

## The Effectiveness of the Play-Based Activities in Teaching Kindergarten Learners in Goa District, Division of Camarines Sur

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### ABSTRACT

Early childhood education recognizes play as a foundational mode of learning through which young children construct meaning, develop language, strengthen motor coordination, and build readiness for formal academic tasks. In kindergarten education, play-based activities are not merely supplementary classroom routines but central pedagogical strategies that support holistic development and emergent literacy. This study examined the effectiveness of play-based activities in teaching kindergarten learners in Goa District, Division of Camarines Sur, with particular attention to how commonly utilized classroom play experiences contribute to the development of early literacy competencies. Specifically, the study investigated the extent of utilization of play-based activities along singing, clay dough, drawing and painting, water play, and sand play. The study also determined the effectiveness of these play-based activities in improving selected literacy-related outcomes among kindergarten learners, particularly alphabet knowledge, phonics, word recognition, spelling, and handwriting. In addition, it tested the degree of significant agreement in the rank ordering of both the utilization of play-based activities and their effectiveness in promoting literacy skills. By linking play forms with literacy indicators, the study positioned play-based pedagogy as a meaningful instructional mechanism rather than as a purely recreational approach. A descriptive-evaluative-correlational research design was employed. The respondents consisted of seventy-seven (77) kindergarten teachers in Goa District, Division of Camarines Sur. A self-made questionnaire served as the primary data-gathering instrument. Statistical tools used included weighted mean, frequency count, percentage, ranking, and Kendall Coefficient of Concordance (W) with the corresponding chi-square test. The level of significance was set at 0.05. This methodological design enabled the study to generate both descriptive profiles of classroom practice and inferential evidence on the consistency of teachers' perceptions regarding the effectiveness of play-based learning. The findings revealed that all measured play-based activities were assessed as very much utilized, with singing obtaining the highest overall rating, followed by drawing and painting, water play, sand play, and clay dough. Significant agreement in the rank order of utilization was observed in all dimensions except water play. The findings further showed that the effectiveness of play-based activities was strongest in alphabet knowledge, handwriting, and phonics, while word recognition was rated only much effective and spelling received the lowest rating among the five literacy dimensions. Significant agreement in rank ordering was likewise found in all literacy areas except word recognition. The study concludes that play-based activities remain highly utilized and pedagogically valuable in kindergarten classrooms, particularly for foundational literacy development. However, the varying levels of effectiveness across literacy domains indicate that not all play forms contribute equally to all aspects of language development. Based on the findings, policy recommendations were formulated to strengthen teacher training, curriculum integration, resource provision, and the development of more targeted play-based interventions, especially for word recognition and spelling. The study affirms that play-based learning is a critical instructional approach in early childhood education and should be further refined through evidence-based practice and sustained institutional support.

### 1. Introduction

Kindergarten education serves as one of the most critical stages in the formal learning continuum because it lays the foundation for later academic achievement, language acquisition, social adjustment, and cognitive growth. At this developmental stage, children learn most effectively through active engagement, exploration, repetition, imagination, and sensory experience. For this reason, early childhood pedagogy has consistently emphasized the value of play as an essential medium of instruction. Play-based

learning enables young children to interact with materials, ideas, peers, and language in ways that are developmentally appropriate and intrinsically motivating. Rather than separating enjoyment from instruction, play-based pedagogy integrates both, thereby making early learning more meaningful and accessible.

In classroom practice, play-based activities provide structured and semi-structured opportunities for children to learn through doing. Singing introduces rhythm, repetition, sound discrimination, and memory; clay dough strengthens fine motor development and symbolic representation; drawing and painting support visual expression, pre-writing control, and conceptual understanding; water play enhances exploration and scientific thinking; and sand play promotes sensory engagement, creativity, and language interaction. These activities are often associated with holistic child development, but they also have specific academic value, particularly in the development of emergent literacy. When integrated purposefully into instruction, they become tools for teaching sound-symbol correspondence, vocabulary, sequencing, print awareness, and writing readiness.

