

Play Activities and Early Learners in Public Kindergartens: Evidence from the La Nkwatanang Madina Municipality, Ghana

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Abstract

This study investigated the play activities on early learners in public kindergartens in the La Nkwatanang Madina Municipality, Greater Accra Region, Ghana. Grounded in the positivists' paradigm and employing a descriptive survey design, the study targeted all the kindergarten teachers in public basic schools within the municipality. The researchers used the census sampling technique to select all 30 qualified Early Childhood Education (ECE) teachers whose questionnaires were completed from a total teacher population of 40, which is consistent with the Krejcie and Morgan's (1970) sample size guidelines. Data were collected through a structured, close-ended questionnaire, anchored on a four-point Likert scale type (1 = Strongly Disagree (SD) to 4 = Strongly Agree (SA)). Data were analysed using descriptive statistics. The instrument returned adequate internal consistency (Cronbach's $\alpha = .79$) during pre-testing. Four research objectives guided the inquiry: (1) teacher's perception of play activities; (2) teacher's roles in supporting play activities; (3) strategies employed to enhance play; and (4) challenges encountered in implementing play activities. Mean scores above the mid-point of 2.50 were interpreted as teachers' indication of agreement with the statements. The findings revealed that the teachers broadly held positive perceptions of play-based learning activities and acknowledged its contributions to children's cognitive, social and emotional development. Teachers' roles were perceived as integral to children's knowledge acquisition, with evidence from a productive disparity between child-directed and teacher-directed approaches. A blend of child-centred and direct instructional strategies was most commonly reported. The main challenges included inadequate qualified teachers, insufficient funding, poorly adapted curricula, and a shortage of teaching and learning materials. The study recommended a sustained in-service teacher professional development, policy-driven resource mobilization, and collaborative school-community partnerships to strengthen play-based pedagogy in Ghanaian kindergartens.

1.0 INTRODUCTION

Worldwide, play is recognised as a fundamental activity in human and animal development that transcends cultural, geographical, and age-related boundaries (Burghardt, 2005; Pellgrini, 2009). Indispensable to child development, play enhances creativity, critical thinking, problem-solving and self-regulation (Hirsh-Paese, et al., 2009), executive function (Bodrova & Leong, 2007), as well as imagination and the construction of situated meaning (Vygotsky, 1967). Over the recent decade, play in Early Childhood Education (ECE) has attracted sustained scholarly and policy attention worldwide (Pyle & Daniels, 2017).

Globally, a paradigm shift is underway in ECE, with many recognizing the pedagogical value of play. The United Nation's Convention on the right of the child (1981) enshrines children's right to engage in play and recreational activities. There is enough empirical evidence that links play-based learning to enhanced cognitive, social and emotional development (Ginsburg, 2007; UNESCO, 2022), emotional skills in young children aged 4 to 6 (Mohammed, Nigussie, Schellens & Rotsaert, 2026). Bredekamp and Copple (1997) and Copple and Bredekamp (2009) reiterate that play-based activities enhance pupils'

general developmental well-being through effective pedagogical practices. Play also supports voluntary social learning formation of friendship and communicative development (Nilson et al., 2018) in high quality preschool settings (Dahlberg et al., 1999, Siraj-Blatchford et al., 2002).

In sub-Saharan Africa, the awareness of play's pedagogical importance is expanding and several countries are integrating play-based approaches into their ECE curricula (Marfo et al., 2011). However, practical challenges including limited resources, insufficient teacher preparations and large class sizes, continue to constrain effective implementation (Ackah-Jnr, Appiah, Addo-Kissiedu & Kwao, 2022). Data from the ECE centres suggest that full-day kindergarten programmes test-driven educational cultures allocate more instructional time to literacy and numeracy drilling than to free or choice-based play (Miller & Almon, 2009). This pattern privileges a standardised test performance at the expense of a holistic development.

Researchers have mapped play-based learning as a method that boosts cognitive development (Bradley & Corwyn, 2002), social, and emotional skills in young children aged 4 to 6 (Mohammed, Nigussie, Schellens & Rotsaert, 2026). Mohammed et al. (2026) did a broad review of 51 studies from 2015–2023. The quantitative data from their study showed that there is a linkage between play-based activities and better academic results, while qualitative insights noted gains in independence and creative thinking. These benefits appear consistent across regions such as North America, Europe, Asia, and Africa, though challenges in rollout persist (Mohammed et al., 2026).

