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Play-Based and Video Phonics Integration and Literacy Competence of Kindergarten Learners

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ABSTRACT

This study examined the integration of play-based learning and video phonics instruction in improving the literacy competence of Kindergarten learners at Sagnap Elementary School, Loay District, Bohol, during School Year 2026–2027. Anchored in constructivist, sociocultural, and multimedia-supported learning perspectives, the study employed a quantitative, quasi-experimental one-group pretest–posttest design involving eleven (11) purposively selected learners. Data were gathered using the Kindergarten Literacy Checklist, an adapted literacy assessment questionnaire, and classroom observations. The intervention consisted of six instructional sessions integrating interactive play-based activities and audiovisual phonics materials. Data were analyzed using frequency counts, percentages, mean scores, Wilcoxon Signed-Rank Tests, and a paired-samples t-test. Initial assessment results revealed that nine learners (82%) were classified as Not Competent, while two (18%) demonstrated Emerging Competency. Following the intervention, the mean literacy score increased from 15.55 to 31.82, with nine learners (82%) attaining the Competent level. The paired-samples t-test confirmed a statistically significant improvement in literacy performance ($t(10) = -12.311$, $p < .001$). The findings suggest that integrating play-based learning and video phonics may strengthen foundational literacy skills, particularly phonemic awareness, letter-sound recognition, and emergent reading. The study recommends teacher training, appropriate instructional resources, and continuous literacy assessment to support effective implementation. The research contributes to Sustainable Development Goal 4 (Quality Education) and supports Sustainable Development Goal 10 (Reduced Inequalities) by promoting responsive and inclusive early literacy instruction. Its educational and institutional sustainability implications include strengthening evidence-informed teaching practices and continuous instructional improvement. However, the small sample and absence of a comparison group limit the generalizability and causal interpretation of the findings.

Keywords: *Alphabet Knowledge, Educational Sustainability, Kindergarten Learners, Literacy Competence, Phonemic Awareness, Play-Based Learning, Video Phonics*

1. INTRODUCTION

Early literacy competence is fundamental to children's cognitive development, academic readiness, and lifelong learning. During Kindergarten, learners develop essential skills in alphabet knowledge, phonemic awareness, letter-sound recognition, vocabulary, print awareness, and emergent reading and writing. These competencies establish the foundation for subsequent reading achievement. Goldstein et al. (2024) emphasized the importance of early literacy interventions in strengthening phonological awareness and alphabet knowledge, particularly among children experiencing difficulties in acquiring foundational skills. Developmentally appropriate instructional approaches are essential in addressing differences in children's learning readiness and abilities. Play-based learning provides opportunities for active exploration, interaction, and meaningful practice, while video phonics uses audiovisual materials to demonstrate sounds, letters, and their relationships. Bautista et al. (2024) and Liu et al. (2024) identified the potential of educational technologies to support early literacy development when appropriately integrated into classroom instruction. However, their effectiveness depends on instructional design, learner characteristics, and teacher guidance. In the Philippines, the Department of Education (2024) established guidelines for implementing the MATATAG Curriculum, which supports learner-centered and developmentally appropriate education. Consistent with these priorities, the present study examines the integration of play-based activities and video phonics in strengthening the literacy competence of eleven Kindergarten learners at Sagnap Elementary School, Loay District, Bohol, during School Year 2026–2027. The study seeks to provide localized evidence that may inform literacy instruction, assessment practices, and a proposed instructional action plan.