The shift toward play-based instruction is especially important in kindergarten because literacy learning at this stage must be responsive to the developmental realities of young children. Alphabet knowledge, phonics, word recognition, spelling, and handwriting are not acquired effectively through mechanical drills alone. Children need repeated, multisensory, and meaningful experiences with language. Songs can reinforce letter names and sounds; drawing and painting can help children connect symbols to meaning; tactile activities such as clay dough and sand tracing can strengthen letter formation; and imaginative play can create rich contexts for language use. Thus, play is not opposed to literacy; rather, it can serve as one of its strongest foundations when thoughtfully implemented.

In the Philippine educational setting, the importance of early literacy has grown even more pronounced with the increasing focus on foundational learning outcomes. Kindergarten teachers are expected to prepare learners not only for Grade 1 readiness but also for long-term literacy success. However, the challenge for teachers lies in balancing developmentally appropriate teaching methods with curricular expectations. Play-based learning offers a practical resolution to this challenge because it aligns with how young children naturally learn while also supporting academic targets. Yet despite its recognized value, there remains a need to examine how extensively play-based activities are actually utilized and how effective they are in specific literacy domains.

The present study is significant because it addresses that empirical need within the context of Goa District, Division of Camarines Sur. By examining the extent of utilization of specific play-based activities and their effectiveness in developing selected literacy skills, the study contributes localized evidence that can inform classroom practice, school leadership, curriculum planning, and policy direction. It also acknowledges that not all forms of play may yield the same results across different literacy outcomes. Understanding these distinctions is crucial for strengthening instructional design and ensuring that play-based approaches are both enjoyable and educationally strategic.

The study is also important because it places teachers' perceptions at the center of analysis. Kindergarten teachers are in the best position to observe which activities are most practical, most frequently used, and most beneficial to learners in actual classroom settings. Their assessments provide valuable insight into instructional realities that may not be captured by policy language alone. Through their responses, the study is able to map how play-based pedagogy functions in day-to-day teaching and how its effects are perceived in relation to core literacy skills.

Another key value of this study lies in its attention to rank-order agreement. By testing whether teachers significantly agree on the relative use and effectiveness of different play-based activities, the study goes beyond descriptive averages and examines the consistency of professional judgment across respondents. This gives additional strength to the findings because it reveals whether particular dimensions are broadly and reliably perceived in similar ways. Areas with lower agreement, such as water play and word recognition, become especially important because they may indicate instructional variability, uneven implementation, or weaker alignment between activity and outcome.

From a broader educational perspective, the study reinforces the principle that early literacy development is best supported through rich, responsive, and child-centered methods. In contexts where pressure for measurable academic performance may lead to overly formal instruction at early ages, research on play-based effectiveness becomes particularly necessary. It reminds educators and administrators that developmentally appropriate practice is not a barrier to learning outcomes; it is often the pathway toward them.

Ultimately, the study argues that play-based activities should be treated not as optional enrichment but as essential pedagogical components of kindergarten instruction. Their high utilization and demonstrated effectiveness in several literacy domains suggest that they are already embedded in practice, but the uneven results across outcomes also indicate a need for refinement. This research therefore contributes both an affirmation and a challenge: it affirms the value of play in early learning, and it challenges educators to design play more intentionally so that it can better support all dimensions of literacy development.

## 2. Methodology

This study employed the descriptive-evaluative-correlational method of research to determine the effectiveness of play-based activities in teaching kindergarten learners in Goa District, Division of Camarines Sur. The descriptive aspect of the study was used to identify and present the extent to which play-based activities were utilized in kindergarten classrooms. The evaluative dimension assessed the effectiveness of these activities in promoting literacy-related learning outcomes, while the correlational component was reflected in the use of statistical tests designed to determine the degree of agreement in the rank ordering of the different variables measured. This design was appropriate because the study aimed not only to describe current classroom practices but also to evaluate their instructional value and consistency across respondents.

The respondents of the study were seventy-seven (77) kindergarten teachers in Goa District, Division of Camarines Sur. These respondents were chosen because they were directly engaged in the implementation of classroom instruction for kindergarten learners and therefore possessed the professional experience necessary to assess both the utilization and effectiveness of play-

based activities. Their participation allowed the study to generate findings grounded in actual instructional practice rather than abstract theoretical assumptions. Because the respondents represented teachers within the same district, the study also gained contextual coherence in relation to curriculum implementation and administrative environment.