In Ghana, the National Early Childhood Education Policy (2015) represents a significant commitment to improving ECE. Nevertheless, many Ghanaian kindergarten teachers reported challenges incorporating play into daily practice owing to limited teaching and learning resources, inadequate pre-service and in-service training, inadequate lesson time for kindergartens as well as large class sizes (Global Partnership for Education, 2025). The La Nkwatanang Madina Municipality, located in the Greater Accra Region, reflects these broader challenges. Pyle et al. (2018) argue that ECE teachers must negotiate complex interplay between child-directed and adult-guided activity if play is to be effectively harnessed for learning. Research on play practices in Ghanaian kindergartens remains sparse, constituting a gap that the present study aims to address.

Statement of the Problem

Teachers' active participation is integral to the quality of play experiences afforded to children. As educational planners and facilitators, teachers design environments, observe children, and intervene strategically to extend learning through play (Wood & Attfield, 2005). Yet, ECE practitioners often face pressure to prioritise literacy and numeracy instructions over play-based activities, which are driven by high-stakes testing accountability systems (Miller & Almon, 2009). The displacement of play by worksheet-driven, didactic instruction risks curtailing the self-regulation, creativity and social competence that are essential for a well-rounded human development.

In Ghana, the society's prioritisation of standardized assessment outcomes has altered ECE teachers' perception of play as a legitimate pedagogical tool. Empirical investigation into play activities in the Ghanaian kindergartens remain limited. This study systematically examines teachers' perceptions, roles, strategies and challenges relating to play in the La-Nkwantanang Madina Municipality to contribute to literature in this regard.

1.2 Purpose and Objectives of the Study

The purpose of this study was to examine the effects of play activities on early learners in public kindergartens within the La-Nkwantanang Madina Municipality. Specifically, the study aimed to:

1. Investigate kindergarten teachers' perceptions of play activities during instruction.
2. Ascertain the role of kindergarten teachers in supporting play activities.
3. Identify strategies used by kindergarten teachers to improve play activities.
4. Identify the challenges encountered in implementing play activities.

2.0 THEORETICAL FRAMEWORK AND LITERATURE REVIEW

2.1 Theoretical Framework

This study is grounded in Vygotsky's (1967) socio-cultural theory, which position's play as the leading activity in children's development and a primary vehicle through which higher psychological functions emerge. Within the Zone of Proximal Development (ZPD), play creates imaginary situations that allow children to act beyond their developmental level by practicing competences that are not yet fully internalised (Bodrova & Leong, 2007). The teacher, functioning as a more knowledgeable person, scaffolds children's learning through strategic engagement with play contexts. This theoretical framework is consistent with contemporary conceptualization of the ECE teacher as an active co-constructor of knowledge rather than a passive supervisor of play (Wood & Attfield, 2005).

2.2 Play-Based Learning in Early Childhood Education

Research has shown that play-based activities enhance pupil's brain development, emotional maturity and physical domain at the kindergarten level (African Centre for School Leadership, 2024; Ginsburg, 2007; UNICEF, 2018). Play enables children to explore symbolic representation, regulate emotions, negotiate social relationships, and rehearse problem-solving in low risk contexts (Nilson et al., 2018). High-value ECE environments that systematically incorporate play have been positively associated with later academic achievement and social competence (Siraj-Blatchford et al., 2002; Smits-van der Nat, van der Wilt, Meeter & van der Veen, 2024).

A study conducted on longitudinal evidence from the High/Scope Perry Preschool Curriculum Comparison by Schweinhart and Weikart (1997) demonstrates that children are encouraged to plan their own play activities accrue significant greater social gains over time compared with their peers in direct instruction programmes. Siraj-Blatchford et al. (2002) conducted a study on "Researching Effective

Pedagogy in the Early Years (PEPEY) project. They found that effective ECE settings are characterized by a combination of teacher-initiated and child-initiated activities within a moderately framed pedagogical structure.

2.3 The Teacher's Role in Supporting Play

Ghana's National Early Childhood Education Policy (2015) signals a policy commitment to holistic, play-inclusive ECE. The Ministry of Education, Science, and Sports recognises play as a mechanism for developing children's cognitive, affective, and psychomotor competencies (Amanfi, 2022).

