African Journal of
Education and Practice
(AJEP)

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IPRJB
INTERNATIONAL PEER REVIEWED
JOURNAL AND BOOK PUBLISHING

African Journal of Education and Practice
ISSN 2519-0296 (Online)
Vol.12, Issue 1, No.1, pp 1 - 20, 2026

www.iprjb.org

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Byanjweli L.
University of Nairobi, Kenya

Odhiambo K. T. O.
University of Nairobi, Kenya

Gakunga D. K.
University of Nairobi, Kenya

Kimamo C.
University of Nairobi, Kenya

Article History

Received 9th December 2025

Received in Revised Form 7th January 2026

Accepted 4th February 2026

How to cite in APA format:

Byanjweli, L., Odhiambo, K., Gakunga, D., & Kimamo, C. (2026). Early Childhood Educators' Pedagogical Practices Regarding Play-Based Learning in Kagera-Tanzania. *African Journal of Education and Practice, 12*(1), 1–20. https://doi.org/10.47604/ajep.3614

Abstract

Purpose: This study examine play-based pedagogical practices among early childhood educators in the Kagera region of the United Republic of Tanzania. Research investigates how teachers interpret, implement, and adapt play as a pedagogical approach in public pre-primary and community-run early childhood development (ECD) settings.

Methodology: A mixed-methods approach was employed, combining classroom observations, interviews, and questionnaires. A sample of 426 participants, including 202 head teachers, 202 preschool teachers, 20 parents, and 2 ward education officers, was selected through simple random sampling from a population of 896 schools and 75,553 preschool teachers. Quantitative data were analyzed using descriptive statistics, while qualitative data were analyzed thematically.

Findings: Findings indicate that while teachers are generally open to child-centered, play-based approaches, implementation is constrained by limited pre-service and in-service training, overcrowded classrooms, resource limitations, and misaligned curricula and assessment systems. Despite these constraints, classrooms with better material provision, teacher facilitation, and structured play environments showed higher learner engagement.

Unique Contribution to Theory, Practice and Policy: The study concludes that effective play-based pedagogy depends on teacher knowledge, planning, supportive environments, and alignment between curriculum, assessment, and community understanding. It recommends strengthening pre-service and in-service training, improving resource availability, enhancing parental awareness, and integrating guided play more explicitly into national ECE policy and practice.

Keywords: *Play-Based Learning, Early Childhood Education, Pedagogy, Mixed Methods, Curriculum*

JEL Code: *I21*

INTRODUCTION

Play practices in early childhood are widely recognized as vital for young children's cognitive, socio-emotional, and physical development. Play-based learning encourages children to explore, question, and understand their environment through interactions with people, objects, and their surroundings, fostering creativity, engagement, and lifelong learning (Pyle, 2017). Globally, research shows that play improves early literacy, math skills, social abilities, and motivation to learn, providing children with rich, meaningful experiences that lay the foundation for future academic success (UNICEF, 2017; Margolis, 2020; La Forett & Mendez, 2020).

In Tanzania, pre-primary education is a crucial stage within the education system, designed to support children's cognitive, social, emotional, physical, and health development before they begin primary school. The Tanzanian pre-primary curriculum encourages child-centered approaches that emphasize learning through play; however, it is not well known and implemented by some educators following the stipulated guidelines across classrooms. Although play-based learning offers recognized benefits, Tanzanian teachers encounter challenges in applying these methods effectively, especially in systems focused on measurable academic results. Teachers often find it difficult to assess learning through a play-based approach, and limited training restricts their ability to implement pedagogically intentional play (Pyle et al., 2018). Therefore, understanding educators' conceptions and practices is essential to aligning teacher education, in-service professional development, and policy efforts aimed at enhancing early learning outcomes.

Although play-based learning is strongly emphasized in early childhood education policy frameworks and international research, there is limited empirical evidence on how early childhood educators in the Kagera region of Tanzania actually implement play-based learning in their day to day pedagogical practices. Specifically, the following is not well documented: The types of play that educators commonly use in ECE classrooms in Kagera, the pedagogical strategies educators employ to integrate play practices with curriculum objectives, and the extent to which classroom practices align with play-based learning principles advocate in Tanzania's pre-primary curriculum, the contextual and institutional factors shaping educators' pedagogical decisions regarding play practices. Therefore, there is insufficient empirical evidence on early childhood educators' pedagogical practices regarding play based leaning (PBL) in the Kagera region of Tanzania, particularly concerning how play practices is enacted in classroom contexts and the factors shaping its implementation. Thus, this study aims to examine early childhood educators' pedagogical methods related to play-based learning in Tanzanian pre-primary settings. Specifically, it investigates the strategies teachers' use, how effective these practices are in supporting comprehensive child development, and the challenges faced both in the classroom and at home. By addressing these questions, the study intends to provide evidence to guide policy, professional development, and the practical application of play-based approaches in early childhood education.

Background: Tanzanian Context

In Tanzania, pre-primary education is officially guided by a child-centered and competence-based curriculum that emphasizes learning through play as a key pedagogical approach. The Tanzania Institute of Education and the Ministry of Education promote play-based learning as a means of fostering children's cognitive, social, emotional and physical development. However, in practice, the implementation of play-based pedagogy varies widely across schools. While some pre-primary

educators integrate play practices into teaching literacy, numeracy and life skills using locally available materials, many teachers still rely on teacher-centered and academically oriented methods. This situation is largely influenced by limited professional training in early childhood pedagogy, inadequate teaching and learning resources, large class sizes and pressure to prioritize formal academic instruction. Consequently, although policy supports PBL, its classroom application in Tanzanian pre-primary schools remains inconsistent and constrained by contextual and systemic challenges.

However, contextual claims concerning Childhood educators' pedagogical practices regarding PBL as it relates to Kagera Region in Tanzania and broader Tanzanian ECE context. The ECE Policy in Tanzanian Preprimary education curriculum is supposed to emphasize learner centered pedagogy and structured play activities as part of children's holistic development such as cognitive, social and motor skills. However, research across Tanzania finds that many teachers still use teacher centered methods instead of Play Based Learning (PBL). A study in Kagera Region shows that, instructional materials including play materials were largely unavailable, infrastructure and resources were inadequate for quality ECE. This suggests limited opportunities for educators to implement play based pedagogy meaningfully.