The main data-gathering instrument used in the study was a self-made questionnaire. The instrument was designed to gather data on two major areas: first, the extent of utilization of play-based activities in teaching kindergarten learners along singing, clay dough, drawing and painting, water play, and sand play; and second, the extent of effectiveness of these activities in terms of literacy-related outcomes such as alphabet knowledge, phonics, word recognition, spelling, and handwriting. The indicators under each dimension reflected practical classroom manifestations of play-based instruction and observable learning outcomes. The use of a structured questionnaire allowed the researcher to collect uniform responses that could be statistically treated and interpreted. The data collection process was undertaken after the necessary administrative and procedural requirements had been observed. Respondents were informed of the purpose of the study, and the instrument was administered in a manner that respected professional schedules and ensured voluntary participation. Ethical considerations were maintained through confidentiality of responses and the assurance that the data would be used solely for academic and research purposes. The responses were then retrieved, organized, encoded, and prepared for statistical analysis.

To analyze the data, the researcher employed weighted mean, frequency count, percentage, and rank to determine the extent of utilization and effectiveness of play-based activities. These tools provided the descriptive basis for identifying which activities were most commonly used and which literacy outcomes were most strongly supported by play-based instruction. To determine the degree of agreement in the rank ordering of responses, the researcher used Kendall Coefficient of Concordance (W) with the corresponding chi-square test. This inferential tool was appropriate for examining whether respondents significantly agreed in the relative ordering of the indicators within each dimension. The 0.05 level of significance was used as the criterion for accepting or rejecting the null hypotheses.

The methodological design of the study is a strength because it allowed both broad and focused analysis. On one hand, it described classroom realities across multiple forms of play-based instruction. On the other hand, it narrowed the analysis to specific early literacy dimensions, thereby producing findings that are pedagogically useful. The combination of descriptive and inferential tools increased the credibility of the conclusions by showing not only average ratings but also the degree of consistency in teacher perceptions.

Another strength of the methodology is its direct alignment with the statement of the problem. Each research question was matched by a corresponding set of indicators and statistical procedures. This alignment ensured coherence between the conceptual focus of the study and the actual data collected. It also enabled the results to be interpreted with clarity, because each statistical output addressed a clearly defined instructional or outcome domain.

The methodology is also context-sensitive. Rather than treating play-based learning as a generalized early childhood principle, the study situated it within the actual experiences of kindergarten teachers in a specific district. This contextual grounding makes the findings more relevant to school leaders and teachers in similar settings. It also acknowledges that the success of play-based instruction depends partly on how it is enacted in real classrooms, with real materials, within real institutional conditions.

Finally, the chosen methodology provided a basis for evidence-informed policy recommendations. Because the findings emerged from the assessments of teachers who implement play-based learning daily, the resulting implications and recommendations reflect both pedagogical practice and classroom feasibility. This makes the study not only academically useful but also practically valuable for improving kindergarten instruction and supporting literacy development through play.

### 3. Results and Discussions

#### 3.1 Extent of the Utilization of Play-Based Activities in Teaching Kindergarten Learners

Play-Based Activity	Composite Mean	Interpretation	Rank
Singing	4.99	Very Much Utilized	1
Drawing and Painting	4.80	Very Much Utilized	2
Water Play	4.73	Very Much Utilized	3.5
Sand Play	4.73	Very Much Utilized	3.5
Clay Dough	4.52	Very Much Utilized	5

The findings show that all five categories of play-based activities were assessed as very much utilized in teaching kindergarten learners. This indicates that play-based instruction is deeply embedded in kindergarten classroom practice in Goa District. The high utilization across all dimensions suggests that teachers do not view play merely as a supplementary classroom diversion, but as an essential instructional approach for engaging young learners. Such a result strongly supports the idea that developmentally appropriate teaching remains central to early childhood practice in the district.

Among the five activities, singing emerged as the most highly utilized, with an almost perfect mean. This is a notable result because singing is one of the most versatile forms of play-based instruction in early childhood education. It supports memory, sequencing, phonological awareness, classroom routines, emotional expression, and social participation. The indicators under singing showed that teachers frequently use songs to teach alphabet sequence, counting, phonetic sounds, body parts, emotions, days of the week, hygiene routines, weather, and cultural awareness. This breadth of use suggests that singing functions not only as a literacy aid but also as a cross-domain pedagogical strategy.