Notwithstanding this framework, structural barriers, including inadequate infrastructure, insufficient teaching and learning materials, poorly adapted curricula, and a shortage of qualified ECE teachers, continue to impede realisation of play-based pedagogy (GPE, 2024; Ackah-Jnr, Appiah, Addo-Kissiedu & Kwao, 2022). The evidence base needed to inform policy and practice in the Ghanaian context requires further strengthening.

According to Rüdisüli, Duss, Lannen and Wustmann Seiler (2023), educators take on roles during free play, from guiding as tutors or stage managers to joining as co-players or handling group dynamics as managers. Observations in Swiss Centres revealed that reactive support such as tutoring occurs most often, shaped more by teachers experiences and class factors than play type alone (Rüdisüli et al., 2023). Experienced staff tend to direct, redirect less intrusively, promoting child control while scaffolding complex activities such as construction play (Rüdisüli et al., 2023).

2.4 Play-Based Learning in the Ghanaian Context

In Ghana, play-based methods face hurdles such as inadequate teaching and learning materials, teacher preference for rote teaching, limited access to professional development, and large class size, limited lesson time in kindergartens (Global Partnership for Education, GPE, 2012; GPE, 2025). Efforts such as leadership communities and training via songs or stories aim to build teacher skills amid large classes and low parental input (African Centre for School Leadership, 2024; Global Partnership for Education, 2025). However, the researchers argue that most of these in-service training projects are under-funded and are designed as a one-shot event, which the teachers described as woefully inadequate. The projects also lacked consistency as it was organised for select few who were invited to Accra on a three-day workshop. Innovations for Poverty Action (2018) argued that rural areas particularly struggle, yet programs show potential for brain growth if resources improve.

3.0 METHODOLOGY

3.1 Research Design

The study adopted a positivists' paradigm associated with the quantitative research approach (Kpodoma et al., 2024). A descriptive survey research design was employed in this study because this design enables the systematic collection and analysis of quantitative data to describe phenomena, attitudes, and perceptions within a defined population (Rashid et al., 2021). Descriptive surveys are particularly

appropriate when the aim is to characterize conditions as they exist rather than to establish causal relationships.

3.2 Study Area and Population

The study was conducted in the La-Nkwatanang Madina Municipality of the Greater Accra Region, Ghana. The target population comprised all kindergarten teachers employed in public basic schools within the Municipality. the total accessible population consisted of approximately 40 kindergarten teachers who shared identified characteristics such as academic qualifications in ECE, which are relevant to the study's objectives (Mugenda & Mugenda, 2015).

3.3 Sample and Sampling Technique

A sample of 30 kindergarten teachers (those who returned completed questionnaires), representing 75% of the Accessible population of 40 were selected using Krejcie and Morgan's (1970) Table for Determining Sample Size. The Census Sampling Technique (CST) was used to ensure that all members of the accessible population were selected (Neuman, 2007). This selection minimized selection bias and enhanced the representativeness of the sample. This also allows for generalisation of the findings to the target population.

3.4 Research Instrument

A structured, self-developed and self-administered questionnaire served as the primary data collection instrument. The instrument consisted of four specific objectives: (1) teachers' perceptions of play activities; (2) teachers' roles in supporting play; (3) strategies used to enhance play; and (4) challenges encountered in implementing play. Each section contained nine items framed as close-ended statements assessed on a four-point Likert scale i.e., 1 = Strongly Disagree (SD); 2 = Disagree (D); 3 = Agree (A); and 4 = Strongly Agree (SA). A four-point scale was deliberately selected to eliminate the central tendency bias associated with a neutral mid-point option (Mugenda & Mugenda, 2015). On this scale, a mean score above 2.50 was interpreted as respondents' overall agreement with the item, while a score of 2.50 or below was interpreted as respondents' disagreement with the item.