Research Problem

Developing foundational literacy competence remains a concern in early childhood education due to differences in learners' language exposure, readiness, instructional resources, and learning support. UNESCO and UNICEF (2024) emphasized that equitable access to quality early childhood education is essential for addressing learning disparities. Skene et al. (2022) found that guided play supported selected learning outcomes, although its advantages over direct instruction in literacy remained inconclusive. Meanwhile, Goldstein et al. (2024) reported improvements in foundational literacy through structured small-group instruction, highlighting the importance of developmentally appropriate teaching. Technology-assisted learning also offers opportunities to strengthen early literacy skills. Liu et al. (2024) identified the potential of digital technologies to develop alphabet knowledge, phonological awareness, vocabulary, and narrative skills. Similarly, Parry et al. (2024) reported mixed outcomes from tablet-assisted phonics instruction, with teacher guidance contributing to potential learning benefits. Raposo-Rivas et al. (2024) found positive but varied effects of technology-enhanced phonological awareness interventions. Potier Watkins and Dehaene (2024) demonstrated improvements in letter knowledge and sound-symbol recognition through digital phonics games, although sustained reading gains were inconsistent. Likewise, Hare et al. (2024) found that digital materials did not consistently outperform printed resources, emphasizing the importance of appropriate instructional implementation. Despite these findings, limited localized evidence exists on the combined use of play-based learning and video phonics in rural Philippine public Kindergarten classrooms. To address this gap, the present study examines learners' literacy competence at Sagnap Elementary School using the Kindergarten Literacy Checklist and pretest–posttest assessments. It evaluates changes in literacy performance following the intervention and provides a basis for developing an instructional action plan.

Assumptions of the Study

The study assumes that Kindergarten learners possess different levels of foundational literacy competence that can be systematically assessed through appropriate assessment instruments.

These differences may be associated with variations in learning readiness, previous literacy experiences, and exposure to instructional activities. Goldstein et al. (2024) demonstrated the value of identifying early literacy difficulties and providing targeted instructional support, while Cusiter et al. (2025) highlighted the potential benefits of interventions addressing both language-related and code-related emergent literacy competencies. The study further assumes that integrating guided play with audiovisual phonics instruction may provide complementary opportunities for literacy development. Play-based activities enable learners to practice and apply literacy concepts through interaction, while video phonics provides visual and auditory demonstrations of letter-sound relationships. This assumption is informed by evidence concerning guided play, technology-supported learning, and instructional assistance (Skene et al., 2022; Liu et al., 2024; Parry et al., 2024). Furthermore, the study assumes that changes in literacy competence can be examined through consistent pretest and posttest assessments. However, because the investigation employs a one-group pretest–posttest design without a control group, observed improvements cannot be attributed exclusively to the intervention. Other factors, including maturation, repeated assessment, and additional learning experiences, may also contribute to changes in performance.

Objectives of the Study

The primary objective of this study is to examine the literacy competence of Kindergarten learners following the integration of play-based learning and video phonics instruction at Sagnap Elementary School, Loay District, Bohol, during School Year 2026–2027. Specifically, it aims to determine the learners' initial literacy profiles using the Kindergarten Literacy Checklist; assess their literacy competence before and after the implementation of integrated play-based and video phonics activities; examine the relationships between Kindergarten Literacy Checklist scores and pretest and posttest results; determine whether statistically significant differences exist among the relevant literacy assessment scores, particularly between pretest and posttest performance; and develop a proposed instructional action plan based on the findings. These objectives are consistent with contemporary research emphasizing structured early literacy assessment, targeted instruction, and evidence-informed intervention practices (Goldstein et al., 2024; Cusiter et al., 2025).

Theoretical or Conceptual Basis

The study is anchored in constructivist, sociocultural, and active learning perspectives, which collectively explain how young children develop knowledge through exploration, interaction, guided participation, and meaningful instructional experiences. Constructivist perspectives, historically associated with Piaget and Bruner, emphasize children's active involvement in learning and the gradual development of knowledge through experience. In the present study, these principles are reflected in play-based literacy activities that encourage learners to recognize letters, distinguish sounds, manipulate learning materials, and practice language skills through interactive tasks. Skene et al. (2022) emphasized the potential contribution of guided play to children's learning while recognizing that outcomes depend on the competencies being developed and the instructional conditions provided. The sociocultural perspective, associated with Vygotsky, emphasizes the importance of interaction, modeling, and instructional scaffolding in children's learning. Within this framework, teachers provide guidance and feedback as learners gradually develop independence in performing literacy tasks. This perspective supports the integration of teacher-guided phonics videos with practical learning activities. Parry et al. (2024) highlighted the importance of instructional guidance in technology-assisted phonological awareness and phonics instruction, while Goldstein et al. (2024) demonstrated the benefits of structured, teacher-implemented early literacy interventions. The study also draws on contemporary perspectives on multimedia-supported learning, which recognize the instructional potential of combining visual, auditory, and interactive learning

