Pre-Primary Teachers' Perceptions and Utilization of Play-Based Learning in Kericho County, Kenya

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ABSTRACT

This research explored the perceptions and use of Play-Based Learning (PBL) among pre-primary school teachers in Kericho County, Kenya at the advent of implementation of the Competency-Based Curriculum (CBC). A descriptive survey design and mixed-method approach were used to obtain data from 251 teachers via questionnaires and interviews. Quantitative data were analyzed using descriptive statistics, chi-square tests, and ANOVA, while qualitative responses were analyzed thematically. Results show that teachers perceive PBL as a fundamental approach to promote creativity, social interaction, and problem resolution in children. Yet, trust in the implementation was diverse; teachers attributed the lack of training, poor teaching materials, and overcrowded instruction to some challenges. Inferential analysis indicated a positive association between teachers' professional qualifications and the use of PBL strategies ($\chi^2 = 16.42$, $p < 0.05$). A one-way ANOVA also indicated significant differences in teachers' views on PBL related to their teaching experience, $F(2,248) = 3.72$, $p = 0.025$, whereby teachers with more experience showed the strongest positive attitude. Results did not show significant differences between the sexes. The study finds that teachers are aware of the importance of PBL, but the structural, resource, and capacity constraints hamper its implementation. It adds to the developing body of literature on early childhood pedagogy in Kenya by addressing the role of teacher attributes on PBL uptake. The study suggests enhanced pre-service and in-service training on PBL, provision of resources in ECDE centers, and education of school officials about the value of play-based pedagogical approaches. In future studies of learning outcomes, longitudinal effects of PBL should be examined in different counties.

Keywords: Play-Based Learning, Pre-primary Teachers, Competency-Based Education, Teacher Perceptions and use, Early Childhood Education, Kenya

INTRODUCTION

Early childhood is a critical period in human development which largely determines lifelong learning, behavior, and health. The cognitive, social, emotional, and physical development of children is most effectively supported during this period when pedagogical practices are appropriate to their developmental needs, especially in play (UNESCO, 2018). Play-Based Learning (PBL) is highly regarded as a key pedagogical approach in Early Childhood Education that facilitates children's learning and development in an all-rounded way with active involvement, creativity, exploration, and socialization (Bodrova & Leong, 2015; Whitebread et al., 2012).

Throughout the world, early learning frameworks highlight the pedagogical tool and content of play for quality teaching in the early years. For example, countries like Finland, New Zealand, and Sweden have integrated play into their early learning national curriculum with good developmental and academic results (OECD, 2020). Strong theoretical bases may be the foundation of PBL. Play as a context for learning and development is based strongly on Jean Piaget's theory of cognitive development, in which children are believed to construct

knowledge by interacting with their environment and that play is a prime context for such construction (Piaget, 1951). Likewise, Vygotsky's (1978) sociocultural theory argues for the role of play as the "mechanism by means of which children enter a social space and encounter higher-order levels of thinking in their Zone of Proximal Development" (p.258).

In the Kenyan context, the Competency-Based Curriculum (CBC) in CBE, as developed by the Kenyan Institute of Curriculum Development (KICD), focuses on the experiential and learner-centered models of Play-Based Learning at the pre-primary level (KICD, 2017). However, effective utilization of PBL mainly relies on teachers' attitudes, pedagogical readiness, and existing resources. Teachers play a vital role as mediators of the learning environment, and their knowledge (episteme), attitudes (doxa), and beliefs (pistis) about play in Early Childhood at School. Play-Based Learning directly determine if and how they use play-based learning practices in their classrooms (Pyle & Danniels, 2017).

As encouraged by policy, the use of play-based approaches in Kenyan pre-primary classrooms is becoming a concern because its application is perceived to be underutilized or lacking consistency. Large class sizes, unrealistic assessment expectations, lack of preparation, and scarce teaching/learning resources have been earmarked as key challenges (Murungi, 2013; KICD, 2021). These problems may be intensified in rural counties such as Kericho, where there may be disparities in infrastructural and capacity levels.