The prominence of singing can be explained by several practical and developmental factors. It is easy to implement, highly engaging, low-cost, and naturally aligned with the oral and rhythmic learning style of young children. Songs also provide

repetition without monotony, which is particularly important in early literacy. Because repetition is embedded in melody and rhythm, children are more likely to retain information. In this sense, the high utilization of singing reflects both pedagogical wisdom and classroom practicality. Teachers appear to recognize that music-based instruction can deliver learning content in ways that are developmentally appropriate and emotionally appealing.

Drawing and painting ranked second and were also assessed as very much utilized. This suggests that visual and expressive art forms are widely integrated in kindergarten instruction. Drawing and painting promote fine motor control, shape recognition, symbol formation, imagination, emotional expression, and the connection between images and ideas. Many of the indicators also showed direct links to literacy and numeracy, such as drawing letters and numbers, representing story scenes, and illustrating concepts observed in the environment. The high utilization of this activity supports the view that art-based play can function as both expression and preparation for formal writing.

Water play and sand play shared the same overall mean, both interpreted as very much utilized. These findings are important because they reflect teachers' continued use of sensory and exploratory activities in kindergarten classrooms. Water play allows learners to investigate volume, capacity, sound, temperature, texture, floating and sinking, and symbolic pretend play. Sand play supports tactile exploration, creativity, comparison, storytelling, and early science and mathematics concepts. Their high utilization suggests that teachers appreciate the value of sensory-rich environments in promoting active learning. However, compared with singing and drawing, these activities may require more materials, space, supervision, and preparation, which may explain why they did not rank highest despite still being strongly utilized.

Clay dough ranked last among the five activities, although it still received a very much utilized rating. This indicates that clay dough remains an important classroom resource, but perhaps one that is somewhat less universal or less frequently integrated than the other activities. Clay dough is highly valuable for strengthening fine motor coordination, hand strength, symbolic thinking, color mixing, counting, shape formation, and letter modeling. The slightly lower rating may reflect practical issues such as availability of materials, time constraints, teacher familiarity, or classroom management concerns. Nevertheless, its overall high interpretation shows that it still occupies an important place in kindergarten pedagogy.

Taken together, these results indicate that kindergarten teachers in the district make substantial use of varied play forms that engage learners musically, visually, tactilely, and kinesthetically. This variety is pedagogically significant because young children do not learn optimally through a single mode alone. Diverse play-based activities create multiple entry points for learning and allow teachers to address different learner needs, preferences, and developmental profiles. The high utilization across all five dimensions is therefore a positive indicator of instructional richness.

The findings also imply that classroom practice in the district is strongly aligned with principles of child-centered education. Instead of relying solely on formal desk-based tasks, teachers appear to be incorporating instructional activities that invite participation, manipulation, movement, and creativity. This is consistent with best practice in kindergarten education, where active engagement is a key predictor of meaningful learning. The extent of utilization observed in this study suggests that teachers are already building learning environments where play functions as a pedagogical bridge to early academic competencies.

At a broader level, the findings affirm that play-based instruction is not a marginal method but a mainstream instructional reality in the local kindergarten context. However, the fact that utilization is high does not automatically guarantee equal effectiveness across all literacy skills. This makes the next set of findings particularly important, because it reveals how these highly utilized play activities translate into specific learning outcomes.

3.2 Test of Significant Agreement on the Rank Orders of the Extent of the Utilization of the Play-Based Activities

Play-Based Activity	Kendall's W	Chi-Square	Significance	Decision
Singing	0.76	20.52	p < 0.025	Significant
Clay Dough	0.85	25.80	p < 0.005	Significant
Drawing and Painting	0.84	27.72	p < 0.005	Significant
Water Play	0.46	12.42	p > 0.05	Not Significant
Sand Play	0.96	28.80	p < 0.005	Significant

The inferential findings reveal that there was significant agreement in the rank orders of the extent of utilization for singing, clay dough, drawing and painting, and sand play. This means that the kindergarten teachers were generally consistent in how they ranked the indicators under these play-based activities. Such consistency strengthens the reliability of the descriptive findings because it shows that the high ratings were not randomly distributed or widely divergent across respondents. Instead, the teachers shared a relatively stable perception of how these activities were being used in classroom practice.