3.5 Validity and Reliability

Content validity was established through expert review by the researchers, who evaluated each item to ensure that each conforms with the study's objectives and provided feedback that informed the instrument's revision before finalisation (Mugenda & Mugenda, 2015). A pre-test was done to assess reliability of the questionnaire. The questionnaire was administered to 10 randomly selected kindergarten teachers in the neighboring Ga East Municipality. Those teachers shared similar professional characteristics with the target population. Internal consistency was calculated and a Cronbach's alpha coefficient of .79 was obtained. This exceeded the threshold of .70 and indicates adequate reliability for the research (Neuman, 2007). The pre-test data were used to refine the clarity of each item before the main data collection commenced.

3.6 Data Collection Procedure

Ethical clearance and permission to conduct the study were obtained from the ethical committee of the University of Education, Winneba and the heads of selected public basic schools in the Municipality before data collection. Upon receiving authorization, the researchers administered the questionnaires directly to the selected teachers during a mutually agreed period to minimise disruption to school schedules. All respondents were informed of the voluntary nature of their participation and the confidential treatment of their responses.

3.7 Data Analysis

Data were analysed using descriptive statistics such as frequencies, percentages, means (M), and standard deviations (SD) by the use of IBM SPSS Statistics (version 26). The results are presented in tables with interpretations. The grand mean cut-off was applied consistently across all four sections to distinguish items on which respondents, on average, agreed ($M > 2.50$) from those on which they disagreed ($M \leq 2.50$). Standard deviations are reported to indicate the degree of consensus or variability in responses.

3.8 Ethical Consideration

Participation in this study was entirely voluntary and respondents were assured of anonymity and the confidentiality of individual responses. All findings were presented in aggregates to protect respondents' identities. Finally, no personally identifiable information was collected.

4.0 RESULTS

The results are presented according to the research questions.

4.1 Research question 1: How do kindergarten teachers' perceive play activities during instruction?

Table 1
Kindergarten Teachers' Perceptions of Play Activities in Public Kindergartens (N = 30)

Items	SD (%)	D (%)	A (%)	SA (%)	M	SD
1. I balance theory and practice of play in the teaching and learning process.	29.3	50.0	7.3	13.4	2.93	0.97
2. Through play I identify how a child may be assisted in learning.	8.5	58.5	19.6	13.4	2.64	0.82
3. Play activities allow me to ascertain a child's capability and provide appropriate support.	19.6	60.3	8.5	11.6	2.87	0.85
4. Play in preschool motivates children for curriculum-based tasks that facilitate easy learning.	50.0	41.5	1.2	7.3	3.34	0.84
5. During play I plan activities aligned with national curriculum goals.	10.4	57.3	7.3	25.0	2.52	0.99
6. Play promotes development of motor and cognitive skills.	3.0	57.4	23.8	15.8	2.46	0.80
7. Through play I promote children's social and emotional competencies.	25.0	53.0	1.2	20.8	2.83	1.04
8. Play helps children think logically and acquire language skills.	16.4	61.7	7.3	14.6	2.78	0.89
9. Children's play is a joyous moment in the early childhood setting.	4.3	61.7	17.6	16.4	2.54	0.82
Source: Field data (2025)						
Note. SA = Strongly Agree; A = Agree; D = Disagree; SD = Strongly Disagree. Mean cut-off = 2.50; values above 2.50 indicate agreement. Source: Fieldwork data (2025).						

The aggregate mean of 2.77 (above the 2.50 cut-off) indicates that the majority of the kindergarten teachers agreed with the items relating to their perceptions of play activities. Item 4 recorded the highest mean score of 3.34, SD = 0.84. this shows that the teachers strongly agreed that play motivates children for curriculum-based learning tasks. Item 6 i.e., play helps in promoting motor and cognitive skills (M = 2.46, SD = 0.84) was the only item on which average responses fell below the agreement threshold. Respondents were in disagreement with this particular item. The moderate standard deviation (mean of SD = 0.88) reflects little variability in the individual responses.

4.2 Research question 2: What roles do kindergarten teachers play in supporting play activities during teaching and learning?

Table 2 below presents findings on teachers' roles of supporting play activities in public kindergartens.

