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LEARNING THROUGH PLAY: KINDERGARTEN TEACHERS' USE OF PLAY-BASED LEARNING AND ITS INFLUENCE ON PHONEMIC AWARENES

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ABSTRACT

This study examined kindergarten teachers' use of play-based learning and its relationship with phonemic Awareness among kindergarten learners in selected elementary schools in North Chicago, Illinois, during School Year 2026–2027. Specifically, it described the teachers' profiles, assessed their use of free play, guided play, structured play, cooperative play, and technology-assisted play, and determined the level of learners' phonemic Awareness in terms of letter-sound recognition, rhyming ability, beginning-sound identification, syllable segmentation, and phoneme blending. Using a quantitative descriptive-correlational research design, the study involved 120 kindergarten teacher-respondents selected through total enumeration. Data were collected using a researcher-made questionnaire and analyzed using descriptive statistics and appropriate inferential tests. The findings revealed that teachers' use of play-based learning was high, with an overall mean of 3.27. Learners' phonemic Awareness ratings were also high, with an overall mean of 3.42. Technology-assisted play obtained the highest mean among the play-based learning approaches, while beginning-sound identification received the highest rating among the assessed literacy indicators. Phoneme blending obtained the lowest rating but remained within the high category. Correlation analysis revealed a weak but statistically significant positive relationship between teachers' use of play-based learning and learners' phonemic Awareness ratings ($r = .223$, $p = .014$). No statistically significant differences were observed in the use of the play-based approach by teachers based on their age, gender, educational background, teaching experience, and attendance at training programs related to the topic. The PLAY to READ Framework that was suggested is based on the results obtained during the research and is aimed at the proper planning, application, and evaluation of play-based literacy learning activities.

KEYWORDS: *Play-Based Learning, Phonemic Awareness, Kindergarten Learners, Early Literacy, Descriptive-Correlational Research, PLAY To READ Framework*

I. INTRODUCTION

1.1. Background of the Study

Early childhood is a very important period where cognitive, language, social, and emotional skills develop and can be used as a base for lifelong learning. Early childhood education is where a child can get the right quality experience of learning to enhance his development, with the research from UNICEF (2018) showing that play-based learning is an approach that fosters whole child development. In addition, the importance of quality early childhood development, care, and pre-primary education is reaffirmed under Goal 4, Target 4.2 of the SDGs, which looks to ensure that all children are school-ready (United Nations, n.d.).

On the other hand, reading achievement remains an issue across the country despite the acknowledged role of early literacy development. An 8.9% decline was observed in average scale scores at fourth grade in reading, compared to average scale scores at fourth grade in 2022. Reading scores for the eighth grade declined compared to 2022 (National Assessment Governing Board, 2025). Early literacy is the foundation of literacy, and therefore, it needs to be increased in schools. Early literacy is important for foundational reading. The most significant of all the pre-reading skills is phonemic awareness. It's defined as the ability to perceive, identify, and manipulate the phonemes of the oral language. Phonemic Awareness seems to be a foundational skill. It is an understanding necessary in reading and learning the alphabetic language of our writing system (National Center on Improving Literacy, n.d.).

Play-based learning is defined as a child-centered philosophy that includes play as well as purposeful teaching and learning. It is suggested that play-based learning can give children opportunities to explore, communicate, and interact, and to develop basic academic skills. Buldu (2023), in his research, looked into the popularity of the play-based approach and the difficulties of teachers in applying this method in their classrooms. Subarna et al. (2025) studied the experiences of kindergarten teachers who used play-based teaching and pedagogical practices and techniques. These studies highlight the importance of understanding how teachers implement play-based models in their classes and how they help in the child's development.

For this framework, the present study aims to explore the correlation between teacher use of play-based learning methods and learners' phonemic Awareness in selected elementary schools of North Chicago, Illinois, USA. Herein, the study pays particular attention to the types of play, including free play, guided play, structured play, cooperative play, and technology-aided play, which will serve as the supportive mediums for early literacy skills. The results are expected to generate useful evidence that can guide teachers, school managers, curriculum designers and policymakers for natural and optimal kindergarten literacy practices.

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1.2 Statement of the Problem

This study aimed to determine the use of play-based learning among kindergarten teachers and its influence on the phonemic awareness of kindergarten learners.