Moreover, Educators' beliefs and Practices around play based learning do vary. There is limited understanding of play concepts. Tanzanian preprimary educators often view play mainly as a motivational or physical activity rather than a core pedagogical tool that contribute a lot directly to learning outcomes. This limits their intentional use of play in curriculum delivery.

Also play are not translated into practices. Despite recognition of its importance many teachers in Tanzania focus their classroom time on academic instruction such as (reading and writing) rather than guided or structured play, even though they acknowledge that play supports cognitive and socio-emotional development. Large class sizes, parental expectations for traditional academic work and teachers' limited competence in play based pedagogy are commonly reported impediments to integrating play into everyday teaching.

Teacher Professional Development and Support are mostly required. Research across Tanzanian contexts highlights that, teacher lack targeted training in play based methods which affects their ability to plan, implement and evaluate play based experiences intentionally.

School Decision Making and Teacher Agency are observed. Studies from Tanzania preprimary settings demonstrate that, teachers are often excluded from key decision making process like, budgeting for materials that would enable better implementation of structured or guided play activities in and outside classrooms. Where teacher involvement in planning and decisions is low, the implementation of structured play in classrooms tends also to be weak.

Many of the documented constraints affecting play based pedagogy in other Tanzanian regions such as lack of play materials, teacher training gaps, large sizes, and cultural pressure towards academic instruction are likely mirrored in Kagera, given similar education system structures and resources challenges across the country.

Core Research Questions

The research was guided by the following questions to reach its objectives

1. What pedagogical practices do teachers use to implement play-based learning in pre-primary classrooms?

2. What challenges do teachers face when implementing play-based pedagogical practices in ECE centers?

Statement of the Problem

Despite national policy in Tanzania emphasizing play-based and child-centered pedagogy in pre-primary education, the actual classroom practices of many pre-primary educators in Kagera Region remain largely teacher-centered and academically driven. Play is often used as a break-time or recreational activity rather than as a structured and intentional teaching strategy for developing children's cognitive, language, social, and emotional skills. This gap between policy intentions and classroom practice is influenced by limited professional training in early childhood pedagogy, inadequate teaching and learning resources, overcrowded classrooms, and insufficient instructional support. As a result, many children in pre-primary schools in Kagera may not be fully benefiting from the developmental and learning opportunities that well-implemented play-based pedagogy can provide. This situation creates a critical need to examine educators' pedagogical practices and the factors influencing the use of PBL in pre-primary classrooms in the region.

However, with a focus on Tanzania and relevance for Kagera region, National research shows a strong empirical basis that Tanzanian classrooms tend to rely on teacher-led instruction which is less effective than leaner-centered methods. A literature review of articles on play based pedagogy in Tanzania showed that many teachers prefer teacher-centered methods and that insufficient professional development and resources are key obstacles to implementing learner-centered approaches. Even where policy supports learner centered methods, teachers often revert to traditional ways and rote methods due to systemic constraints.

Classroom research contexts (Classroom observational studies), under qualitative research in Tanzania preprimary schools observing teacher practices found that despite awareness of learner centered approaches, teacher centered methods remains common, particularly where time, resources, and training are limited. For that case, classroom observation data offer direct evidence of teacher-centered pedagogy dominating day today teaching.

Another study in Kagera found that, supervisory practices by heads of schools are statistically linked to teacher behaviors, results suggest low instructional leadership may inforce teacher centered habits because teacher receive limited pedagogical coaching. This quantitative data shows how school leadership and instructional context in Kagera shape teaching practices, indirectly supporting the claim that, teacher centered methods persist due to systemic factors.

Moreover, decision making participation linked to play pedagogy are limited, meaning that, teacher involvement in Kagera preprimary schools found that teachers often have limited role in decision making which correlates with top-down, teacher centered school cultures rather than collaborative, learner focused pedagogy. So teachers excluded from pedagogical decisions are less likely to adopt innovative, learner centered methods.

Generally, research shows that teacher centered practices remain dominant in Tanzanian classrooms, despite curriculum reforms that advocate for learner centered pedagogy. A 2025 meta-analysis of 35 studies found significantly stronger learning outcomes associated with learner centered methods while reviews indicate that teachers often revert to traditional methods due to insufficient training, resources, time and systemic support. In the Kagera Region, regional studies highlight average teacher commitment and limited instructional leadership, suggesting that, institutional and professional barriers reinforce teacher centered practices patterns backed by literature and statistics.

LITERATURE REVIEW

Theoretical Background

Play-based pedagogy is rooted in socio-cultural and constructivist traditions that see children as active creators of meaning. The theoretical framework for this study combines Vygotskian views on social mediation of learning, Piagetian constructivism focused on active exploration, and modern ecological models that emphasize the role of teachers, families, and community resources (Bronfenbrenner, 1979).Piaget regarded play practices as tools for assimilation and accommodation to support cognitive development, while Vygotsky highlighted social mediation, viewing play as a zone for higher mental functions and the zone of proximal development (ZPD). Current syntheses consider play practices both as inherent motivators and as scaffolds for learning when mediated by skilled adults (Margolis, 2020).

However, Constructivism holds that young children actively construct knowledge through interaction with their environment, materials, peers and adults. Meaning that, learning is not given to the child, it is built by the child. Constructivism theory is directly informs pedagogical play practices in early childhood learning centers through various sources. It shift the focus from the teacher to the child (Child-centered learning experience). Through play practices children choose activities based on their interests. Teachers observe, listen and respond rather than dominate instruction. Learning follows children's curiosity for example, exploring water, blocks, nature, soil and stones. For example, instead of teaching shapes in Math's through drills, children build with blocks, plastics, papers and discover shapes naturally.