experiences. Video phonics may provide learners with repeated demonstrations of letter names, speech sounds, and sound-symbol relationships, while play-based activities offer opportunities to apply these concepts through guided practice. Bautista et al. (2024) and Liu et al. (2024) emphasized that digital technologies can support early literacy development when their instructional features correspond with learners' developmental needs and intended learning outcomes. Similarly, Potier Watkins and Dehaene (2024) and Bora et al. (2026) provided empirical evidence concerning digital phonics instruction and its integration with classroom-based learning, while underscoring the importance of instructional continuity and transfer of learning. Conceptually, the study considers the Kindergarten Literacy Checklist as the basis for determining learners' initial literacy profiles, while pretest and posttest assessments serve as measures of literacy competence before and after the instructional intervention. The intervention consists of integrated play-based learning and video phonics activities intended to strengthen foundational literacy competencies. The assessment findings subsequently provide the basis for developing an instructional action plan addressing identified learning needs, appropriate teaching strategies, and continuous literacy monitoring.

The present study supports Sustainable Development Goal 4 (Quality Education), particularly Target 4.2, which promotes access to quality early childhood education, and SDG 10 (Reduced Inequalities), which emphasizes inclusive and equitable learning opportunities. UNESCO and UNICEF (2024) highlighted the importance of developmentally appropriate early education in establishing strong learning foundations and reducing educational disparities. By examining the integration of play-based learning and video phonics, the study provides classroom-based evidence that may strengthen foundational literacy instruction and support Kindergarten learners with varying levels of learning readiness, particularly in rural public schools. Furthermore, the research contributes to educational and institutional sustainability by promoting evidence-based teaching practices, systematic literacy assessment, and continuous instructional improvement. The proposed action plan may guide teachers and school administrators in enhancing instructional strategies, allocating appropriate learning resources, and sustaining quality early literacy education.

2. METHODOLOGY

Research Design

The study utilized a quantitative, quasi-experimental one-group pretest–posttest design to assess changes in Kindergarten learners' literacy competence following exposure to integrated play-based learning and video phonics instruction. An initial assessment established learners' foundational literacy skills, particularly alphabet knowledge, phonemic awareness, and emergent reading. The intervention incorporated interactive play-based activities and audiovisual phonics materials to reinforce letter-sound recognition and literacy development. Classroom implementation was monitored by the School Head and Master Teacher, while pretest and posttest scores were compared to determine changes in learners' literacy performance.

Research Locale or Study Setting

The study was conducted at Sagnap Elementary School, Loay District, Division of Bohol, Philippines, during School Year 2026–2027. This public elementary school provided the setting for examining the integration of play-based learning and video phonics in Kindergarten literacy instruction. The school was selected because it represented an authentic classroom environment where learners experienced varying levels of literacy readiness and instructional needs.

Participants or Data Sources

The participants consisted of eleven (11) Kindergarten learners enrolled at Sagnap Elementary School during School Year 2026–2027. They were purposively selected based on their enrollment and relevance to the study's focus on foundational literacy development. The learners participated in the initial literacy assessment, pretest, instructional intervention, and posttest. Their assessment scores served as the primary quantitative data for examining changes in literacy competence.