Specifically, it seeks to answer the following questions:

1. What is the profile of the kindergarten teacher-respondents in terms of age, sex, highest educational attainment, years of teaching experience, and relevant trainings and seminars attended?
2. What is the level of kindergarten teachers' use of play-based learning in terms of free play, guided play, structured play, cooperative play, and technology-assisted play?
3. What is the level of phonemic awareness among kindergarten learners in terms of letter-sound recognition, rhyming ability, beginning sound identification, syllable segmentation, and phoneme blending?
4. Is there a significant difference on the kindergarten teachers' use of play-based learning and the phonemic awareness of kindergarten learners?
5. Is there a significant difference on the kindergarten teachers' use of play-based learning when grouped according to profile?
6. Based on the findings of the study, what practical output may be proposed to strengthen phonemic awareness through play-based learning?

1.3 Hypotheses

The study tested the following null hypotheses:

1. H_{o1}: There is no significant difference on the kindergarten teachers' use of play-based learning and the phonemic awareness of kindergarten learners.
2. H_{o2}: There is no significant difference on the kindergarten teachers' use of play-based learning when grouped according to profile.

1.4 Purpose of the Study

While play-based learning has been identified as a developmentally appropriate practice in early childhood education, more research is needed to understand better the relationship between play-based learning and particular early literacy skills, such as phonemic Awareness. The evidence has been insufficient to explain the relationship between kindergarten teachers' use of free play, guided play, structured play, cooperative play, and technology-mediated play and learners' phonemic Awareness. The relationship between teachers' demographic and professional characteristics and their use of play-based learning should also be further studied.

Consequently, the current study sought to examine the impact of the use of play-based learning by Kindergarten teachers on phonemic Awareness among learners in selected elementary schools in North Chicago, Illinois, USA. The following were the specific objectives of this study: describe the profiles of teachers (age, qualifications, work experience, and professional training), identify the Extent of implementation of each of the approaches to play-based learning, describe the phonemic Awareness of learners, identify the relationship between teachers' use of approach to play-based learning and learners' phonemic Awareness, and determine if there were any statistically significant differences in the implementation of the approaches to play-based learning based on the profiles of teachers.

The lessons learned from these findings were instrumental in helping educators and school authorities make adjustments in teaching literacy in a developmentally appropriate manner. Overall, these findings helped to advance knowledge necessary for improving early literacy education and achieving the goal of SDG 4 on promoting inclusive and equitable quality education and lifelong learning opportunities for all.

1.5 Scope and Delimitations

This study examined the application of play-based learning in selected kindergarten teachers and its association with phonemic Awareness of learners in selected elementary schools in North Chicago, Illinois, USA, for School Year 2026-2027.

The researcher for this study made use of the following five kinds of play: Free Play, Guided Play, Structured Play, Cooperative Play, and Technology-based Play. Phonemic Awareness among the subjects was gauged based on the following: letter-sound relation, rhyming Awareness, initial sound Awareness, segmentation of words into syllables, and phonemic blending. Age, gender, educational level, teaching experience, and teacher training were some of the variables used.

The study covered just the selected kindergarten students and did not include other literacy aspects such as reading comprehension and writing. Therefore, the findings cannot be generalized outside the scope of the study.

II. REVIEW OF RELATED LITERATURES AND STUDIES

2.1 Review of Empirical Studies

Play-Based Learning in Early Childhood Education

An educational philosophy that combines the natural affinity children have towards play with organized learning experiences, including socialization, exploration, problem-solving, and engagement. Skene et al. (2022) suggest, based on their systematic review and meta-analysis, that guided play has potential educational benefits over direct instruction in some areas of learning, although these potential benefits vary depending on the subject. Yin et al. (2022) explored the factors influencing kindergarten teachers' intention to implement play-based learning, highlighting the need to understand what conditions enable its effective implementation in the classroom. The evidence from these studies suggests that play-based learning can be an effective intervention if school teachers follow the curriculum guidelines and are supported to deliver the learning programs. It will be an effective approach in developing language and literacy in the Kindergarten setting.

Types of Play-Based Learning

Play-based learning entails several methods that differ with respect to children's autonomy, the level of teachers' involvement, and goals. In free play, children can choose the activity, while in guided play, exploration of children occurs alongside teacher-guided learning. In structured play, planned activities are conducted towards certain learning goals, and in

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cooperative play, interaction and collaboration are the key elements. Technology-mediated play includes the use of digital resources in learning activities.