Play practices is a core constructivist strategy in ECE. In play activities, dramatic play, block play, outdoor play and sensory play are valued. Play practices allows children to test ideas, solve problems, and make meaning. It is where teachers scaffold play with thoughtful questions. For example, during pretend shop play, children do construct understanding of numbers, money, language and social roles.

Constructivism also emphasizes learning by doing (active and hands on-learning). In play practices use of concrete materials like toys, manipulatives, natural objects, experiments, exploration, discovery activities, children manipulate, compare, sort and experiment, for example, children learn about plants by planting seeds and observing growth not by memorizing facts.

From Vygotskian constructivist view learning happens through social interaction (Hidayati, 2020). In play practices, group works and peer interaction are encouraged. Children learn from one another through discussion and cooperation. Teachers use dialogue to extend thinking, For example, children solve a puzzle together, sharing ideas and strategies.

Learning connected to real life experiences. Constructivism values meaningful and relevant learning. Play activities connect to children's home and cultural contexts. Use familiar materials and everyday experiences. Learning builds on what children already know. For example, in Tanzanian context, using local games, songs, household objects, improvised materials and community activities to teach concepts.

In general constructivism supports Play Based Learning (PBL), child autonomy, teacher facilitation, social interaction, context relevant pedagogy. All these makes it highly suitable for preprimary and early childhood learning centers, especially in contexts like Tanzania where experiential and culturally grounded learning is encouraged.

Conceptualizing Pedagogical Practices in ECE Settings

Play-based pedagogy (PBP) includes both free play and structured activities aimed at achieving specific learning outcomes (Weisberg et al., 2013). It is a fundamental approach in early childhood education, where play acts as the main way children explore and internalize academic concepts (Hidayati, 2020). Based on Vygotsky's Zone of Proximal Development (ZPD), play-based pedagogy emphasizes the importance of adult guidance to scaffold learning and help children develop new skills (Margolis, 2020; Wood, 2009).

Effective PBP requires teachers to create engaging environments, provide appropriate materials, and interact with children as collaborators (Pyle & Daniel, 2017). Such practices motivate children to explore, experiment, solve problems, and develop imagination through play. Pedagogical methods in early childhood education combine teaching, guided activities, and exploration, fostering curiosity and a love for learning (Waite-Stupiansky, 2022). Through these interactions, children enhance their communication skills, social-emotional abilities, cognitive development, and physical skills. Play-based learning is also recognized as a vital approach for supporting sustainable, long-term learning and 21st-century skills (Weisberg et al., 2013).

Teachers' Perspectives on Play Pedagogy and Professional Development in ECE

Play-based practices have gained increasing attention in early childhood education; however, teachers' perceptions of these practices remain varied (Bubikova-Moan et al., 2019). Educators' beliefs about ECE span a continuum: from those supporting unrestricted free play to those emphasizing structured academic preparation with minimal play. Research shows that while some teachers effectively incorporate play into learning, others see it mainly as a recreational activity unrelated to academic growth (Pyle et al., 2018; Walsh, Glenda, & Gardner, 2006).

Teachers' content knowledge, pedagogical understanding, and engagement in professional learning communities are essential factors influencing play-based pedagogy implementation (Mendenhall, 2021). Evidence from East Africa indicates that although many teachers are open to play-based methods, they often lack ongoing pre-service and in-service training. As a result, interpretations of PBP vary greatly, with some teachers equating play with social or physical activities rather than cognitive development (Bronfenbrenner, 1979; Piaget, 1962). Teachers' experiences, previous education, and personal beliefs significantly influence how they incorporate play into classroom practices (Weisberg et al., 2013). Those who participate in professional development are more likely to plan intentional play activities, scaffold learning, and effectively incorporate academic objectives (Ndijuye, 2020; Nibal et al., 2022).

Teacher Pedagogical Practices and Play-Based Approaches in ECE

The quality of play-based learning (PBL) in early childhood education (ECE) heavily depends on teachers' pedagogical practices (Pellegrini, 2009). Teachers shape children's cognitive, social, emotional, and physical growth by creating play environments, guiding play activities, and observing their learning progress. Successful PBP requires teachers to take on multiple roles: designing play spaces, scaffolding and co-playing, assessing and planning, acting as cultural mediators, and communicating with families and communities (Pyle & Daniel, 2017). In Tanzanian classrooms, common practices include using materials like bottle caps, sticks, and recycled paper for literacy and numeracy tasks (Mligo, 2016). Although some classrooms have role-play corners, manipulatives, or reading areas, limited space and safety concerns often hinder their use. Teacher-led activities, such as circle-time songs or counting games, tend to be more common than child-led or guided play. Strategies for effective scaffolding, like open-ended questions, modeling, and expanding vocabulary, are used inconsistently, especially in large classrooms.

Professional development programs that integrate coaching, locally produced materials, and parental involvement have shown beneficial effects on teacher practices and children's learning results (Mendenhall, 2021). Nevertheless, systemic challenges like curriculum pressure, resource shortages, and insufficient training still hinder effective play-based learning.

Effectiveness of Play-Based Learning Resources in ECE

Play-based learning resources are vital for supporting comprehensive child development. High-quality play practices encourage school readiness, boost cognitive and socio-emotional skills, and help reduce developmental disparities (Taylor & Boyer, 2020; La-Forett, 2020). Teachers play a crucial role in guiding meaningful interactions with materials and ensuring that play serves educational goals. Adult mediation, including scaffolding, observation, and guidance, amplifies the positive effects of play activities on language, executive function, early numeracy, and social skills. International research highlights that adapting to the context, teacher facilitation, and providing adequate play materials are key to maximizing the benefits of PBP.

Availability of Play-Based Learning Resources in Pre-Primary Settings

The availability of play materials greatly impacts children's chances for exploration, problem-solving, creativity, and social skills (Hirsh-Pasek et al., 2009). In many rural or low-resource pre-primary environments in Tanzania, play materials are limited, and children often depend on group activities with few options (Pyle et al., 2018). Lack of enough materials and limited time for play harm children's social-emotional growth, focus, and ability to behave appropriately, emphasizing the importance of providing better resources in Kagera and similar areas.