Research Instruments or Materials

The study utilized the Kindergarten Literacy Checklist and an adapted literacy assessment questionnaire for evaluating learners' foundational literacy competencies. The questionnaire was developed using existing assessment tools, including the Early Literacy Skills Assessment (ELSA) developed by Invernizzi, Sullivan, Meier, and Swank (2004) and the Phonological Awareness Literacy Screening (PALS) developed by Invernizzi, Meier, and Juel (2001). The instrument was adapted to align with the study's objectives and the developmental needs of Kindergarten learners. The assessment covered six domains: alphabet knowledge, phonemic awareness, vocabulary and word recognition, print awareness, writing readiness, and engagement and motivation. Activities included letter identification, sound recognition, picture naming, word matching, print identification, and letter tracing. Responses were evaluated using a three-point scoring scale: 0 for No Competency, 1 for Emerging Competency, and 2 for Competent. The instruments were administered individually by presenting appropriate learning materials, including flashcards, picture cards, books, and writing materials. Observational responses were recorded and scored to determine learners' literacy competence. Video phonics materials and structured play-based activities served as instructional resources during the intervention.

Data Gathering Procedure

Data gathering followed three sequential stages consisting of preparation, intervention, and post-intervention assessment. Before conducting the study, the researcher secured permission from the University President, Schools Division Superintendent of Bohol, and School-in-Charge of Sagnap Elementary School. After obtaining the necessary approvals and parental consent, the researcher administered the Kindergarten Literacy Checklist to establish the initial literacy profiles of the eleven learners. The School Head and Master Teacher subsequently conducted the pretest to determine baseline literacy competence. Following the pretest, integrated play-based learning and video phonics instruction was implemented during Weeks 5–10, consisting of six instructional sessions lasting approximately one hour each. The activities incorporated interactive games, guided learning tasks, and audiovisual demonstrations of letter sounds, sound-symbol relationships, and word recognition. Assessment questionnaires and observation checklists were administered after the sessions to monitor learners' progress. The School Head and Master Teacher supervised classroom implementation to ensure consistent delivery of the instructional activities. After completing the intervention, the School Head and Master Teacher administered the posttest using the adapted literacy assessment instrument. The completed questionnaires and assessment records were checked, organized, and scored. Pretest and posttest results were subsequently compared to examine changes in literacy competence and provide evidence for the development of a proposed instructional action plan.

Data Analysis

The collected data were analyzed using descriptive and inferential statistical methods. Frequency counts, percentages, and mean scores were used to describe learners' literacy profiles and competency levels before and after the intervention. The Wilcoxon Signed-Rank Test was employed to examine differences between the Kindergarten Literacy Checklist and pretest

scores and between the checklist and posttest scores. A paired-samples t-test was used to determine whether the difference between pretest and posttest scores was statistically significant. Pearson Product–Moment Correlation was also identified in the original statistical treatment section. The statistical findings served as the basis for interpreting literacy performance and developing recommendations for improving Kindergarten instruction.

Ethical Consideration

The study observed ethical procedures involving institutional approval, informed consent, voluntary participation, and confidentiality. Formal permission was obtained from the University President, Schools Division Superintendent of Bohol, and School-in-Charge of Sagnap Elementary School before data collection. Since the participants were Kindergarten learners, informed consent was secured from their parents or legal guardians. The researcher also oriented the learners and their families regarding the study's objectives, procedures, and ethical safeguards. Participation was voluntary, and confidentiality was maintained throughout the collection, recording, and analysis of learners' assessment results.