According to Skene et al. (2022), guided play was found to have positive results in some areas, such as early mathematics and spatial vocabulary, compared to some other instructional methods. The study by Schmidtke (2023) focused on kindergarten teachers' views about professional learning and the impact it had on their implementation of guided play. These two articles show the importance of looking at how play is implemented.

In the current study, these methods can be used as a basis for looking into teachers' instructional practices and their relationship with phonemic Awareness of kindergarten learners.

Teachers' Characteristics and Implementation of Play-Based Learning

Teachers' professional knowledge, beliefs, and professional development may affect the implementation of play-based learning in the kindergarten classroom. Yin et al. (2022) state that there are many factors that influence teachers' intention to implement play-based learning. Additionally, Schmidtke (2023) has looked into the influence of professional learning on the implementation of guided play by teachers.

In addition, Pyle et al. (2022) have studied kindergarten teachers' play-based learning profiles and classroom assessment practices. Results show that teachers vary in assessing what children learn through play and thus, in how they teach and assess.

Therefore, it is assumed that investigating teachers' personal attributes and professional background is crucial when investigating the implementation of play-based learning. For this study, teacher characteristics such as age, gender, educational background, years of teaching experience, and professional training in play-based learning are examined.

Phonemic Awareness and Early Literacy Development

Phonemic Awareness involves being aware of the individual sounds in spoken words and the ability to isolate and manipulate those sounds. Phonemic Awareness skills can also help to develop early skills in reading and spelling.

One meta-analysis (Rice et al., 2022) points to a moderate overall positive effect of phonemic Awareness instruction on outcomes for preschool- and first-grade readers. A study (Rehfeld et al., 2022) also found positive effects of phonemic Awareness instruction for children who are suspected to have reading disabilities, including effect sizes for segmentation and blending. A third review (Sá & Lousada, 2022) focuses on phonological Awareness stimulation programs for preschoolers, including an effectiveness and methodology review.

Clearly, these results emphasize the need for teaching and evaluating children with specific indicators of sound-awareness skills. In this article, the current research project extends the view of phoneme Awareness by analyzing letter-sound recognition, rhyme, first-sound recognition, syllable segmentation, and phoneme blending. These indicators must be clearly understood, since first-sound recognition and phoneme blending are specific indicators of phonemic Awareness, while rhyme and syllable segmentation are part of other skills.

Play-Based Learning and Early Literacy Development

Children may learn about words and sounds in a variety of ways, and the play-based approach could include different types of active teaching styles. In addition, group activities, stories, songs, and games that use language will also likely help children to learn about words and sounds.

Skene et al. (2022) state that guided play may promote some learning outcomes, but it is not universally associated with benefits in various aspects of development. Fernández-Otoya et al. (2022) investigated the use of information and communication technologies for the stimulation of phonological awareness in preschool children, providing insight into digital means for phonological Awareness learning. Additionally, research by Rice et al. (2022) showed that conducting specific phonemic awareness training is probably effective in developing phonemic Awareness.

The findings seem to suggest that play activities can be seen as an adjunct to deliberate instruction. However, the proof that play has developmental advantages does not mean that all play has functions in phonemic awareness. It is recommended to develop investigations exploring the association between teachers' play-based activities and children's sound awareness.

Technology-Assisted Play and Phonemic Awareness

Play-assisted by technology includes the use of technological applications, interactive games, and multimedia tools in the teaching process. The use of such resources may offer chances for practicing sounds, their combination, rhyming, and correspondence to letters by children.

In their systematic review of studies, Fernández-Otoya et al. (2022) looked at the role of technology-based phonological Awareness in preschoolers. Similarly, Atış Akyol et al. (2023) conducted a systematic review of digital technology in preschool education by analyzing its applications in preschool learning. More specifically, Parry et al. (2024) reviewed the role of tablets in the context of phonological Awareness and phonics lessons and found varied results about the learning outcomes but emphasized the importance of teacher guidance.

Thus, technology-assisted play should be analyzed based on the quality and instructional purposes of the digital activities. In this study, technology-assisted play is one of the five methods used to analyze kindergarten teachers' play-based learning implementation.