Learning Environment and Play Pedagogy

The learning environment, often called the "third teacher," greatly impacts children's interactions, exploration, and engagement (Siraj et al., 2002). Classroom spaces, including learning centers for art, literacy, math, science, and discovery activities, should be designed to promote hands-on, child-led learning. Children's engagement and views of play are influenced not only by the materials provided but also by how the environment is arranged, accessible, and visually appealing (Howard, 2006).

Barriers to Implementing Play-Based Pedagogy in ECE

Although PBP offers clear benefits, Tanzanian teachers face numerous obstacles to its effective adoption. Stringent academic requirements and inflexible curricula limit opportunities for child-led play, causing teachers to rely more on teacher-centered methods (Pyle et al., 2018; Nolan et al., 2024). Additional difficulties include large class sizes, insufficient professional development, and lack of play materials, unsafe playgrounds, and inadequate assessment systems. Cultural norms and parental expectations that associate learning primarily with formal academic instruction further hinder play-based strategies. These challenges highlight the need to understand teachers' beliefs, improve training, and align policies to promote holistic early childhood development.

Challenges such as limited teacher knowledge, insufficient resources, overcrowded classes, and misaligned assessment systems often hinder the effective use of play-based pedagogies (Pyle et al., 2018). These problems highlight the gap between policy objectives and actual classroom practice, emphasizing the need to understand how educators view and implement play-based learning.

METHODOLOGY

Research Design

A mixed methods design was used, combining quantitative measures of child outcomes with qualitative data from classroom observations, questionnaires, and interviews. This approach enabled methodological triangulation and offered a richer understanding of how play-based practices influence children's learning outcomes. The quantitative part, as noted by Mondal et al. (2022), provided objective assessment through numerical data, helping to evaluate the types of play-based teaching methods used by teachers, their effectiveness, and the challenges faced when implementing play activities in early childhood education (ECE) settings. In addition, the qualitative part provided deeper insights into teachers' beliefs, experiences, and strategies for overcoming challenges related to implementing play-based learning (PBL). By combining these methods, the study gained a comprehensive and balanced understanding of the research problem. A parallel mixed methods design was chosen, where qualitative data complemented and enriched the interpretation of quantitative results. This design strengthened the study by allowing for simultaneous data collection and comparison across both approaches.

Participant's Selection

A total of 426 respondents were sampled from two districts: Kyerwa and Bukoba Rural located within the Kagera region. Simple random sampling was used to select 202 schools, 202 preschool teachers, and 20 parents. Additionally, 202 head teachers and 2 Ward Education Officers (WEOs) were purposively chosen due to their administrative roles and relevance to the research focus. The sample was justified based on the broader ECE context in Tanzania, which includes 1,278,886 ECE teachers nationwide and 7,553 teachers and 899 pre-primary schools in the Kagera region, including 202 schools and 84,261 learners in the two selected districts (URT, 2020).

Data Collection Procedures

Various instruments were used to collect detailed quantitative and qualitative data on teachers' play-based teaching approaches. These tools facilitated a systematic analysis of teacher behaviors, classroom settings, student engagement, and stakeholder views. Data were collected through:

Classroom Observation Schedule

An adapted early year's observation tool was used to record teacher behaviors, types of play activities, child engagement, availability and use of materials, and classroom transitions. Observation proved to be an effective method for capturing how teachers implement play-based learning (PBL) in real time within early childhood education (ECE) settings. Data were collected through a structured observation checklist and open-ended field notes, allowing the researcher to document both standardized indicators and subtle aspects of instructional practice. This approach provided a detailed understanding of the effectiveness of PBL strategies and their impact on children's engagement and learning outcomes.

Interview Protocol

Semi-structured interviews were conducted with preschool teachers, ward education officers, and parents/guardians to explore beliefs about play experiences with pre-service and in-service training, perceived barriers, and overall opinions on the effectiveness of PBL. Each interview lasted 30–45 minutes and used an open-ended guide that allowed respondents to expand on their pedagogical practices and challenges. To ensure data accuracy and depth, the researcher gathered field notes, photographs, and audio recordings (with informed consent). These qualitative accounts provided valuable insights into how educators understand and apply play-based pedagogy.

Questionnaire

A structured questionnaire was distributed to ECE teachers to collect quantitative data on the implementation of play-based teaching methods. The tool included demographic questions and Likert-scale statements organized into thematic sections that addressed teachers' use of PBL strategies, perceived effectiveness, and challenges. The questionnaire enabled systematic measurement of patterns across a large sample and supported qualitative findings from observations and interviews.

Data Analysis

Quantitative data were analyzed using descriptive statistics in the Statistical Package for the Social Sciences (SPSS) version 22 and presented as frequencies and percentages, along with tables. The 5-point Likert scale was used, ranging from 1 (strongly disagree) to 5 (strongly agree). Meanwhile, qualitative data, coded and analyzed by themes using content analysis, were presented in narratives. The researcher adhered to all ethical considerations throughout the entire data collection process from the study participants.

RESULTS AND DISCUSSION

This study examined early childhood educators' pedagogical practices related to play-based learning in Tanzania. Using semi-structured interviews, data were collected from teachers, school leaders, and parents or guardians regarding the types of activities used and their frequency of implementation. The data were also analyzed thematically. The findings offered valuable insights into play-based pedagogical practices and how PBL enhances learners' academic achievement. A preliminary review of the literature showed that teachers often report a strong theoretical understanding but face challenges such as large class sizes, limited materials, assessment pressures, and limited professional development, which lead to constrained, teacher-directed play routines rather than child-initiated exploration.

Results

Based on Tanzanian research, teachers generally support play practices and recognize their developmental importance, but many see play activities as just free time rather than a structured educational tool. Classrooms with more teacher facilitation, better availability of materials, and smaller effective groups demonstrate stronger child engagement and improved early learning indicators. Major constraints include insufficient pre-service and in-service training in PBL, inconsistent and brief in-service training, assessment pressures that lead teachers toward teacher-centered practices, and a lack of locally relevant teaching and learning materials.