Table 2
Kindergarten Teachers' Roles in Supporting Play Activities (N = 30)

Items	SD (%)	D (%)	A (%)	SA (%)	M	SD
1. When I am present, children perceive an activity as not play and approach tasks less playfully.	29.3	50.0	7.3	13.4	2.69	0.79
2. Children display less metacognitive monitoring under my supervision.	8.5	58.5	19.6	13.4	2.88	0.91
3. My role as teacher is essential in enabling children's development through play.	19.6	60.3	8.5	11.6	3.23	0.92
4. I plan a play environment and support learning through play.	50.0	41.5	1.2	7.3	3.34	0.84
5. My role increases children's stress and anxiety and demotivates them.	10.4	57.3	7.3	25.0	2.52	0.99
6. I encourage children to plan their own activities for some of the time, generating considerable social gains.	3.0	57.4	23.8	15.8	2.46	0.80
7. I use a combination of teacher-led and child-led activities to improve play.	25.0	53.0	1.2	20.8	2.83	1.04
8. My active role in play helps children reach their full potential.	16.4	61.7	7.3	14.6	2.78	0.89
9. I sometimes provide materials, safe spaces, and toys to encourage play without interfering.	4.3	61.7	17.6	16.4	2.54	0.82

Source: Fieldwork Data (2025).

Note

SA = Strongly Agree; A = Agree; D = Disagree; SD = Strongly Disagree. Mean cut-off = 2.50. Source: Fieldwork data (2025).

The aggregate mean of 2.81 indicates overall agreement across role-related items. Items 3 (M = 3.23, SD = 0.92) and item 4 (M = 3.34, SD = 0.84) attracted the highest agreements. This affirms the fact that the teachers regard their roles as critical to facilitating children's development and to planning supportive play environments. Items 5 (M = 2.52, SD = 0.99) and 6 (M = 2.46, SD = .80) were clustered around the agreement threshold. This shows that most of the teachers were divided on whether their presence causes stress for children (Item 5) and were somewhat less certain about fully ceding activity planning to children (Item 6). The mean standard deviation reflects moderate response consistency.

4.3 What strategies are used by kindergarten teachers to improve play activities?

Table 3 shows the strategies used by kindergarten teachers to improve play activities.

Table 3
Strategies Used by Kindergarten Teachers to Improve Play Activities (N = 30)

Items	SD (%)	D (%)	A (%)	SA (%)	M	SD
1. I employ instructional techniques and strategies that enable learning to take place.	29.3	50.0	7.3	13.4	2.55	0.82
2. I mostly use interactive teacher–learner processes to enhance the learning environment.	8.5	58.5	19.6	13.4	2.64	0.82
3. I use direct instruction in teaching through play.	19.6	60.3	8.5	11.6	2.87	0.85
4. I use a child-centred, play-based, and child-directed approach.	50.0	41.5	1.2	7.3	3.34	0.84
5. I promote learning through a mix of direct instruction and play.	10.4	57.3	7.3	25.0	2.52	0.99
6. I use teaching methods that help children master foundational skills before advanced learning.	3.0	57.4	23.8	15.8	2.46	0.80
7. I carefully sequence the learning process with task analysis and systematic progress monitoring.	25.0	53.0	1.2	20.8	2.83	1.04
8. I enforce the child-centred view that learning is child-directed rather than teacher-directed.	16.4	61.7	7.3	14.6	2.78	0.89
9. I believe both child-centred and direct-instruction approaches effectively promote children's learning.	4.3	61.7	17.6	16.4	2.54	0.82

Source: Fieldwork Data (2025).

Note

SA = Strongly Agree; A = Agree; D = Disagree; SD = Strongly Disagree. Mean cut-off = 2.50. Source: Fieldwork data (2025).

The aggregate mean of 2.73 shows that the majority of the teachers were in agreement with the strategy-related items. for instance, Item 4 (child-centred, lay-based approach returned the highest mean score of 3.34, SD = 0.84), whereas Item 6 (mastery of foundational skills before advanced learning recorded a mean score of 2.46, SD = 0.80) was the only item approaching the disagreement threshold. This suggests that foundational skills first instruction is not strongly endorsed as a play strategy. The overall data patterns suggest that the respondents favor a blended pedagogical approach by combining child-centred and teacher-directed elements during instruction. The mean of standard deviation of 0.90 shows moderate variability.

Research question 4: What are the challenges encountered in implementing play activities?

Table 4 shows challenges encountered in implementing play activities in public kindergartens.