2.2 Theoretical Framework

The study is constructed upon the contemporary theories of play-based learning, emergent literacy, and Vygotsky's Sociocultural Theory of Cognitive Development. According to Zosh et al. (2022), playful learning is defined as the integration of meaningful educational objectives with fun and child-driven games for learning purposes. In a similar way, play activities with the possibility of providing advantages for emergent literacy, such as oral language skills, emergent reading, and decoding skills in connection with sound-symbol relations, were considered by Rand and Morrow (2021). Smolucha & Smolucha (2021) analyzed Vygotsky's emerging theory of

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pretend play, social interactions, and zone of proximal development. Rice et al. (2022) examined the importance of phonemic Awareness instruction to the development of sound-awareness skills in young children. These theoretical perspectives guide this study and its examination of the relations between kindergarten teachers' play types: free, guided, structured, cooperative, and technology-assisted, to the learners' phonemic Awareness assessed by letter-sound identification, rhyming, beginning sound identification, syllable segmentation, and phoneme blending.

2.3 Conceptual Framework

This study was formulated within the context of a conceptual framework that included the logic model to establish the interrelationship among the variables studied.

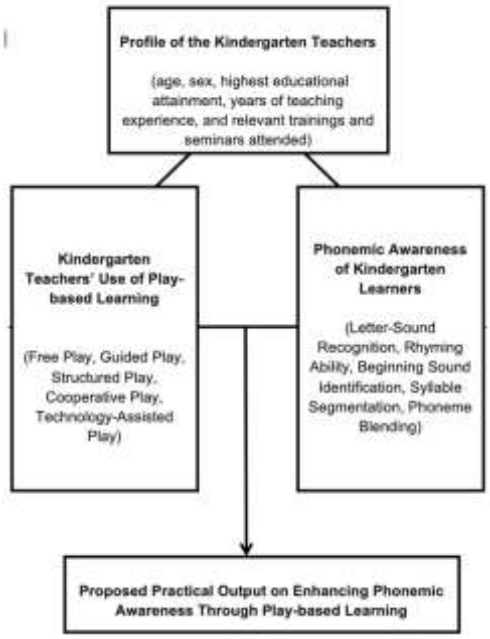


Fig. 1. The Conceptual Framework of the study

Figure 1 shows the proposed conceptual framework that pointing to the use of play-based learning activities (free play, guided play, structured play, cooperative play, and technology-based play), phonemic awareness of kindergarten learners (letter-sound knowledge, rhyme Awareness, beginning sound Awareness, syllable Awareness, and phoneme blending), and profiles of teachers (age, sex, highest academic qualification, years of teaching experience, and training).

The conceptual framework facilitated the process of analyzing the relationship between play-based learning implementation and phonemic Awareness of kindergarten learners. In addition, the conceptual framework enabled the analysis of differences in the implementation of play-based learning based on the teacher's profile. The interrelationships among the variables led to the development of a proposed practical output on how to improve phonemic Awareness of kindergarten learners through play-based learning.

2.4 Research Gap and Justification

Although current research exists on play-based learning and early literacy, more research is required to understand the relationship between various types of play-based learning and phonemic Awareness in kindergarten children. According to Skene et al. (2022), guided play enhanced certain learning outcomes, although the advantages of such an approach were not equally evident for all types of tasks. At the same time, the significance of phonemic Awareness instruction was proven by Rice et al. (2022), while Fernández-Otoya et al. (2022) conducted a systematic review of technologies for phonological Awareness training. The mentioned studies can serve as relevant literature. Still, they cannot help in identifying how the application of free play, guided play, structured play, cooperative play, and technology-enhanced play is related to indicators of phonemic Awareness discussed in the current paper.

In addition, Pyle et al. (2022) studied kindergarten teachers' play-based learning and assessment practices, which emphasizes the need to analyze the ways teachers apply play in their practice. Similarly, Garbo (2022) analyzed a play-based strategy for phonemic Awareness among five students of Grade 1 who experienced difficulties in reading.

This study investigates kindergarten teachers' implementation of five play-based strategies and their possible association with learners' phonemic Awareness in five selected elementary schools in North Chicago, Illinois, USA. This study also looks at whether kindergarten teachers' implementation differs according to teachers' age, sex, educational qualifications, teaching experience, and related training. The results of this study are meant to provide context-specific evidence that can contribute to the enhancement of kindergarten literacy teaching and contribute to the development of a proposed practical output to improve phonemic Awareness.

III. RESEARCH METHODOLOGY

3.1 Research Design

The study employed a quantitative descriptive correlational research design that sought to provide a description of kindergarten teachers' adoption of play-based learning and learners' phonemic awareness, as well as to establish the relationship between these variables. It is appropriate for the use of a quantitative design in the current study since it involved numbers and statistics.