Discussion

The Kagera context reflects a broader Tanzanian pattern: the adoption of play-based pedagogy is inconsistent and influenced by teacher training, resource availability, and community expectations. The findings indicate that promoting guided play practices requires aligning policy, training, and community messaging. Teachers can and do create play-based learning opportunities, especially when supported by context-appropriate training and simple, durable teaching aids. However, the implications for theory and the Kagera case highlight the importance of situating play-based pedagogy within ecological models that account for teacher beliefs, material constraints, and caregiver norms. In practice, scaling play practices requires low-cost materials, scalable coaching models, and adjustments to assessment expectations.

Demographic Information of the Respondents

Table 1: Demographic Characteristics of Respondents (N=426)

Variable	Category	Frequency (n)	Percentage (%)
Gender	Male	279	63.9
	Female	109	25.7
Age groups	15-30	109	25.5
	31-40	190	44.6
	41-50	78	18.3
	Above 50	49	11.5
Education Level	Certificate	220	51.5
	Diploma	164	38.6
	Degree	25	5.9
	Other	17	4.0
Work experience	1-5	107	25.2
	6-10	211	49.5
	10-15	67	15.7
	Above 15	41	9.6
Primary training	Certificate	224	52.5
	Diploma	158	37.1
	Degree	25	5.9
	Short course	19	4.5

The demographic profile of participants, summarized in Table 1, provides important context for understanding this study's findings. As shown in the table, the sample consisted mainly of male

respondents (63.9%), with females accounting for 25.7%. Although this imbalance probably reflects the random sampling process, it had no methodological impact, as the research questions did not focus on gender-specific responses. Most participants were adults in their prime teaching years. The largest group (44.6%) was in the 31–40 age range, followed by 25.5% aged 15–30 and 18.3% aged 41–50. This age distribution closely matches the teachers' work experience: nearly half (49.5%) reported 6–10 years, and 25.2% reported 1–5 years. These patterns indicate that the study included both early-career and mid-career teachers, enriching the variety and depth of perspectives on play-based learning.

Regarding academic qualifications, Table 1 indicates that over half of the respondents (51.5%) hold a certificate, while 38.6% have a diploma. A smaller percentage (5.9%) earned a degree, though some of these degree holders are still teaching at the pre-primary level. This distribution underscores the importance of ongoing professional support, such as refresher courses or in-service training, to ensure all educators, regardless of their qualification level, are adequately prepared to implement play-based pedagogies.

Additionally, 52.5% of respondents had completed pre-primary training, while 37.1% had finished diploma-level ECE training. The presence of educators with diverse training backgrounds emphasizes the importance of understanding how variations in preparation affect the way play-based learning is implemented. Overall, the demographic data illustrate a diverse sample across gender, age, experience, and qualifications, enabling a comprehensive examination of how different groups of educators understand and apply play-based pedagogical practices in early childhood settings.

The Availability of Play-Based Learning Resources in Preprimary School Settings

The study aimed to evaluate the accessibility and use of learning resources that support play-based teaching methods in early childhood education (ECE) settings. The availability and usage of materials varied widely across arithmetic, art, and writing concepts.

Some materials were reported as being used extensively, while others were available only in limited quantities or not at all. In supporting arithmetic concepts, the most commonly used materials were rulers (84%), blocks (60.4%), and counting tools (55.9%), showing that teachers tend to rely on simple, accessible manipulatives to improve numeracy skills. Conversely, measuring cups (0.5%) and cubes (2.5%) were the least used, indicating limited access to or familiarity with a variety of hands-on numeracy resources.

In supporting art concepts, teachers commonly used books (84.2%), boxes (71.8%), paper (70.3%), and sand (55.9%). However, several creative and tactile resources are rarely used, including wood stones (2%), paint tools (3%), and play dough (4%), while pieces of cloth are not used at all. This pattern indicates that although some art-related materials are available, many important open-ended resources that encourage creativity remain underutilized.

For writing concepts, the most commonly used resources were colored chalk (90.1%), chalkboards (89.6%), and paper (80.2%), reflecting a strong reliance on traditional writing tools. In contrast, materials such as inkpads (1%) and envelopes (2%) were rarely used, indicating limited use of varied literacy-enhancing materials.

These findings align with Njuguna and Waithaka (2020), who discovered that teachers with

positive perceptions of play-based learning and higher levels of training are more likely to utilize various materials and strategies rooted in play in their teaching. The current study also indicates that the availability of resources and teacher preparedness significantly influence the level of play-based teaching. Although many basic instructional resources are available and frequently used in pre-primary classrooms, the limited variety of play-based materials emphasizes the need for better teacher training, enhanced resource availability, and a stronger emphasis on creative, hands-on materials that support overall learning.

Nature of Play-Learning Resources and Environment

Table 2: Teachers' Responses on the Nature of Play Learning Resources and Environment (n=202)

Statement	Responses					
	Yes		No		No response	
	f	%	f	%	f	%
The school environment encourages play application in all subjects.	98	49.5	89	44.1	15	7.4
Does the learning environment have all the required play items?	16	7.9	165	81.7	21	10.4
Are play items useful in improving a child's learning capabilities?	146	72.3	32	15.8	24	11.9
Do learners use the required play items in learning activities?	147	72.8	36	17.8	19	9.4
Does the environment support childhood learning and attainment?	149	73.8	35	17.3	18	8.9
Do learning centers create a model learning environment for learners?	124	61.4	61	30.2	17	8.4
Does learning syllabus provide the required contents	39	19.3	145	71.8	17	8.4
Is play resources/materials sufficient according to the learners' need	24	11.9	165	81.7	13	6.4
Have you ever initiated play practice in school as a teacher	128	63.4	58	28.7	16	7.9

Source: Field Data (2025)

Data in Table 2 reveal diverse perceptions of the learning environment across preprimary schools. Of the ten items evaluated, five received endorsement from more than half of respondents. The majority agreed that play items boost children's learning (72.3%) and that the school setting supports childhood education (73.8%). Likewise, 72.8% confirmed that teachers employed suitable play items to aid instruction. Additionally, 61.4% believed that ECE centers had established a viable learning model, and 63.4% noted that play-based practices had been implemented in their schools.