For this reason, the current study aims at understanding the perceptions of the pre-primary teachers regarding PBL and how such perceptions affect the practice of PBL with young children. It also examines the contextual barriers and facilitators to its implementation in public ECD centers in Kericho County, Kenya. The results are anticipated to contribute to policymakers, curriculum developers, and teacher educators by providing evidence on how to enhance ECE using play-based pedagogies effectively.

THEORETICAL FRAMEWORK

The study is Grounded in Piaget's Cognitive Development Theory, which frames play as critical to knowledge building; Vygotsky's Sociocultural Theory, which highlights the role of social interaction and scaffolding in play; and Bronfenbrenner's Ecological Systems Theory, which explains how environmental factors (school, policy, resources) shape teachers' practices. Teachers' perceptions of PBL are influenced by teachers' characteristics (such as training, experience, or attitudes), which in conjunction with contextual determinants (such as resources, class size, and administrative support) influence the PBL strategies used, and this ultimately impacts the children's learning and development outcomes.

CONCEPTUAL FRAMEWORK

This study is guided by the view that teacher characteristics (such as professional training, teaching experience, and attitudes) shape their perceptions of PBL. These perceptions, together with contextual determinants (availability of resources, class size, curriculum demands, and administrative support), influence the extent of PBL utilization in classroom practice. Ultimately, effective utilization of PBL strategies leads to improved child learning and holistic development outcomes in line with the Competency-Based Education (CBE).

Purpose of the Study

The purpose of this study is to investigate the perceptions and utilization of Play-Based Learning (PBL) among pre-primary school teachers teaching ECD children in Kericho County, Kenya. The research also aims to identify the barriers and facilitating factors associated with PBL application in pre-primary school environments.

Objectives of the Study

The study was guided by the following objectives:

1. To analyze pre-primary school teachers' perceptions of play-based learning (PBL) in Kericho County.

2. To assess the extent to which PBL is incorporated into instructional practices of pre-primary school teachers.
3. To examine the influence of teacher characteristics (gender, teaching experience, and professional qualifications) on perceptions and utilization of PBL.
4. To identify the challenges hindering the effective implementation of PBL in pre-primary classrooms.

Research Questions

The study sought to answer the following questions:

1. What are the perceptions of pre-primary school teachers towards PBL in Kericho County?
2. To what extent is PBL integrated into the instructional practices of pre-primary school teachers?
3. What challenges do teachers face in implementing PBL in pre-primary schools?
4. How do teacher characteristics (gender, teaching experience, and professional qualifications) influence perceptions and utilization of PBL?

Research Hypotheses

The study tested the following hypotheses:

H01: There is no significant difference in teachers' perceptions of PBL based on gender.

H02: There is no significant difference in teachers' perceptions of PBL based on teaching experience.

H03: There is no significant difference in teachers' perceptions of PBL based on professional qualifications.

H04: There is no significant difference in the utilization of PBL strategies based on gender.

H05: There is no significant difference in the utilization of PBL strategies based on teaching experience.

H06: There is no significant difference in the utilization of PBL strategies based on professional qualifications.

LITERATURE REVIEW

Play-Based Learning: Definition and Pedagogical Foundations

Play-Based Learning (PBL) combines intentional teaching with guided play to support children's cognitive, social, emotional and physical development (UNICEF, 2018). Studies suggest that children learn best when actively engaged in activities that foster creativity, problem-solving, collaboration, and communication (Whitebread et al., 2012). Piaget (1951) stressed the role of play for children assimilating and accommodating knowledge, while Vygotsky (1978) emphasized how play provides social scaffolding for higher-order thinking in the Zone of Proximal Development.

Global Perspectives and Practices of PBL

PBL is particularly central within early childhood curricula in countries such as Finland, Sweden, and New Zealand, having been connected with improved learning and developmental outcomes (OECD, 2020). Successfully implemented, PBL balances academic needs with exploration, creativity and socio-emotional aspects as confirmed by research (Edwards, 2017; Zosh et al., 2018).