3.2 Population and Sampling

The study involved 120 kindergarten teachers from selected elementary schools in North Chicago, Illinois, USA, during School Year 2026–2027. Total enumeration was used to include all eligible kindergarten teachers in the identified population.

3.3 Research Instrument

The data collection tools included a research-developed questionnaire comprising three sections: demographic information about teachers, play-based learning techniques, and teachers' evaluation of phonemic awareness among learners. The tool comprised five play-based learning techniques and five indicators of phonemic awareness. The responses were evaluated based on the four-point Likert scale, starting from Never (1) to Always (4), which was also categorized as Very Low (1) to Very High (4). The content

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validity and reliability of the tool were established through expert review and pilot testing, respectively.

3.4 Validity and Reliability

The questionnaire designed by the researcher was also validated by experts to establish the content validity of the instrument. The questionnaire was scrutinized by persons in the field of Early Childhood Education, Literacy Education, and Research Methodology to determine if the instrument is clear, relevant, and consistent with the objective of the study and the variables under investigation. Feedback and suggestions from the experts were incorporated into the revised version of the questionnaire.

To test the reliability of the new questionnaire, it was pilot tested on kindergarten teachers who did not participate in the main study sample. Responses were scored to Cronbach's alpha, in order to determine the internal consistency of items measuring implementation of play-based learning and teacher-rated phonemic awareness. An acceptable coefficient of.70 or above is typically used as an indicator of acceptable internal consistency (DeVellis & Thorpe, 2021). Final revisions of the instrument were made after it was validated and pilot-tested.

3.5 Data Collection Procedure

The researcher secured permission from the appropriate educational authorities and school administrators before conducting the study. After approval, informed consent was obtained from the participating kindergarten teachers, and applicable parental consent requirements were observed for learner-related data. The researcher then administered the researcher-made questionnaire to the 120 kindergarten teacher-respondents to gather information about their profiles, implementation of play-based learning, and learners' phonemic awareness. Clear instructions were provided to ensure proper completion of the instrument. After retrieval, the questionnaires were checked for completeness, coded, and organized for statistical analysis using SPSS. The findings served as the basis for the study's conclusions, recommendations, and proposed practical output.

3.6 Data Management and Data Analysis Procedures

Statistical tools that were appropriate for the analysis of the collected data were applied. The frequency counts and percentages were utilized in describing the profile of the kindergarten teachers in relation to their age, gender, highest educational attainment, teaching experience, and training and seminars taken. The mean and weighted mean were applied in determining the Extent of implementation of the play-based learning approach of the teachers in relation to free play, guided play, structured play, cooperative play, and technology-assisted play, as well as the phonemic Awareness of the learners in relation to letter-sound recognition, rhyming, beginning-sound identification, syllable segmentation, and phoneme blending. The independent-samples t-test or one-way analysis of variance (ANOVA) was utilized in determining the difference in the implementation of the play-based learning approach of the teachers in relation to their profiles. On the other hand, Pearson's r or Spearman's rho was employed in analyzing the correlation between the play-based learning implementation and phonemic Awareness. All statistical tests involved a 0.05 level of significance.

3.7 Ethical Considerations

The research complied with all the standards for ethical research, having obtained the necessary authorization from the department of education and from principals before collecting any data. The kindergartens' teachers gave their consent, and parental permission was considered for the learners as well. Students also gave written permission before their data was included in the study. Data was used only for the purpose of the research; all sources were referenced according to APA 7.

IV. RESULTS AND DISCUSSION

Question 1. What is the profile of the kindergarten teacher-respondents in terms of age, sex, highest educational attainment, years of teaching experience, and relevant trainings and seminars attended?

Table 1.

Profile of the Kindergarten Teacher-Respondents

Profile variables	Category	Frequency	Percentage
Age	21–25 years	16	13.3%
	26–30 years	37	30.8%
	31–35 years	24	20.0%
	36–40 years	17	14.2%
	41–45 years	6	5.0%
	46–50 years	12	10.0%
	51 years and above	8	6.7%
Sex	Male	73	60.8%
	Female	47	39.2%
Highest educational attainment	Bachelor's degree	33	27.5%
	With master's units	32	26.7%
	Master's degree graduate	16	13.3%
	With doctoral units	24	20.0%
	Doctoral degree graduate	15	12.5%
Teaching experience	1–3 years	27	22.5%
	4–6 years	30	25.0%