Despite these positive indicators, several aspects of the learning environment were found to be inadequate. Only 7.9% of teachers reported that their school had all necessary play items for

effective learning, whereas 81.7% said otherwise. Similarly, only 19.3% believed that the syllabus included all required content, indicating significant gaps in curriculum coverage. The availability of play resources was also lacking, with just 11.9% confirming sufficient materials and 81.7% reporting shortages.

Findings further revealed substantial variation in the quality and quantity of materials across schools. Several play environments or materials were largely unavailable. These included cooking corners (89.1%), music corners (88.1%), hospital corners (86.6%), construction corners (86.1%), transport corners (82.2%), shop corners (80.2%), and bottle tops (80.2%). Additional materials rated as largely unavailable or of poor quality included water play areas (76.7%), funnels (75.7%), tins (72.8%), see-saws (71.8%), seeds (69.3%), sliding panels (64.9%), and swing areas (52.5%). The absence of these facilities—particularly indoor play resources—presents a significant limitation to effective teaching and learning in early childhood settings. These deficiencies highlight the need for improvisation and resource mobilization to enrich the learning environment.

Additional evidence indicated that several play environments were either not sufficiently available or lacked acceptable quality. These included plant corners and adequate learning spaces (each 76.7%), suitability of materials (71.3%), visual attractiveness (66.8%), comfort (61.4%), animal corners (59.4%), play cards (57.9%), classrooms with proper ventilation (55.4%), and reading corners (55.2%). These findings support the researcher's observations, which noted shortages of essential materials such as colored chalks and inadequate classroom space and ventilation conditions that may jeopardize children's safety and learning.

Although some schools reported availability of certain play environments such as sand play areas (44.1%), boxes (42.1%), reading corners (36.6%), rooms with ventilation (30.7%), and ropes or chains (35.1%) none of these exceeded 50% availability. This suggests that while some resources are available, they are often limited in number or lack quality.

Overall, the findings indicate that many preprimary classrooms lack supportive environments with enough space, ventilation, and quality materials to promote play-based learning. Play-by-doing, which is essential for toddlers' manipulation of objects and development of basic skills, is therefore limited. The poor quality and visibility of available materials further highlight the urgent need for intervention to improve learning conditions.

In summary, the quality and availability of play environments and materials in the surveyed preprimary schools are below the recommended standards. Most facilities were either lacking or poorly supplied, especially indoor play areas. These results align with concerns from parents, who mentioned that home settings do not support play-based learning because of limited play space and resources. One parent pointed out that the home environment cannot replace the school for supporting play-based learning, as it lacks both playgrounds and suitable play equipment.

He argues that:

> *"Home environment is not the same as school environment for a child to practice play-based learning. For instance, no playing ground, no tools that the child can use for practicing play-based learning"*

Teachers' Perspectives on Play-Based Pedagogy in ECE Classrooms

Preprimary education plays a vital role in effectively preparing children for primary school. A strong start in education helps reduce some of the challenges encountered at the next level of learning. Therefore, evaluating how play and learning are integrated in ECE is essential for improving preprimary education. Because of the importance of understanding how play and learning succeed, the researcher chose to conduct a study, with the results summarized in Table 6.3.

Table 3: Teachers' Responses on Their Views on Applying Play-Based Pedagogy (n=202)

	Statements	Strongly Disagree		Disagree		No answer		Agree		Strongly Agree		No Response	
		f	%	f	%	f	%	f	%	f	%	F	%
I	There is enough time and space to practice play and learning process	2	1	47	23.3	44	21.8	73	36.1	27	13.4	9	4.5
Ii	I am stressed when applying play practices	17	8.4	82	40.6	30	14.9	18	8.9	44	21.8	11	5.5
iii	Am satisfied with parental intervention in learners academic success	1	0.5	11	5.4	21	10.4	53	26.2	107	53	9	4.5
iv	Hand on activities are proper way of teaching style in early childhood classes	-	-	34	16.8	26	12.9	114	56.4	22	10.9	6	3
V	Teachers are observer, planner, guider, instructor, designer in play based learning	-	-	2	1	6	3	136	67.3	54	26.7	4	2
Vi	Play is an effective way for ECE learner	1	0.5	7	3.5	15	7.4	117	57.9	58	28.7	4	2
Vii	Teachers are aware of the rationale of Play based learning in ECE	-	-	6	3	23	11.4	129	63.9	38	18.8	4	2

Source: Field Data (2025)

The findings showed that the majority (71.3%) of the participants agreed that teachers provide play materials in the classroom. These findings are supported by the data collected, which showed that teachers mostly used materials to facilitate the acquisition of mathematics, art, writing, and developmental skills in children in preprimary schools. The use of play materials in the classroom

suggests that teachers have a positive perception of play pedagogy. Similarly, more than three-quarters (74.8%) of the participants agreed, and 20.8% strongly agreed, that play practices promote cognitive, social, emotional, physical, and language skills in children in early childhood education (ECE). Furthermore, the findings revealed that more than half of the teachers who participated in the study felt comfortable and confident using play activities when implementing the play-and-learn curriculum, and 62.9% of participants agreed that applying play practices leads to academic success, with 21.3% strongly agreeing.

Regarding play pedagogical practices to inspire creativity, critical, and imaginative thinking in children in early education, the majority of the participants (53%) strongly agreed and 38.6% agreed that it inspires them. About toys, most participants (54%) agreed and 29.7% strongly agreed that the use of toys in teaching and learning in pre-primary schools helps children develop various skills. The study also shows that teachers frequently use songs and rhythms when teaching new concepts and vocabulary, with the majority of participants (54%) strongly agreeing and 36.1% agreeing.

However, a large number (49.5%) of participants were neutral about whether the play learning environment can be regarded as the third teacher, while 13.5% disagreed that the play environment should be considered the third teacher. Similarly, the participants did not support the idea that every play practice in the classroom is significant, as 34.2% strongly disagreed, 20.8% disagreed, and 30.2% were neutral.