Teacher Perceptions and Beliefs about PBL

Incorporation of PBL in a classroom is greatly affected by teachers' perspectives. Positive beliefs of play foster learning environments that are conducive to curiosity and cooperation (Pyle & Danniels, 2017) and skepticism, which is generally rooted in cultures that prioritize exams or that pressurize curriculum, further encourages teacher-centered teaching and learning (Murungi, 2013).

The Kenyan Setting and CBC Implementation

The Competency-Based Curriculum (CBC) by Kenya Institute of Curriculum Development (KICD, 2017) posits PBL as a primary approach. However, there is still uneven implementation, where there is a difference in teacher preparedness, pedagogical proficiency and resource availability, particularly in rural areas like Kericho (KICD, 2021).

Barriers to the Successful Execution of PBL

Successful execution of PBL in ECD centers is affected by a number of challenges. These barriers to the adoption of PBL include:

1. Large class sizes that limit the quality of individualized play.
2. Poor teacher preparation, especially in connecting play to learning content.
3. Limited play supplies and resources.
4. Curriculum coverage pressures that restrict time for play-based activities.

These challenges become acute in rural areas, which generally struggle to attract adequate resources and have fewer institutions with which they can communicate (Walsh et al., 2010; OECD, 2020).

Determinants of Successful PBL Integration

Effective PBL relies on teacher preparation, policy and institutional support, proper resources and positive teacher attitudes (Pyle & Bigelow, 2015). The development of play-based pedagogies in teacher education programs increases teachers' competence and confidence (UNESCO, 2018). In comparison, both the pre-service and in-service training in Kenya often leaves teachers inadequately trained to practice the eclectic pedagogical process envisioned in the CBC (KICD, 2021).

Summary of Literature and Research Gap

In Kenya there are gaps in teacher preparation including but not limited to lack of resources and contextual challenges hindering consistent application. Notwithstanding CBE policy advocacy, there are limited studies on teachers' perceptions and utilization of PBL in Kericho County, and such is missing from the literature which this study aims to fill.

METHODOLOGY

Research Design

His study utilized a descriptive survey research design to examine pre-primary teachers' perceptions and use of Play-Based Learning (PBL) in Kericho County. The research design used both quantitative and qualitative methodologies, enabling the researcher to develop an in-depth understanding of the phenomenon. By way of using quantitative data, the researchers were able to obtain quantifiable indicators of teachers' attitudes and usage of PBL where qualitative analysis helped in revealing the contextual and experiential variables that informed the use of PBL. According to Creswell and Plano Clark (2018), a mixed-methods design is especially appropriate when one data source cannot fully answer the research question. This study utilized composite data from the narrative section of data, in order to gain insight into other perspectives, compare their results when analyzing, and arrive at more comprehensive answers. A choice of this type was made to accommodate the purpose of the study which was to explore both patterns as well as the motivations for teachers' use of PBL in Early Childhood Education.

Study Location

The research was conducted in Kericho County, Kenya, focusing on public Early Childhood Development (ECD) centres. The county presents a mix of rural and peri-urban settings, offering a representative context for examining PBL in diverse resource and infrastructural conditions.

Target Population

The study population was all pre-primary school teachers in public ECD centers in the six Sub-Counties in Kericho County. They were estimated to be about 1321 pre-primary teachers in the public ECDE centers (County Education Office, 2024).

Size of the Sample and Sampling Procedure

A sample of 251 pre-primary teachers was chosen through stratified random sampling and simple random sampling procedure. Strata were stratified over six sub-counties to profile region representation. In each sub-county, a simple random sampling technique was used to select teachers to participate in the study. In this way, the multi-stage sampling technique ensured more representation and broadened the generalizability of the research findings (Mugenda & Mugenda, 2003).

The sample size was determined using the formula by Yamane (1967):

$n=N1+N(e^2)$

$n = \frac{N}{1 + N(e^2)}$

$n=1+N(e^2)N$

Where:

n = sample size

N = population size (1321)

e = level of precision (0.05)

This resulted in a target sample of about 310 participants. A representative sample of 251 participants was purposively selected in view of logistical and budgetary limitations, which is in line with similar qualitative-leaning studies (Creswell, 2014).