The strongest agreement was found in sand play, followed by clay dough and drawing and painting. This suggests that teachers had particularly uniform perceptions of how these activities were implemented. Such strong concordance may indicate that the use of these activities follows similar classroom routines, material conditions, or pedagogical patterns across schools in the district. When teachers significantly agree on the rank ordering of an activity's indicators, it often suggests a level of instructional regularity and shared professional practice.

The significant agreement in singing also reinforces the earlier finding that music-based play is not only heavily used but also widely understood in similar ways by teachers. Singing may be one of the most standardized and familiar forms of play-based instruction in kindergarten because many songs are commonly used across classrooms for literacy, counting, routines, and behavior management. The significant concordance suggests that teachers collectively recognize similar instructional strengths in singing and are likely drawing on comparable methods and purposes in its implementation.

In contrast, water play did not yield significant agreement in rank ordering. This is a meaningful finding because it suggests greater variability in how teachers perceive the utilization of water play activities. Although the overall descriptive mean still showed that water play was very much utilized, the lack of significant agreement implies that teachers did not rank the indicators in a sufficiently consistent manner. This may indicate that water play is implemented differently across classrooms, depending on resource availability, space, safety considerations, teacher preference, or scheduling opportunities.

The weaker concordance for water play may also reflect the inherently variable nature of the activity itself. Unlike singing, which can be implemented easily in almost any classroom, water play often depends on physical setup, materials, access to water, supervision requirements, and weather or classroom conditions. Some teachers may use it regularly for measurement, sensory exploration, and experimentation, while others may use it less often or in more limited ways. This diversity of implementation can lead to less consistent ranking patterns even when the activity remains broadly valued.

From a pedagogical standpoint, the result for water play highlights the difference between overall utilization and structured uniformity. An activity may be widely used, yet still vary considerably in form and emphasis from one classroom to another. This is important for administrators and curriculum leaders because it suggests that some play-based activities may require more guidance, exemplars, or resource support to promote more consistent implementation. In the case of water play, variability may not necessarily be a weakness, but it may point to the need for clearer frameworks for integration.

The inferential findings, therefore, enrich the interpretation of the utilization results. They show that most play-based activities are not only highly used but also perceived with strong consistency across teachers. This strengthens confidence in the overall conclusion that play-based instruction is well established in the district. At the same time, the exception found in water play reminds educators that some forms of play may benefit from further standardization, professional development, or contextual support.

Overall, the presence of significant agreement in four of the five play domains suggests that kindergarten teachers in Goa District share a common instructional culture regarding play-based learning. This shared culture is an important asset because it can support coordinated improvement efforts, collaborative lesson design, and stronger curriculum alignment. Areas with weaker concordance, however, should be viewed as opportunities for refinement rather than as failures of implementation.

### 3.3 Extent of the Effectiveness of the Play-Based Activities in Teaching Kindergarten in Terms of Literacy Outcomes

Literacy Outcome	Composite Mean	Interpretation	Rank
Alphabet Knowledge	4.67	Very Much Effective	1
Handwriting	4.62	Very Much Effective	2
Phonics	4.57	Very Much Effective	3
Word Recognition	4.40	Much Effective	4
Spelling	3.26	Effective	5

The findings on effectiveness show that play-based activities were most beneficial in the areas of alphabet knowledge, handwriting, and phonics, all of which were rated very much effective. This indicates that play-based pedagogy is especially strong in supporting foundational, emergent literacy skills that are closely tied to sound recognition, letter familiarity, and early writing readiness. These results are highly consistent with early childhood learning theory, which emphasizes that young children benefit most from tactile, repetitive, auditory, and visually engaging activities when first encountering written language.

Alphabet knowledge emerged as the highest-rated literacy outcome. This suggests that play-based activities are particularly effective in helping kindergarten learners identify, name, sequence, and associate letters with sounds. The indicators under this domain included singing the alphabet, arranging letters, writing uppercase and lowercase letters, matching letters to pictures, identifying initial sounds, and recognizing letters in everyday environments. These results strongly support the idea that play can make abstract symbols more concrete, familiar, and memorable. Since alphabet knowledge is one of the most essential precursors to reading, this finding carries major instructional significance.