The Challenges Educational Implementers Face during PBL Practices in ECE

Challenges within any institution can act as barriers to implement activities and programs, potentially impeding its growth and progress. Recognizing the specific issues faced by an institution is crucial to devising strategies to address them. The researcher selected to study early childhood education (ECE) in preprimary schools. Literature indicates recurring difficulties. The findings highlight that the most significant challenge identified was the lack of resources, reported by 90.6% of participants. Teachers' free responses often mentioned missing materials such as adequate classrooms or space for children to learn comfortably, toys for play, sufficient books, digital tools like computers, and a curriculum that incorporates play-based activities. This aligns with the researcher's observation report, which noted the absence of computers and internet in all surveyed schools. These findings also match Table 4.8, showing a shortage of various materials like toys, tins, boxes, ropes or chains, funnels, blocks, seeds, play cards, and bottle tops in preprimary schools.

The findings from an interviewed Ward Education Officer (WEO) aligned with those of the teachers, as it also showed that the government provided play materials only to a limited extent. The WEO had this to say:

> *"You know the government has concentrated more on education from primary school to college or university levels. What the government mainly emphasizes is for institutions to follow the education structure that starts with a child beginning learning from pre-primary education. The government's follow-up on primary education, including how assessments are conducted, teaching methodologies, content, and objectives, is less extensive compared to its follow-up for primary schools to university level"*

The findings imply that teachers from the surveyed preprimary schools might lack the knowledge and skills to improvise some teaching and learning materials, as some materials can be constructed from the local environment.

Another challenge frequently reported by participants was the unstructured mode of play practice, and 63.4% of participants reported parental pressure against play. These findings contradict the responses from the interviewed parents. Of the 20 parents interviewed, 60% believed that play should be increased in learning, as they think it can interfere with children's learning. One of the interviewed parents said this:

> *"Yes, I think play practices in schools should be increased because play helps children maintain good health, which makes it easier for them to understand when the teacher is teaching. Play also prevents children from getting diseases, so they will have enough time to focus on their learning"*

One of the interviewed head of school from school A had a negative perception towards play in schools.

He said that:

> *"On my side, I suggest that play by children be minimized in order to give children more time to do classroom activities. When my child comes home, she spends more of her time playing instead of reading. So if they also spend more time playing in school, when will they get time for study in?"*

Another challenge frequently mentioned by the participants was the congested timetable, as reported by 77.7% of the participants. The teachers' responses revealed complaints about the timetable. Many teachers specifically complained about the lack of a timetable that includes play activities. The findings further showed that the timetable is only partially prepared, without specifying when particular play activities will be practiced, leaving it to the teachers' discretion to organize these activities to meet the requirements of play practice learning. When the WEO was asked about teachers' complaints regarding the congestion of the timetable, he said that:

It's true the timetable is crowded because, first of all, your preprimary children are very young, and their time to stay in school is also limited. Therefore, the activities must be packed into the timetable. Also, remember there are few teachers who instruct at this level, so they see the timetable as crowded.

Additionally, lack of ideas and innovation was reported by 58.6% of respondents as another challenge to implementing play practice learning in preprimary schools. There were 41.2% of teachers who were neutral to the question asked. The findings might suggest that teachers lack training on improvisation of materials and methods for teaching and assessment, especially when compared to the findings from Table 4.8 regarding materials and environment available in preprimary schools. Some of the materials that were absent could potentially be creatively improvised from the local environment.

General, limited teacher knowledge, pre-service and in-service training: Many teachers lack both conceptual understanding of play as pedagogy and practical facilitation skills for structured and unstructured play. Studies and program evaluations report that preservice teachers' education often emphasizes didactic methods, with limited practical exposure to play-based strategies, and in-

service professional development is patchy in coverage, duration, and follow-up coaching. Pilot projects that included sustained coaching found greater uptake, suggesting that training quality and follow-up matter.

Lack of teaching and play materials and learning spaces is a common and tangible barrier, often due to the scarcity of affordable, contextually relevant play resources. Many classrooms lack manipulatives, books, outdoor play areas, or locally sourced materials. When materials are available, teachers often lack ideas for using them effectively in their teaching. Observational reports from pilot programs show that improvisation is possible but inconsistent. Curriculum, assessment, and accountability pressures also play a role; national curricula and exams mainly reward measurable skills like letter formation and numeracy drills, which encourages teachers to focus on teacher-directed instruction. When school evaluation and promotion systems emphasize exam scores, teachers face competing demands that limit the time and perceived legitimacy for project-based learning (PBL).

Teacher workload, class size, and workforce shortages large class sizes and a lack of qualified ECE teachers make it harder to manage individualized, play-rich activities. Overburdened teachers may see play as time-consuming or a classroom management risk, especially when classrooms have mixed ages or behavioral challenges. Staffing limits also reduce time for planning and preparing play activities. Parental and community beliefs about play and early learning sometimes, parents and communities see play as just entertainment or not real learning pressuring teachers to focus on visible academic instruction. This cultural view decreases support for play and can cause tension between teachers and parents when play activities replace familiar drills. Components involving community engagement in successful pilots often addressed such misconceptions. Management, leadership, and school governance principals and local education authorities influence resource distribution and pedagogical priorities. When school leaders lack knowledge or commitment to play-based approaches, teachers receive little institutional support (such as time for planning, materials, or flexible schedules). Centralized decision-making in some contexts also limits teachers' ability to adopt play methods. Safety, infrastructure, and outdoor play limitations physical infrastructure (like safe playgrounds, sanitation, and shelters) can restrict outdoor play. Safety concerns and limited space in schools hinder opportunities for active, social play. Although guidelines for day care and preprimary education exist, their implementation is often inconsistent.