3. RESULTS AND DISCUSSION

3.1 Teachers' Expenditure Patterns Literacy Competence of Kindergarten Learners

3.1.1 Initial Literacy Competence Based on the Kindergarten Literacy Checklist

The initial assessment revealed that nine learners (82%) were classified as Not Competent, while two (18%) demonstrated Emerging Competency. None attained the Competent level. The mean score of 10.45 indicated that most learners had limited foundational literacy skills, particularly in areas assessed by the Kindergarten Literacy Checklist, and required additional instructional support. These findings emphasize the importance of early literacy assessment and targeted interventions. Goldstein et al. (2024) demonstrated that structured small-group literacy instruction improved phonological awareness and alphabet knowledge among preschoolers with identified learning difficulties. Similarly, Rehfeld et al. (2022) found that phonemic awareness instruction produced positive learning outcomes, particularly in segmentation and blending skills, among children at risk of reading difficulties. Cusiter et al. (2025) further emphasized the value of interventions addressing both language development and foundational literacy skills. These studies support the need to identify learning difficulties early and implement responsive instructional strategies.

3.1.2 Literacy Competence Before and After Play-Based and Video Phonics Integration

Before the intervention, nine learners (82%) were classified as Not Competent, while two (18%) demonstrated Emerging Competency, with a mean pretest score of 15.55. Following the integration of play-based learning and video phonics, nine learners (82%) attained the Competent level, while two (18%) remained Emerging. No learner was classified as Not Competent. The posttest mean increased to 31.82, representing a mean improvement of 16.27 points. The improvement suggests that integrating interactive play-based activities and audiovisual phonics instruction may support foundational literacy development. Quileste et al. (2025) reported significant improvement in letter-sound identification through a phonics play approach, while Genobia and Basmayor (2025) found improved phonemic awareness following video-assisted instruction among Philippine Kindergarten learners. Similarly, Lojero (2025) and Gumidam (2025) documented improved literacy outcomes through game-based and interactive learning materials. However, Hechanova et al. (2025) found that although play-based instruction

improved letter recognition, progress in letter sounding remained limited, emphasizing the importance of targeted instructional support for different literacy competencies.

3.2 Significant Differences in Literacy Assessment Scores

3.2.1 Difference Between the Kindergarten Literacy Checklist and Pretest Scores

The Wilcoxon Signed-Rank Test reported a statistically significant difference between the Kindergarten Literacy Checklist and pretest scores ($W = 7.50$, $p = .024$). The mean literacy checklist score was 10.45, while the pretest mean was 15.55. Both assessments were administered before the instructional intervention, and the reported results indicated differences in learners' performance across the two assessments. The significant difference highlights the importance of examining learners' literacy competence through appropriate assessment procedures. Goldstein et al. (2024) emphasized identifying specific literacy difficulties to guide targeted instruction, while Cusiter et al. (2025) demonstrated the importance of assessing related but distinct emergent literacy competencies. However, because the two assessments used different scoring ranges, their raw scores require careful interpretation. The observed difference should not be attributed to the intervention because both assessments preceded its implementation.

3.2.2 Difference Between the Kindergarten Literacy Checklist and Posttest Scores

The Wilcoxon Signed-Rank Test revealed a statistically significant difference between the Kindergarten Literacy Checklist and posttest scores ($W = 0.00$, $p = .004$). The checklist mean was 10.45, whereas the posttest mean reached 31.82. The results showed higher post-intervention literacy scores, with nine learners attaining the Competent classification. These findings are consistent with recent research highlighting the potential of guided multimedia instruction for foundational literacy development. Genobia and Basmayor (2025) found that alphabet videos supported phonemic awareness among Kindergarten learners, while Parry et al. (2024) reported that technology-assisted phonics instruction could provide learning advantages when accompanied by appropriate teacher guidance. Nevertheless, the difference between the checklist and posttest scores should be interpreted cautiously because the assessments used different scoring ranges. The pretest–posttest comparison provides a more appropriate basis for examining performance changes following the intervention.