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	7–10 years	24	20.0%
	11–13 years	17	14.2%
	14–16 years	14	11.7%
	17 years and above	8	6.7%
Relevant trainings and seminars attended	Below 5	40	33.3%
	6–10	39	32.5%
	11–15	23	19.2%
	16–20	18	15.0%
Total respondents		**120**	**100.0%**

Table 1 shows the Profile of 120 kindergarten teacher respondents. The data showed that most of the respondents were aged 26-30 years old (30.8%), female respondents are (39.2%) and males (60.8%). Bachelor's degree is (27.5%) highest educational attainment of the respondents, followed by those who attained master's degrees (26.7%). Most of the respondents had 4- 6 years of teaching experience (25.0%) of teaching experiences and 33.3% attended less than five trainings/seminars, and 32.5% attended 6-10 trainings/seminars. The data revealed that the group is varied in terms of age, educational attainment, years of teaching experience, and attendance at seminars/trainings, and this may be used to examine if there are significant relationships between teacher variables and differences in their application of play-based instruction.

The results also bring out the demographic and professional characteristics of the respondents. (Pyle et al., 2022) a study showed that Kindergarten teachers had mixed opinions on play-based learning and class assessments. Other research by Schmidtke (2023) highlighted the importance of professional development in classroom implementation of guided play by teachers. On the other hand, using teachers' self-efficacy, instructional leadership, and collegial trust as predictors, Yin et al. (2022) determined that teachers intend to implement play-based learning. These research studies offered a basis for examining teacher characteristics and teacher professional preparation as related to play-based learning. As such, the current study examined whether play-based learning differed because of teachers' age, gender, degree level, years of teaching experience, and attendance at professional trainings and conferences.

Question 2. What is the level of kindergarten teachers' use of play-based learning in terms of free play, guided play, structured play, cooperative play, and technology-assisted play?

Table 2

Composite Table on the Level of Kindergarten Teachers' Use of Play-Based Learning

Indicators	Mean	Std. Deviation	Verbal Interpretation
Free Play	3.21	0.71	High
Guided Play	3.21	0.77	High
Structured Play	3.21	0.78	High
Cooperative Play	3.34	0.63	High
Technology-Assisted Play	3.39	0.65	High
Overall	**3.27**	**0.52**	**High**

Verbal interpretation: 3.50–4.00 = Very High; 2.50–3.49 = High; 1.50–2.49 = Low; 1.00–1.49 = Very Low.

Based on the data shown in **Table 2**, it can be inferred that the Kindergarten teachers' overall utilization of play-based learning would have been high based on the overall mean score of 3.27 with the corresponding standard deviation of 0.52. Furthermore, it seemed that the teacher had incorporated the highest usage of technology-assisted play (M = 3.39, SD = 0.65); on the other hand, cooperative play was the second-highest usage, with a mean of 3.34 with the standard deviation of 0.63, and free play, guided play, and structured play had a similar mean of 3.21. In total, all five play-based learning approaches were rated High, suggesting that the teachers used different types of approaches to teach learners phonemic Awareness regularly. Therefore, it can be concluded that technology-assisted and cooperative play were the most often reported play-based learning approaches, whereas the other three were also common.

The results show that teachers used various types of play-based learning, and that technology-assisted play and co-operative play were rated the highest. This resonates with Liu et al. (2024), who conducted a systematic review exploring the use of digital technologies to support early childhood language and literacy development. Also, Skene et al. (2022) found that adult-led play could improve children's learning and development at school. Furthermore, Pyle et al. (2022) point out that there are several profiles of how kindergarten teachers adopt play-based learning and classroom assessment practices.

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Question 3. What is the level of phonemic awareness among kindergarten learners in terms of letter-sound recognition, rhyming ability, beginning sound identification, syllable segmentation, and phoneme blending?

Table 3

Composite Table on the Level of Phonemic Awareness Among Kindergarten Learners

Indicators	Mean	Std. Deviation	Verbal Interpretation
Letter-Sound Recognition	3.42	0.66	High
Rhyming Ability	3.45	0.38	High
Beginning-Sound Identification	3.46	0.35	High
Syllable Segmentation	3.41	0.35	High
Phoneme Blending	3.37	0.33	High
Overall Phonemic Awareness	**3.42**	**0.21**	**High**

Verbal interpretation: 3.50–4.00 = Very High; 2.50–3.49 = High; 1.50–2.49 = Low; 1.00–1.49 = Very Low.