Table 4
challenges encountered in implementing play activities (N = 30)

Items	SD (%)	D (%)	A (%)	SA (%)	M	SD
1. The principal challenge to play activities is a lack of effective, well-targeted intervention.	6.1	59.1	7.3	27.5	2.39	0.97
2. Inadequate funding hinders children's play activities.	4.3	63.4	23.8	8.5	2.63	0.70
3. Limited local and national administrative capacity hinders adequate play activities.	6.1	66.5	8.5	18.9	2.58	0.86
4. Poor or absent infrastructure poses a challenge to children's play activities.	25.0	32.3	35.4	7.3	2.74	0.92
5. Inadequate teaching and learning materials hinder play activities.	23.8	53.1	8.5	14.6	2.87	0.94
6. Poorly adapted curricula that do not meet children's needs hinder play activities.	39.6	35.4	8.5	16.5	2.97	1.07
7. A shortage of qualified teachers to facilitate play activities is a major challenge.	32.3	54.3	8.5	4.9	3.15	0.76
8. Lack of access to quality early childhood education prevents adequate play activities.	20.7	64.7	3.0	11.6	2.95	0.84
9. The financial demands of play materials pose a challenge to play activities.	20.7	41.5	35.4	2.4	2.77	0.82

Source: Fieldwork Data (2025).

Note

SA = Strongly Agree; A = Agree; D = Disagree; SD = Strongly Disagree. Mean cut-off = 2.50. Source: Fieldwork data (2025).

The data in shows that the kindergarten teachers faced numerous difficulties when it came to using play. With a mean score of 2.78, it can be said that most respondents agreed with the majority of assertions made to them in order to learn about the difficulties they had when using play. The respondents' agreement with the entire phenomenon varied greatly, as demonstrated by the mean of the standard deviation of 0.88.

5.0 DISCUSSIONS

5.1 Teachers' Perception of Play Activity

The perceptions of the kindergarten teachers in this study affirm the existing international literature that play enhances pedagogy (Hirsh-Paese, 2003; Pyle et al., 2018). Teachers' endorsement of play as a tool for identifying children may be supported in learning, which reflects the assessment and diagnostic functions of play-based observation as documented by Theobald et al. (2015). The study found that teachers strongly agree that play motivates children. These findings confirm that of Hirsh-Paese et al. (2009) who found that play-based approaches serve as motivational scaffolds for formal learning among children.

Again, teachers indicated that play promotes social, emotional, and language development. This is in line with findings of various scholars in the literature (African Centre for School Leadership, 2024; Ginsburg, 2007; UNICEF, 2018).

Moreover, the respondents affirmed that play is a source of joy and well-being (Item 9; $M = 2.54$) aligns with Sutton-Smith's (1997) characterisation of play as intrinsically pleasurable experience. Experienced staff tend to direct, redirect less intrusively, promoting child control while scaffolding complex activities such as construction play (Rüdisüli et al., 2023). The teachers strongly agreed that play promotes motor and cognitive skills (Item 6, $M = 2.46$) shows the influence of test-oriented discourse, which tends to describe play as distinct, rather than continuous for academic cognitive development.

5.2 Roles of Teachers in Supporting Play-Based Activities

The high aggregate mean for the role-related items shows teachers' recognition of their centrality to quality play experiences. The strong agreement with items concerning environment planning (Item 4) and enabling pupils' full developmental potential (Item 8) is consistent with the pedagogy of play framework. Wood and Attfield (2005) posit that teachers are the active architects and mediators of the learning environment. These findings confirm those of Siraj-Blatchford et al. (2002), who argued that settings that combine teacher-led activities within a moderately structured pedagogical framework as most developmentally effective.

Contrary to Sheridan et al. (2011) observation that uninvited teacher presence can constrain playful engagement most teachers disagreed with the notion that their presence makes activities feel less like play (see Item 1). This reflects a context-specific dynamic in which Ghanaian kindergarteners are socialized into teacher-present play from the onset of schooling. The finding from this study that pupils display greater meta-cognitive monitoring under teacher supervision (Item 2; $M = 2.88$) is consistent with existing literature. Whitebread et al. (2009) found that teacher-supported play contexts enhance children's self-regulatory activities.

