo, R. C. (2023). *Teaching experience as a moderator of pedagogical innovation: A Philippine case study. Journal of Early Childhood Research, 21(1), 45–59.* https://doi.org/10.1177/1476718X221144679
5. Bresson, C., Dubé, A. K., & Beaudoin, A. (2024). *Enhancing vocabulary through digital storytelling and guided play in early childhood settings. Journal of Early Childhood Literacy, 24(1), 77–94.* https://doi.org/10.1177/14687984231121320
6. Bustrillo, H. T., Sumicad, R., & Cuevas, G. C. (2024). *Effectiveness of Word Games in Teaching Students Vocabulary. Journal of World Englishes and Educational Practices, 6(3), 7–16.* https://doi.org/10.32996/jweep.2024.6.3.2Al-Kindi Publisher
7. De Naeghel, J., Valcke, M., & Van Keer, H. (2021). *Supporting early reading fluency through playful repeated reading strategies in the classroom. Early Childhood Education Journal, 49(3), 451–463.* https://doi.org/10.1007/s10643-020-01079-z
8. Dizon, M. A., & Santos, L. F. (2023). *Enhancing language acquisition through frequent play-based learning: Evidence from Philippine kindergartens. Journal of Early Childhood Research and Practice, 15(1), 45–59.*
9. Edwards, S. (2021). *Process quality, curriculum and pedagogy in early childhood education and care. OECD education working papers, (247), 0_1-55.*
10. Gritt, A., & Standish, K. (2024). *Word play throughout the day: Phonological awareness in the preschool classroom. NAEYC. Retrieved from* https://www.naeyc.org/resources/pubs/tyc/winter2024/word-play-throughout-the-day
11. Guo, P. (2024). *Approaches to enhance game-based teaching literacy for kindergarten major students. Pacific International Journal, 6(4), 120–124.* https://doi.org/10.55014/pij.v6i4.489rclss.com
12. Heidecker, K. (2021). *Effects of Play-Based Learning on Phonemic awareness and phonics skills. RED: A Repository of Digital Collections.* https://red.mnstate.edu/thesis/481
13. Işıkoğlu, N., & Güzen, M. (2024). *The promise of digital storytelling for kindergarteners: language and technology skills. Early Child Development and Care, 194(2), 195–207.* https://doi.org/10.1080/03004430.2023.2299389Taylor & Francis Online
14. Kenjaboyeva, D. A., & Xurramova, O. S. (2023). *The importance of rhyming in phonological awareness for early language development. Formation of Psychology and Pedagogy as Interdisciplinary Sciences. Retrieved from* https://interoncof.com/index.php/italy/article/view/2523interoncof.com+1Book Creator app+1
15. Keung, C. P. C., & Fung, C. K. H. (2021). *Pursuing quality learning experiences for young children through learning in play: how do children perceive play? Early Child Development and Care, 191(4), 583-597.*
16. Khadijah, K., Pulungan, E. N., Hariati, R., & Maisarah, M. (2021). *Developing the Educational Game Tool to Improve Reading Ability of Early Childhood. International Journal of Language Education, 6(1).* https://ojs.unm.ac.id/ijole/article/view/20145UNM OJS
17. Kim, H. J., & Lee, J. Y. (2021). *The role of play-based learning in enhancing early literacy skills. Journal of Early Childhood Education, 42(3), 142–155.* https://doi.org/10.1016/j.jece.2020.10.002

18. Korat, O., & Falk, H. (2022). *Enhancing early literacy through digital storybook reading: Effects on phonological awareness and narrative comprehension. Early Childhood Research Quarterly, 59,* 239–250. https://doi.org/10.1016/j.ecresq.2021.10.004

19. Lee, H. J., & Lee, M. S. (2023). *The effect of gamified phonics instruction on early reading fluency among preschoolers. Journal of Early Childhood Literacy, 23(1),* 67–84. https://doi.org/10.1177/14687984211054322

20. McArdle, J. (2024, August 24). *Understanding Play Theories: A guide for play based Teachers – My teaching cupboard. My Teaching Cupboard.* https://www.myteachingcupboard.com/blog/play-theories.

21. Morales, L. M., Castillo, J. R., & Cuarte, R. (2024). *A systematic review on the effectiveness of digital game-based learning in the development of vocabulary skills. International Journal of Multidisciplinary Studies in Higher Education.* https://ijmshe.com/index.php/pub/article/view/5

22. Moran, R., Briggs, S., & Collins, L. (2023). *The integration of digital tools in playful reading instruction: Impacts on fluency and engagement in early readers. Journal of Educational Multimedia and Hypermedia, 32(1),* 55–72.