3.2.3 Difference Between Pretest and Posttest Literacy Competence

The paired-samples t-test revealed a statistically significant difference between pretest and posttest scores, $t(10) = -12.311$, $p < .001$. The mean score increased from 15.55 to 31.82, representing an improvement of 16.27 points. At the .05 significance level, the null hypothesis of no significant pretest–posttest difference was rejected. These findings indicate a statistically significant improvement in learners' overall literacy performance following the instructional intervention. The improvement is consistent with evidence supporting structured phonics instruction and the purposeful integration of digital learning resources. Potier Watkins and Dehaene (2024) demonstrated improvements in early phonics-related skills through digital instruction, while Bautista et al. (2024) and Liu et al. (2024) identified the potential of educational technologies to support early literacy development. However, Skene et al. (2022) found that guided play did not consistently outperform direct instruction in literacy outcomes, and Hare et al. (2024) reported that digital materials did not uniformly produce better reading outcomes than printed materials. These findings suggest that the observed improvement may reflect the value of combining instructional guidance, active learner participation, and audiovisual reinforcement

rather than relying on technology or play alone. Because the present study employed a one-group pretest–posttest design, the results demonstrate improvement associated with the intervention but do not establish an exclusive causal effect.

4. CONCLUSIONS AND RECOMMENDATIONS

The study concluded that integrating play-based learning and video phonics instruction was associated with significant improvement in the literacy competence of Kindergarten learners at Sagnap Elementary School, Loay District, Bohol. The mean literacy score increased from 15.55 in the pretest to 31.82 in the posttest, with 82% of learners attaining the Competent level after the intervention. The paired-samples t-test confirmed a statistically significant difference in performance ($t(10) = -12.311$, $p < .001$). These findings demonstrate the potential of combining interactive, multisensory, and developmentally appropriate instructional strategies to strengthen foundational literacy skills, particularly phonemic awareness, letter-sound recognition, and emergent reading.

Based on the findings, Kindergarten teachers are encouraged to integrate play-based learning and video phonics into literacy instruction to provide engaging, interactive, and developmentally appropriate learning experiences. Learning resource developers may incorporate play-based phonics materials into the K–12 curriculum, while school administrators should allocate appropriate resources to support implementation. Professional development coordinators are encouraged to provide teacher training on multimedia-supported phonics instruction, contextualized learning materials, demonstration teaching, and continuous literacy assessment. The School of Advanced Studies of Bohol Island State University may also utilize the findings as a basis for extension activities under its Master of Education program. Future researchers are encouraged to examine the long-term effects of these instructional strategies on reading comprehension, writing, and multilingual learning.

The study was limited to eleven (11) Kindergarten learners from a single public elementary school during School Year 2026–2027 and employed a one-group pretest–posttest design without a comparison group. Consequently, the findings reflect the literacy performance of the participating learners and may not be generalizable to other educational settings. Although statistically significant improvements were observed, the research design does not establish that the intervention alone caused these changes.

5. REFERENCES

Bautista, G. F., Ghesquière, P., & Torbeyns, J. (2024). Stimulating preschoolers' early literacy development using educational technology: A systematic literature review. *International Journal of Child-Computer Interaction, 39*, Article 100620. https://doi.org/10.1016/j.ijcci.2023.100620

Bora, D., Richardson, U., Poikkeus, A.-M., & Torppa, M. (2026). Supporting early literacy and reading skills development in Grade 1: Findings from a randomized control trial with GraphoLearn-Rime and teacher-led phonics instruction. *Reading Research Quarterly, 61*(3), Article e70128. https://doi.org/10.1002/rrq.70128

Cusiter, J., Short, K., Webb, A., & Munro, N. (2025). Combined language and code emergent literacy intervention for at-risk preschool children: A systematic meta-analytic review. *Child Development, 96*(4), 1519–1545. https://doi.org/10.1111/cdev.14252

Department of Education. (2024). *Policy guidelines on the implementation of the MATATAG curriculum (DepEd Order No. 010, s. 2024)*. https://naro.law.upd.edu.ph/issuances/4436

Genobia, C. A., & Basmayor, E. N. (2025). Phonemic awareness in Kindergarten through video clips. *Psychology and Education: A Multidisciplinary Journal, 47*(6), 743–750. https://doi.org/10.70838/pemj.470604