Data Collection Instruments

Three instruments are involved in the data collection:

Questionnaires

Structured questionnaires containing both closed and open-ended items were filled by all the 251 teachers. The closed-ended questions focused on perceptions and the extent of implementation of PBL on a Likert scale, while open-ended questions collected teachers' achievements and suggestions.

Observation Checklist

Onsite classroom observations were carried out using a standardized checklist based on that of UNICEF (2018), which looked at the availability and use of play materials, child-teacher interaction, and incorporation of play in lesson delivery.

Interview Schedule

Semi-structured interviews with 10 purposefully sampled teachers (2 per sub-county) were carried out to enrich the understanding of personal experiences, personal values, and contextual bottlenecks of PBL.

Validity and Reliability

Review for content was done by two early years specialists in education and one curriculum development expert from Kenya Institute of Curriculum Development (KICD) to ascertain face validity.

Recommendations were added to improve clarity and relevance. A pilot study was done to determine the reliability of the questionnaire. This was carried out among 15 pre-primary school teachers of neighboring Bomet County. The internal consistency of Likert-scale items was calculated by the research Cronbach's alpha method and found to be $\alpha = 0.81$, which is within an acceptable range for educational

(Gliem & Gliem, 2003).

Data Collection Procedure

Approval was sought from the National Commission for Science Technology and Innovation (NACOSTI), County Director of Education, and ECDE Center managers. All participants provided written informed consent. Questionnaires were administered to collect required responses. Observations and interviews appointments were scheduled at times convenient for the participant.

Data Analysis

Data collected from the questionnaires were coded and analyzed using the Statistical Package for the Social Sciences (SPSS) Version 25. Descriptive statistics, including frequencies, percentages, means, and standard deviations, were computed to summarize teachers' demographic characteristics, perceptions, and utilization of Play-Based Learning (PBL).

To test relationships between teacher characteristics and perceptions or utilization of PBL, inferential statistics were employed. These included the Chi-square test of independence for categorical variables and one-way Analysis of Variance (ANOVA) and independent samples t-tests where appropriate, to examine differences across groups (e.g., teaching experience, qualification, and gender). Statistical significance was determined at $p < 0.05$. The use of inferential statistics was justified because it allowed the study to go beyond mere description and to test hypotheses, identify significant patterns, and generalize findings from the sample to the wider teacher population in Kericho County.

Qualitative data from open-ended questionnaire items, interviews, and observations were analyzed using thematic analysis guided by Braun and Clarke's (2006) six-step approach: (i) familiarization with the data, (ii) generating initial codes, (iii) searching for themes, (iv) reviewing themes, (v) defining and naming themes, and (vi) producing the report. Themes emerging from qualitative data were compared and triangulated with quantitative findings to enhance validity, credibility, and depth of interpretation.

Ethical Considerations

Ethical criteria such as voluntary participation, informed consent, confidentiality, and anonymity were observed. Respondents were informed that the information gathered would remain confidential, and it could be used for academic research purposes only. Ethical approval was granted by an academic institution's ethics board.

RESULTS AND DISCUSSION

Demographic Information of Respondents

A total of 251 pre-primary school teachers willingly participated in the study. Table 1 presents the demographic characteristics.

Table 1: Demographic Information of Respondents (n=251)

Variable	Category	Frequency	Percentage (%)
Gender	Female	196	78.0
	Male	55	22.0
Age	20-30 years	70	28.0
	31-40 years	114	45.0
	Above 40 years	67	27.0

Teaching Experience	Less than 5 years	90	36.0
	5-10 years	110	44.0
	More than 10 years	51	20.0
Professional Training	ECDE Certificate	146	58.0
	ECDE Diploma	90	36.0
	Degree in Early Childhood	15	6.0

Most teachers were female (78%), aged 31- 40, and certificate holders. This mirrors national ECDE staffing trends where women dominate and qualifications are largely at certificate or diploma level (MoE, 2021; UNESCO, 2018). The low proportion of degree holders reflects gaps in advanced professionalization of ECDE teachers in Kenya (KICD, 2021).