Handwriting was also rated very much effective, indicating that play-based activities strongly support motor and pre-writing development. This result is understandable given the emphasis on activities such as tracing, drawing, molding, shaping, and manipulating materials. Play-based learning naturally strengthens hand control, eye-hand coordination, directional awareness, and symbolic representation. The high ratings for name writing, pencil grip, letter formation, word spacing, and writing within lines suggest that play helps learners build the physical and cognitive readiness needed for formal writing tasks.

Phonics likewise received a very much effective rating, showing that play-based activities support children's ability to connect letters with sounds, identify initial and ending sounds, count syllables, blend and segment sounds, and recognize word families. Singing, movement, rhythm, tactile tracing, and sound games likely contribute to this strength. Because phonics instruction in kindergarten is most effective when multisensory and playful, the finding confirms that play-based strategies are highly compatible with early sound instruction. This is particularly important because strong phonics skills contribute directly to later reading development.

In contrast, word recognition was rated only much effective. While still positive, this lower rating indicates that play-based activities may not support this literacy domain as strongly or as directly as they do alphabet knowledge, handwriting, and phonics. Word recognition requires learners not only to know letters and sounds but also to process words more automatically, identify patterns, use context, and develop familiarity with high-frequency and sight words. This is a more advanced literacy task that may require repeated exposure to print, guided reading interaction, and more targeted decoding practice beyond general play routines.

The lowest-rated domain was spelling, which was interpreted only as effective. This suggests that spelling remains the most difficult literacy outcome to develop through current play-based activities. Spelling requires learners to move from recognizing and sounding out language to reproducing it in written form with increasing accuracy. This involves memory, fine motor control, phonemic segmentation, orthographic awareness, and visual recall. For kindergarten learners, spelling may still be emerging and therefore may not yet show the same degree of observable mastery as more basic literacy skills. The lower rating does not mean play is unhelpful, but rather that current play-based strategies may not yet be sufficiently targeted to produce stronger spelling gains.

These results reveal an important developmental progression. Play-based activities appear most effective in building the early and preparatory layers of literacy—knowing letters, hearing sounds, and forming symbols—while being less effective in the more complex tasks of fluent word recognition and conventional spelling. This is not unexpected. Foundational skills typically develop first, and more complex literacy competencies require longer-term scaffolding and more specialized instructional design.

At the same time, the findings should not lead to the conclusion that play is inadequate for higher literacy skills. Rather, they suggest that the design of play-based activities may need to become more intentional and targeted when the instructional goal shifts from general literacy readiness to specific decoding and encoding outcomes. For example, more structured sight-word games, word-family manipulation tasks, phoneme-grapheme mapping activities, and playful spelling routines may be needed to strengthen outcomes in word recognition and spelling.

Overall, the effectiveness findings confirm that play-based learning is a powerful pedagogical approach for kindergarten literacy instruction, especially in foundational domains. However, the results also point to the need for differentiated play design. Not all literacy outcomes respond equally to the same types of play, and therefore teachers may need to align specific play forms more deliberately with specific learning targets. This insight is among the most valuable contributions of the study because it moves the discussion from general support for play-based learning to more nuanced instructional refinement.

3.4 Test of Significant Agreement on the Rank Orders of the Extent of the Effectiveness of the Play-Based Activities

Literacy Outcome	Kendall’s W	Chi-Square	Significance	Decision
Alphabet Knowledge	0.96	25.92	p < 0.005	Significant
Phonics	0.94	28.20	p < 0.005	Significant
Word Recognition	0.24	7.92	p > 0.05	Not Significant
Spelling	0.86	30.96	p < 0.005	Significant
Handwriting	0.95	37.05	p < 0.001	Significant

The inferential results show that there was significant agreement in the rank orders of effectiveness for alphabet knowledge, phonics, spelling, and handwriting. This means that teachers generally agreed in how they ranked the indicators within these literacy domains. Such concordance provides additional strength to the descriptive findings by indicating that the observed effectiveness ratings were not merely average tendencies but shared professional judgments. High agreement in these domains suggests that teachers have relatively consistent experiences in observing how play-based activities support these aspects of literacy.