Table 3 indicates that the overall mean of phonemic Awareness of the kindergarten learners is high, with a mean of 3.42 and a standard deviation of 0.21. The highest mean was scored for beginning sound identification, with a mean of 3.46 and a standard deviation of 0.35. Rhyming skill also scored a high mean of 3.45 with a standard deviation of 0.38. Letter-sound recognition scored a mean of 3.42, while syllable segmentation scored a mean of 3.41. The lowest mean was scored for phoneme blending, with a mean of 3.37, which was also considered to be high. This means that from the respondents' perspectives, the learners performed well in all the indicators of phonemic Awareness.

From the evaluation of the respondents, it can be deduced that the learners achieved a high level of achievement in all the five criteria, but the least achieved criterion is for phoneme blending. Rice et al. (2022) highlight the importance of providing instruction in phonemic awareness skills. Sá and Lousada (2022) examine the effects of interventions to develop phonological awareness in preschool children. They point out the importance of providing the relevant activities at the beginning of the learning process. Fernández-Otoya et al. (2022) review the importance of information and communication technologies to develop phonological awareness in preschool children.

Question 4. Is there a significant difference on the kindergarten teachers' use of play-based learning and the phonemic awareness of kindergarten learners?

Table 4

Significant Difference Between Kindergarten Teachers' Use of Play-Based Learning and Kindergarten Learners' Phonemic Awareness

Variables Compared	t-value	df	Sig. (2-tailed)	Decision	Remarks
Teachers' Use of Play-Based Learning and Kindergarten Learners' Phonemic Awareness	-3.197	119	0.002	Reject the null hypothesis	Significant

Table 4 gives the findings from the statistical test for the difference between the use of play-based learning by kindergarten teachers and phonemic Awareness among kindergarten learners. The calculated t-value is -3.197 with 119 degrees of freedom and a p-value of 0.002. The null hypothesis was, therefore, rejected because the p-value was below the 0.05 significance level. There is thus a significant difference between the two measures, provided the statistical test was the right one to use. The literature related to this topic offers a framework for exploring the link between play-based learning and early literacy. According to Skene et al. (2022), play may be used as an opportunity for adults to facilitate the process of learning and development in educational settings. Similarly, Rice et al. (2022) discussed the significance of phonemic awareness instruction as a factor that facilitates early literacy development. Moreover, the role of technology in the promotion of phonological Awareness was considered by Fernández-Otoya et al. (2022) in the context of preschoolers' development. This research is relevant to the current problem but does not confirm the findings of the study on its own.

Question 5. Is there a significant difference on the kindergarten teachers' use of play-based learning when grouped according to profile?

Table 5

Significant Difference in Kindergarten Teachers' Use of Play-Based Learning When Grouped According to Profile

Profile Variables	Statistical Test	Test Statistic	df	Sig. (p-value)	Decision	Remarks
Age	One-way ANOVA	F = 0.508	6, 113	0.801	Fail to reject H_0	Not Significant
Sex	Independent-samples t-test	t = -0.665	118	0.507	Fail to reject H_0	Not Significant
Highest Educational Attainment	One-way ANOVA	F = 0.729	4, 115	0.574	Fail to reject H_0	Not Significant

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Teaching Experience	One-way ANOVA	F = 1.513	5, 114	0.191	Fail to reject H_0	Not Significant
Relevant Trainings and Seminars Attended	One-way ANOVA	F = 0.157	3, 116	0.925	Fail to reject H_0	Not Significant

Note. The level of significance was set at 0.05. H_0 = null hypothesis. The analysis used the uploaded dataset of 120 respondents.

Table 5 presents the results of the statistical tests conducted to determine whether significant differences existed in kindergarten teachers' use of play-based learning when grouped according to their profile. The results revealed no statistically significant differences based on age, (F(6,113)=0.508), (p=0.801); sex, (t(118)=-0.665), (p=0.507); highest educational attainment, (F(4,115)=0.729), (p=0.574); teaching experience, (F(5,114)=1.513), (p=0.191); and relevant trainings and seminars attended, (F(3,116)=0.157), (p=0.925). All p-values were greater than the 0.05 level of significance. Therefore, the null hypothesis was not rejected for all five profile variables. These findings indicate that the data did not provide sufficient evidence of differences in teachers' use of play-based learning across the profile groups examined. In this sample, teachers' reported use of play-based learning was statistically comparable regardless of age, sex, educational attainment, teaching experience, and number of relevant trainings and seminars attended.