CONCLUSION AND RECOMMENDATIONS

Play practices is any behavior that is freely chosen, intrinsically motivated, and personally directed by the child. All types of play from fantasy to rough-and-tumble, have a crucial role in children’s development. The implication is that any form of play is the lens through which children experience their world and the world of others. Researcher further asserts that if deprived of play practices, children will suffer both in the present and in the long-term. With supportive adults, adequate play space, and an assortment of play materials, children stand the best chance of becoming healthy, happy and productive members of society

Conclusion

The study concludes that the availability and use of play-based resources in preprimary schools in Kagera region generally look promising. Many schools have well-structured learning environments with adequate ventilation, lighting, spacious reading areas, and organized

bookshelves, all located in quiet, learner-friendly settings. Key services like access to textbooks and reference materials are reported to be satisfactorily available to both students and teachers, with regular weekly use indicating meaningful integration into teaching and learning. The findings show a negative correlation between the presence of these resources and the ECE learning environment, as play-based resources not only serve as hubs for independent learning and research but also as important support systems that ease teachers' instructional workload. However, despite these advancements, significant challenges remain, especially the lack of essential digital infrastructure such as advanced tools and computers, as well as the absence of educational media, which limit the full potential of CEC as comprehensive learning centers. To maximize the educational benefits of school CEC, there is an urgent need for ongoing investment in digital resources, capacity building for staff, and diversification of learning materials to boost the contribution of CEC to academic excellence in preprimary schools in Kagera.

Recommendation

Based on the findings of this study, the following recommendations are proposed to improve the availability and effectiveness of play-based resources in pre-primary schools:

- The government should allocate a comprehensive budget specifically for constructing and equipping CEC resources, particularly in underserved community schools.
- The government and education stakeholders should invest in training and employing professional teachers who are dedicated solely to managing play-based services rather than combining them with teaching duties
- To promote a reading culture and lifelong learning, the government, NGOs, and private sector partners should collaborate to establish well-resourced children's libraries
- For teacher education and professional development, expand pre-service curricula to include trained modules on guided play practices, curriculum design for play, and assessment of play-based learning. Design low-cost, sustained in-service coaching and professional learning communities (PLCs) focused on classroom modelling and reflective practice.
- For curriculum and assessment: Align curriculum guidance and assessment frameworks so that play-based approaches are explicitly assessed via formative assessment tools suited to play practice contexts, reducing teachers' incentive to revert to didactic methods.
- For materials and classroom environment: Promote locally sourced, low-cost play materials and guidance for teachers on improvisation. Pilot small grants for resource development tied to coaching.
- For research and monitoring: Institutionalize classroom observation and child outcome monitoring to track quality and provide feedback loops

REFERENCES

Bubikova-Moan, J., Næss Hjetland, H., & Wollscheid, S. (2019). ECE teachers' views on play-based learning: A systematic review. *European Early Childhood Education Research Journal*, *27*(6), 776-800.

Bronfenbrenner, U. (1979). The ecology of human development; Experiment by nature and design. Harvard University Press

Hidayati, A. (2020, March). The influence of learning science with constructivist approach toward character building of early childhood. In *Journal of Physics: Conference Series* (Vol. 1481, No. 1, p. 012095). IOP Publishing.

Hirsh-Pasek, K., Golinkoff, R. M., Berk, L. E., & Singer, D. (2009). A mandate for playful learning in preschool; presenting the evidence. Oxford University Press.

Kıran, I., Macun, B., Argın, Y., & Ulutaş, İ. (2021). Montessori Method in early childhood education: A systematic review. *Cukurova University Faculty of Education Journal*, *50*(2), 1154-1183.

LaForett, D. R., & Mendez, J. L. (2020). Children's engagement in play at home: a parent's role in Supporting play opportunities during early childhood. In *Reconsidering. The Role of Play in Early Childhood* (pp. 228-241). Routledge.

Margolis, A. A. (2020). Zone of Proximal Development, Scaffolding and Teaching Practice. *Cultural-Historical Psychology*, *16*(3).

Mendenhall, et al. (2021), Teacher Task Force white paper: Teacher Professional Development & play-based learning in East Africa.

Mondal, P., Mondal, S., & Shibpur, W. B. I. (2018). Quantitative and qualitative research: a mixed method approach in educational science. *International Journal of Technical Research & Science*, *3*(7).

Ndijuye, L. G., Mligo, I. R., & Machumu, M. A. M., (2020). Early childhood education in Tanzania: Views and beliefs of stakeholders on its status and development. Global Education Review.

Nibal Khalil, Ahman Aljanazrah, Ghadeer Hamed & Elaine Murtagh (2022).Exploring Teacher Educators' Perspectives of Play Based Learning: A Mixed Method Approach. Department of Physical Education & Sport Science, University of Limerick, V94T9Px, Limerick Ireland.

Pellegrini, A. (2009). The role of play in human development. Oxford University Press

Piaget, J. (1962). Play, dreams and imitation in childhood. Nortion.

Pyle A. & Danniels E. (2017). A continuum of Play Based Learning. The role of the teacher in play based pedagogy and the fear of hijacking play. Early Education & Development, 288 (3), 274-289. https://tspace.library .Toronto. Ca/bitstream/1807/96410/1/A%20continuum%20 of playbased%20%learning%20-%20Revised.pdf.

Pyle, A., Poliszczuk, D., & Danniels, E. (2018). The challenges of promoting literacy integration within a play-based learning kindergarten program: Teacher perspectives and implementation. *Journal of research in childhood education*, *32*(2), 219-233.

Siraj-Blatchford, Sylva, K., Muttock, S., Gilden, R., & Bell, D. (2002). Researching effective pedagogy in the early years, Department for Education and skills, UK.

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

UNICEF Tanzania (2024), Early Childhood Development in the United Republic of Tanzania

Vygostky, L. S. (1978). Mind in Society: The development of higher psychological processes. Harvard University Press.

Waite-Stupiansky, S. (2022). Jean Piaget's constructivist theory of learning. In *Theories of early childhood education* (pp. 3-18). Routledge.

Weisberg, D. S., Hirsh-Pasek, K., & Golinkoff, R. M. (2013). Guide play: Where curricular goals meet a playful pedagogy, Mind, Brain and Education, 7(2), 104-112.