23. Moya, M. R., & Mendoza, K. L. (2022). *Professional development and its influence on play-based pedagogy in early childhood education. Philippine Journal of Education Studies, 10(1),* 33–44.

24. Nordin, N. A., Kamaludin, P. N. H., Sharif, N. F. M., Chumari, M. Z., & Zabidin, N. (2024). *The Effectiveness of Vocabulary Games on Vocabulary Acquisition: A Literature Review. International Journal of Modern Education, 6(21).* https://gaexcellence.com/ijmoe/article/view/585

25. Nurhasnah, N., Sepriyanti, N., & Kustati, M. (2024). *Learning theories according to constructivism theory. Journal International Inspire Education Technology, 3(1),* 19-30.

26. Patria, L. (2023). *Improving Students' Motivation in Learning Phonics through Games. Proceedings of the 2nd International Conference on Advances in Humanities, Education and Language (ICEL 2022).* https://doi.org/10.4108/eai.7-11-2022.2329345EUDL

27. Pyle, A., DeLuca, C., Danniels, E., & Chapman, J. (2024). *Guided play in early literacy development: Balancing child agency with teacher direction. SAGE Journals.*

28. Pyle, A., Wickstrom, H., Gross, O., & Kraszewski, E. (2024). *Supporting literacy development in kindergarten through teacher-facilitated play. Journal of Early Childhood Research, 22(1),* 45–60. https://doi.org/10.1177/1476718X231221363

29. Rahiem, M. D. H. (2021). *Storytelling in early childhood education: Time to go digital. International Journal of Child Care and Education Policy, 15(1),* 4. https://doi.org/10.1186/s40723-021-00081-x

30. Rasinski, T. V., Paige, D. D., & Young, C. (2022). *Play, performance, and fluency: A multidimensional model of reading development. The Reading Teacher, 76(1),* 61–71. https://doi.org/10.1002/trtr.2050

31. Reyes, J. M., & Cruz, A. C. (2021). *Frequency of play-based learning and its impact on oral language development among preschoolers. Asia Pacific Journal of Multidisciplinary Research in Education, 9(2),* 101–110.

32. Reyes, L. C., & Dacillo, J. C. (2021). *Bridging the digital gap: Teaching experience and technology use in early childhood education. Asia Pacific Journal of Multidisciplinary Research, 9(2),* 62–68.

33. Roche, M., Edwards, S., & Barblett, L. (2024). *Preschool teachers' perceptions of play-based learning for language and literacy development. SAGE Journals.*

34. Roskos, K., & Neuman, S. B. (2021). *Play-based practices in early literacy: Implications for policy and professional development. The Reading Teacher, 74(5),* 563–571. https://doi.org/10.1002/trtr.2020

35. Sood, A., & Patel, N. (2023). *Teacher training and its impact on play-based learning in early childhood classrooms. Early Childhood Education Quarterly, 56(2),* 85–92. https://doi.org/10.1016/j.ecresq.2022.11.003

36. Sukmakarti, L. D. (2024). *The Effect of Storytelling on Receptive Language Development in Early Childhood: A Systematic Literature Review. Jurnal Terapi Wicara dan Bahasa, 3(1).* https://doi.org/10.59686/jtwb.v3i1.158jtwb.org

37. Surya, U. I., & Pratiwi, V. A. (2023). *The Impact of Storytelling on English Language Development in Early Childhood Education. Jurnal PG-PAUD Trunojoyo: Jurnal Pendidikan dan Pembelajaran Anak Usia Dini, 10(2).* https://journal.trunojoyo.ac.id/pgpaudtrunojoyo/article/view/27185Jo

38. Taylor, M. E., & Boyer, W. (2020). *Play-based learning: Evidence-based research to improve children's learning experiences in the kindergarten classroom. Early Childhood Education Journal, 48(2),* 127-133.

39. Toraman, Ç., Yıldırım, M. C., & Yıldız, A. (2023). *The impact of educational play on young learners' language skills and motivation. MDPI.*

40. Torres, J. V., & Garcia, P. C. (2021). *Strengthening early childhood teaching through targeted training: The role of digital tools in play-based learning. Southeast Asian Journal of Early Education, 9(2),* 112–123.

41. Uyanik, G., & Kandir, A. (2020). *The effect of educational games on the vocabulary development of preschool children. International Journal of Early Childhood Education Research, 9(2),* 135–149. https://doi.org/10.26822/iecer.2020.003

42. Veraksa, N., Colliver, Y., & Sukhikh, V. (2022). *Piaget and Vygotsky's play theories: The profile of twenty-first-century evidence. In Piaget and Vygotsky in XXI century: Discourse in early childhood education (pp. 165-190). Cham: Springer International Publishing.*