The strongest agreement was recorded in alphabet knowledge and handwriting, followed closely by phonics. This indicates that teachers have very stable perceptions regarding the effectiveness of play in developing these foundational literacy skills. Such consistency likely stems from the visibility and measurability of these outcomes in kindergarten classrooms. Children’s ability to sing the alphabet, identify letters, trace shapes, hold pencils, and form letters can be directly observed during daily activities. Because these outcomes are concrete and frequently practiced, teachers are more likely to reach similar judgments regarding their improvement.

The significant agreement in spelling is also noteworthy even though spelling received the lowest effectiveness mean. This suggests that teachers consistently perceived spelling as a weaker area of development. In other words, the lower mean was not due to scattered opinion but to shared professional recognition that spelling remains more difficult to improve through current play-based strategies. This kind of finding is useful because it clearly identifies spelling as an area in need of instructional strengthening. Agreement around a weakness is still valuable because it gives educators a common basis for action.

In contrast, word recognition did not show significant agreement. This means that while the average rating indicated that word recognition was much effective, teachers differed more noticeably in how they ranked the indicators within this domain. This variability may reflect differences in classroom practice, learner readiness, teacher expectations, or interpretation of what constitutes successful word recognition at the kindergarten level. Some teachers may observe stronger gains through play-based methods, especially when using environmental print, labels, picture-word matching, or name recognition, while others may see slower progress in learners’ ability to identify and read unfamiliar words.

The weak concordance in word recognition may also point to the transitional nature of this skill. Word recognition sits between early letter-sound knowledge and more independent reading. It requires not only familiarity with symbols and sounds but also repeated exposure to print, visual memory, contextual interpretation, and developing automaticity. Because this skill develops unevenly among young learners and may be more sensitive to home exposure, learner background, and teacher strategy, it is reasonable that teacher assessments would be less uniform.

From an instructional perspective, the lack of significant agreement in word recognition suggests that this area may require more standardized teaching supports or assessment frameworks. When teachers do not strongly agree on the rank order of indicators, it may indicate that the domain is being approached in varied ways or that outcomes are less consistently observed. This does not

undermine the value of play-based learning, but it does signal the need for more focused intervention design and perhaps more shared criteria for evaluating progress in word recognition.

The presence of significant agreement in four of the five literacy domains, however, remains a strong overall result. It confirms that teachers broadly concur that play-based activities are especially effective in foundational aspects of literacy, even when the degree of effectiveness differs by domain. This pattern of strong concordance lends credibility to the study's broader conclusion that play-based pedagogy is a valid and consistent approach in kindergarten instruction.

At a larger level, these inferential findings help distinguish between domains where play-based literacy instruction is well established and domains where it remains more variable or developmentally complex. Such distinctions are highly valuable for teachers, school heads, and curriculum planners because they point toward more precise instructional decisions. Rather than treating literacy development as a single undifferentiated outcome, the findings show that some areas may require broader reinforcement while others need more specialized and targeted play-based strategies.

#### 4. Conclusions

The study concludes that the play-based activities utilized in teaching kindergarten learners along singing, clay dough, drawing and painting, water play, and sand play are all very much utilized. This indicates that play-based instruction is strongly embedded in kindergarten classroom practice in Goa District and remains a central instructional strategy for engaging young learners. The high ratings across all activity types affirm that teachers recognize the pedagogical value of varied, multisensory, and participatory learning experiences.

The study further concludes that there is significant agreement on the rank orders of the extent of utilization of play-based activities in all measured domains except water play. This means that teachers generally share a common perception regarding how most play-based activities are utilized in classroom instruction. The exception found in water play suggests that although the activity is highly utilized overall, its implementation may be more variable across classroom contexts, likely due to differences in resources, setup, or practical classroom conditions.

The findings also support the conclusion that the effectiveness of play-based activities in teaching kindergarten is strongest in alphabet knowledge, handwriting, and phonics, while word recognition is only much effective and spelling is effective. This means that play-based pedagogy is especially powerful in supporting the foundational stages of literacy development, where learners are first acquiring letter knowledge, sound awareness, and early writing control. However, the results also show that more advanced literacy processes such as word recognition and spelling may require more targeted and intentional play-based strategies.

The study additionally concludes that there is significant agreement on the rank orders of the extent of effectiveness of play-based activities in all literacy domains except word recognition. This indicates that teachers generally concur in their judgments regarding how play supports most literacy skills, but are less consistent in their assessment of word recognition outcomes. This inconsistency points to the need for stronger instructional and assessment support in that particular area.