The results indicate that there is no significant difference in the teachers' play-based teaching practice among the profile groups investigated. Natividad and Capinpin (2024), in their study on the use of play in kindergarten education, have also shown that there were no significant differences in most of the teacher profile variables in their investigation. However, according to Schmidtke (2023), the significance of ongoing professional development in supporting the kindergarten teachers in improving their practice of guided play cannot be understated. In more recent studies, instructional coaching as an important factor in planning and conducting playful learning activities was found to be effective (Feasibility and Acceptability of an Active Playful Learning Intervention for Kindergarten Teachers Using Instructional Coaching, 2025).

Question 6. Based on the findings of the study, what practical output may be proposed to strengthen phonemic awareness through play-based learning?

PLAY to READ Framework for Strengthening Phonemic Awareness Through Play-Based Learning

Rationale

PLAY TO READ Framework has been designed based on the results of the study, indicating a very high level of kindergarten teachers' implementation of play-based teaching and a high level of learners' phonemic Awareness. Of the five types of phonemic Awareness, phoneme blending received the lowest mean score, which indicates the type of phonemic Awareness that may need some further work. This framework is recommended as the tool for the purposeful integration of developmentally appropriate play-based activities into literacy instruction for kindergarten teachers. It should be used in order to develop letter-sound correspondence skills, rhyming, beginning sound identification, syllable segmentation, and phoneme blending. The effectiveness of this framework has yet to be determined.

Objectives

The suggested PLAY to READ Framework will be useful in:

1. Guiding the teachers in Kindergarten Schools in applying free play, guided play, structured play, cooperative play, and play assisted by technology in teaching literacy.
2. Providing examples of play activities that emphasize on the five phonemic/phonological awareness tasks identified.
3. Motivating teachers to place increased focus on phoneme blending in addition to other literacy skills that need development.
4. Showing ways of assessing learners' progress and areas that need more help.
5. Serving as an example for future improvements of play-based literacy in kindergartens.

Overview

The principles of Play to Read are at the core of the strategic framework developing. This is called PLAY to READ and contains three parts: Play-Based Learning Assessment, Strategic Planning and Capacity Development, and Monitoring and Continuous Improvement. Play-Based Learning Assessment, which equips educators to assess and build upon current practices and approaches with Play-Based Learning; Strategic Planning and Capacity Development, which supports educators to plan for targeted play-based learning activities aligned to the five literacy indicators; and Monitoring and Continuous Improvement, which demonstrates how an educator may monitor a learner's actions and then develop a reflective response.

The intended audience for this framework is for kindergarten teachers, school administrators, and curriculum leaders to use in their own classrooms and schools. The diagram of the framework, implementation considerations, and activity examples could all be added as an appendix to the framework. Formal implementation and evaluation are also suggested to ascertain usefulness.

V. SUMMARY OF FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

Summary of Findings

Results of the study showed that there were diverse demographic and professional characteristics of the 120 teacher-respondents in the kindergarten. Overall, the teachers highly used play-based learning (M = 3.27, SD = 0.52), while the use of technology-assisted play was rated highest (M = 3.39). Ratings of phonemic Awareness of the learners were also high (M = 3.42, SD = 0.21), wherein the beginning-sound identification was rated highest (M = 3.46) and the phoneme blending was rated lowest (M = 3.37). The results of the

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correlation analysis showed a weak but significant positive correlation between the use of play-based learning and phonemic Awareness of the learners (r = .223, p = .014). There were no significant differences in the use of play-based learning among the teachers in terms of their age, sex, educational attainment, teaching experience, and attendance at trainings and seminars. Therefore, based on the findings of this study, the PLAY to READ: A Play-Based Learning Enhancement Framework was recommended.

Conclusions

The study found that the kinder teachers perceived that there was very high usage of play-based instruction, and the learners were rated highly on the phonemic Awareness skills measured. There was a very weak but significant positive correlation between the two variables; however, without establishing any causality. Moreover, the use of play-based instruction by teachers was not significantly different based on their profile characteristics. The PLAY to READ framework could be used as a guideline for developing effective play-based literacy interventions in the kindergarten classes.

Recommendations

Kindergarten educators and school administrators are recommended to adopt the suggested PLAY to READ Model by incorporating diverse play-literacy activities, especially those that enhance phoneme blending skills, whereas future researchers should consider examining its impact on children's literacy skills through experiments and longitudinal studies to assess its possible contributions to the enhancement of early literacy skills among kindergartners.

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