Goldstein, H., Peters-Sanders, L. A., Madsen, K. M., Williams, J. M., Drobisz, J., Broome, E. A., Freda, S., McKeever, L. A., & Spencer, T. D. (2024). Efficacy of a supplemental small-group early literacy intervention implemented by early childhood educators. *American Journal of Speech-Language Pathology, 33*(1), 220–236. https://doi.org/10.1044/2023_AJSLP-23-00176

Gumidam, R. E. (2025). Enhancing reading literacy of Kindergarten through interactive learning materials at San Vicente Elementary School. *Asian Journal of Education and Social Studies, 51*(6), 1051–1060. https://doi.org/10.9734/ajess/2025/v51i62056

Hare, C., Johnson, B., Vlahiotis, M., Panda, E. J., Tekok-Kilic, A., & Curtin, S. (2024). Children's reading outcomes in digital and print mediums: A systematic review. *Journal of Research in Reading, 47*(3), 309–329. https://doi.org/10.1111/1467-9817.12461

Hechanova, H. A., Rollo, C. R., Libdan, I. E., Jr., & Disca, B. Y. (2025). Learning through playing: Improving phonemic awareness in Kindergarten learners of Eugenio Llido Rañada Elementary School. *Psychology and Education: A Multidisciplinary Journal, 37*(4), 407–416. https://doi.org/10.70838/pemj.370409

Liu, S., Reynolds, B. L., Thomas, N., & Soyoof, A. (2024). The use of digital technologies to develop young children's language and literacy skills: A systematic review. *SAGE Open, 14*(1). https://doi.org/10.1177/21582440241230850

Lojero, M. T. (2025). Effectiveness of game-based learning in the language and literacy of Kindergarten pupils in Balasi Elementary School. *Asian Journal of Education and Social Studies, 51*(5), 897–911. https://doi.org/10.9734/ajess/2025/v51i51969

Parry, C.-R. L., Kumar, S., & Gallingane, C. (2024). Integration of tablets in phonological awareness and phonics instruction: A systematic review. *Journal of Research in Childhood Education, 38*(4), 559–576. https://doi.org/10.1080/02568543.2023.2301110

Potier Watkins, C., & Dehaene, S. (2024). Can a tablet game that boosts Kindergarten phonics advance 1st grade reading? *The Journal of Experimental Education, 92*(1), 32–55. https://doi.org/10.1080/00220973.2023.2173129

Quileste, R. M., Labial, G. R. J., & Saa, N. (2025). Enhancing kindergartners' letter sound identification with the phonics play approach (PPA): An action research study. *INKUIRI: Jurnal Pendidikan IPA, 14*(2), 236–245. https://doi.org/10.20961/inkuiri.v14i2.103452

Raposo-Rivas, M., Halabi-Echeverry, A. X., Sarmiento Campos, J. A., & García-Fuentes, O. (2024). Associations among variables in technology-enhanced phonological awareness programmes based on a meta-analysis. *Education Sciences, 14*(4), Article 343. https://doi.org/10.3390/educsci14040343

Rehfeld, D. M., Kirkpatrick, M., O'Guinn, N., & Renbarger, R. (2022). A meta-analysis of phonemic awareness instruction provided to children suspected of having a reading disability. *Language, Speech, and Hearing Services in Schools, 53*(4), 1177–1201. https://doi.org/10.1044/2022_LSHSS-21-00160

Skene, K., O'Farrelly, C. M., Byrne, E. M., Kirby, N., Stevens, E. C., & Ramchandani, P. G. (2022). Can guidance during play enhance children's learning and development in educational contexts? A systematic review and meta-analysis. *Child Development, 93*(4), 1162–1180. https://doi.org/10.1111/cdev.13730

UNESCO & UNICEF. (2024). *Global report on early childhood care and education: The right to a strong foundation*. https://www.unicef.org/reports/global-report-early-childhood-care-and-education-right-strong-foundation