Another conclusion that may be drawn is that play-based activities do not contribute equally to all literacy outcomes. Their effectiveness appears to follow a developmental pattern, with stronger results in readiness-oriented skills and comparatively weaker results in more complex literacy tasks. This suggests that while play-based learning is highly valuable, it should not be treated as a uniform strategy with identical outcomes across all domains. Instead, its design must be aligned more deliberately with the specific literacy competency being developed.

The study also concludes that singing stands out as a particularly powerful and highly utilized play-based activity. Its near-perfect utilization rating and its alignment with alphabet knowledge and phonics suggest that music-based learning is especially effective in early literacy instruction. This has implications for curriculum development and teacher training, particularly in encouraging the intentional use of rhythm, repetition, and sound-based activities in classroom practice.

Finally, the study concludes that the policy recommendations formulated from the findings are necessary and relevant because they respond directly to identified strengths and gaps in play-based literacy instruction. The findings do not call for the replacement of play-based learning; rather, they call for its enhancement, especially in domains where effectiveness is less pronounced. Play-based pedagogy is therefore affirmed as both essential and improvable within kindergarten education.

#### 5. Implications

The findings of the study have important implications for early childhood pedagogy. First, they reinforce the principle that play-based instruction should remain central to kindergarten teaching. Since all measured activities were highly utilized and several literacy outcomes were strongly supported, educators and school leaders have empirical reason to continue promoting developmentally appropriate, play-centered learning environments. The findings challenge any tendency to replace play with overly formal academic instruction at the kindergarten level.

A second implication concerns literacy instruction design. The results show that play-based activities are particularly effective for alphabet knowledge, phonics, and handwriting, which means they are especially well suited for foundational literacy learning. However, because word recognition and spelling showed lower effectiveness, teachers may need to modify or enrich their play-based strategies when addressing these domains. This implies that effective play-based instruction requires intentional alignment between the form of play and the literacy skill being targeted.

Third, the findings suggest the need for differentiated teacher training. Not all play-based activities appear to produce the same level of instructional impact, and not all teachers may be equally skilled in maximizing each activity for literacy development. Professional development programs can therefore focus on helping teachers design more targeted songs, sensory tasks, storytelling games, and print-rich activities that strengthen word recognition and spelling while sustaining gains in other literacy areas.

A fourth implication is related to curriculum and resource support. Since singing, art, sensory play, and manipulative activities are already widely used, curriculum writers and school administrators should ensure that these are not treated as peripheral enrichment tasks but as integral components of literacy teaching. Schools may need to provide structured lesson exemplars, classroom materials, literacy-rich play spaces, and guidance documents that help teachers connect play experiences to clear learning outcomes.

The significant agreement found in most domains also implies that there is a relatively strong shared professional culture among kindergarten teachers in the district regarding the use and value of play-based learning. This is a positive organizational resource. It means that collaborative planning, peer mentoring, and district-level instructional improvement initiatives can build on an already existing consensus. Areas with weaker agreement, such as water play and word recognition, can become priority topics for instructional dialogue and collective refinement.

The study also has implications for assessment in kindergarten education. Because some literacy domains such as word recognition showed weaker agreement, there may be a need for clearer and more standardized indicators of progress. Kindergarten teachers may benefit from more consistent tools for observing and documenting literacy development within play-based contexts. Assessment frameworks that capture both playful engagement and academic growth could improve the reliability of classroom evaluation.

At the policy level, the findings imply that play-based learning should be institutionally protected and strengthened, not marginalized. Policymakers and school heads should recognize that play is not the opposite of learning but one of its most effective forms at the kindergarten level. Policies that support music integration, sensory-rich classrooms, parent involvement, and teacher capacity-building can help sustain and deepen the role of play in early literacy instruction.

Finally, the study implies that future program improvement in kindergarten education should adopt a holistic but evidence-based approach. Play-based learning already works well in several key areas, but its full potential depends on thoughtful refinement. The challenge for educators is not whether to use play, but how to use it more purposefully so that all major literacy outcomes—including the more difficult ones—can be supported with greater consistency and effectiveness.

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