5.3 Strategies to Improve Play-Based Activities

The respondents have reported that they made use of child-centred and interactive approaches in their teaching activities. These findings reflect the contemporary best practice in ECE (Marcon, 2002; Stipek & Byler, 2004). The blended pedagogical model i.e., combining direct instruction with child-centred activities, mirrors the approach recommended by Dodge et al. (2002) in the Creative Curriculum for

Preschool, which advocates integrating both strategies to accommodate individual learner needs. The systematic sequencing of learning through task analysis (Item 7) further suggests that teachers endeavor to scaffold children's within play contexts. This result is consistent with Vytgosky's (1967) ZPD-based principles.

5.4 Challenges of Implementing Play in Kindergartens

Teachers have identified several challenges in implementing ECE in this study. These challenges are in line with those enumerated in the comparable sub-Saharan African contexts (Partnership for Education, GPE, 2025; Ndlovu et al., 2023). For instance, (Global GPE (2025) and Ndlovu et al. (2023) found that there was inadequate teaching and learning materials, teacher preference for rote teaching, limited access to professional development, and large class size, limited lesson time in kindergartens.

Again, insufficient qualified teachers (Item 7; $M = 3.15$) was the most acute challenge enumerated by the teachers in this study. This points to the fact that there are systemic gaps in ECE teachers preparation and deployment that undermine play-based implementation fidelity. Inadequate teaching and learning materials (Item 5) and poorly adapted curricula (Item 6) were the structural challenges that limit the range and quality of play experiences available to children. These findings are in line with Bradley and Corwyn's (2002) findings that linked access to different types of materials to children's cognitive development.

Finally, the pervasiveness of financial constraints (Item 2 and Item 9) that the teachers were faced with the challenge of limited resourcing in the public ECE in Ghana. This resonates with the findings of Ackah-Jnr, Appiah, Addo-Kissiedu and Kwao (2022) on resource limitation in Ghanaian preschool settings. Collectively, these findings suggest that positive teacher attitudes and strategies are critical but not sufficient conditions for effective play-based pedagogy; structural and systemic enablers, adequate staffing; materials and curriculum adaptations are equally important.

6.0 CONCLUSION

This study provides empirical evidence on the effects of play-based activities in public kindergartens in the La-Nkwantanang Municipality of Ghana. Majority of the kindergarten teachers held positive perceptions of play-based pedagogy and recognized play activities' numerous contributions to children's cognitive, affective and psycho-motor development. The kindergarten teachers had indicated that in playing their facilitative and supportive roles, they must also employ a blend of child-centred and direct instruction strategies. However, the realization of play's developmental potential is constrained by a range of structural and material challenges. The most critical challenge identified was a shortage of qualified ECE personnel.

These findings stressed the need for policy interventions that strengthens teacher professional capacity and address the resource constraints impeding play-based practice. The data suggest that there is the need to address both pedagogical and structural dimensions towards the improvement of the country's

kindergarten education. Future study should employ the mixed methods approach and probability samples drawn from across different municipalities would throw more light on play-based pedagogical practices in the Ghanaian contexts.

7.0 RECOMMENDATIONS

Drawing from this study's results, we propose the following actions:

- The Ghana Education Service (GES) ought to establish ongoing, formalized in-service training initiatives centered on play-based teaching methods, covering both foundational principles and hands-on classroom application techniques.
- Together, the Ministry of Education (MoE) and the National Teaching Council (NTC) should integrate skills for guiding structured play into initial teacher training programs and required yearly professional development obligations.
- The MoE and GES need to assist early childhood education (ECE) instructors in enhancing their teaching practices via on-site mentoring and collaborative peer groups, fostering better support for play that boosts children's cognitive, emotional, and physical growth.
- In conjunction with Parent-Teacher Associations (PTAs), the MoE should emphasize supplying suitable, locally relevant resources for teaching and learning to support engaging, meaningful play in public kindergartens. The Municipal Education Directorate must create a specific plan for distributing resources and adjusting the curriculum to tackle ongoing shortages in facilities and mismatches in program design that hinder high-quality play-based ECE.

Declarations

Conflicts of Interest:

The authors report no conflicts of interest.

Ethical Approval:

Approval was secured from school principals and pertinent municipal education officials before gathering data. All participants gave informed consent, with confidentiality upheld at every stage. Per current national standards for educational surveys, no institutional review board approval was needed.

Funding:

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Data Availability:

Data underpinning the study's results can be obtained from the corresponding author upon reasonable request.

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