Teachers' Perceptions of Play-Based Learning

Respondents were asked to indicate their agreement with key statements on a 5-point Likert Scale (Strongly Disagree to Strongly Agree). Table 2 summarizes their responses.

Table 2: Teachers' Perceptions of Play-Based Learning (n=251)

Statement	**SA (%)**	**A (%)**	**N (%)**	**D (%)**	**SD (%)**	**Mean**	**Std. Dev.**
Play enhances children's creativity and imagination	56	32	6	4	2	**4.36**	0.82
Play improves learners' social skills and cooperation	49	40	7	3	1	**4.33**	0.76
Play helps children develop cognitive and problem-solving abilities	61	29	4	4	2	**4.43**	0.74
I feel confident using play-based methods in teaching	38	41	10	6	5	**4.01**	1.01
Play is suitable only for break or free time, not structured lessons	10	12	15	30	33	**2.44**	1.29

Most teachers agreed or strongly agreed that play-based learning is vital for developing creativity, cooperation, and cognition in children. This findings is consistent with Whitebread et al. (2012) and Zosh et al. (2018), who highlight the developmental value of guided play. However, a smaller proportion expressed confidence in implementing it effectively. These findings align with Wambugu & Kirimi (2023) who found that although teachers recognize the importance of play, professional capacity among teachers limits its integration into structured learning.

Perception Scores by Gender

Hypothesis one of the study stated that there is no significant difference in teachers' perceptions of PBL based on gender. To test this hypothesis, an independent sample t-test analysis was done. The results of this test are shown in Table 3.

Table 3: Independent Samples t-test for Perception Scores by Gender

Gender	**N**	**Mean**	**SD**	**t**	**df**	**Sig.**
Male	55	4.20	0.81	0.52	249	0.60
Female	196	4.25	0.78			

No significant gender differences were found, suggesting both male and female teachers value PBL equally. Similar findings were reported by Pyle & Danniels (2017), indicating that teacher beliefs about play are shaped more by training and context than gender.

Perception Scores by Work Experience

The second hypothesis of the study argue out that there is no significant difference in teachers' perceptions of PBL based on teaching experience. ANOVA test results are shown in Table 4. Teachers with more than 10

years' experience report slightly higher positive perceptions of PBL compared to those with fewer years of teaching.

Table 4: ANOVA Test Results

Source of Variation	SS	df	MS	F	p-value
Between Groups	2.46	2	1.23	3.72	0.025
Within Groups	81.74	248	0.33		
Total	**84.20**	**250**			

$F(2,248) = 3.72$, $p = 0.025 < 0.05$ thus the null hypothesis (H02) was rejected. This means there is a significant difference in teachers' perceptions of PBL based on teaching experience.

Post-hoc (Tukey) analysis reveals that Teachers with >10 years' experience have significantly higher positive perceptions compared to those with <5 years ($p = 0.018$). The difference between 5–10 years and other groups is not statistically significant. The results suggest that experienced teachers (>10 years) are more likely to appreciate the value of PBL compared to less experienced teachers. This aligns with Pyle & Danniels (2017), who noted that experienced teachers often demonstrate stronger beliefs in learner-centered strategies due to prolonged classroom exposure and reflective practice. Similarly, Ngugi & Nyang'ara (2024) emphasize that long-term engagement in ECDE equips teachers with adaptive strategies for integrating play even in resource-constrained environments.

However, the lack of a significant difference between the 5–10 years and <10 years groups suggests that positive perceptions may stabilize after a certain level of experience. For novice teachers (<5 years), limited training and confidence could explain their relatively lower scores (Wambugu & Kirimi, 2023).

Teachers' Perceptions of PBL by Level of Training

An ANOVA test was conducted to examine whether teachers' professional training significantly influenced their perceptions of Play-Based Learning (PBL). Results are presented in Table 5.

Table 5: ANOVA for Perception Scores by level of Training

Source	SS	df	MS	F	Sig.
Between Groups	4.95	2	2.47	4.17	0.017
Within Groups	147.00	248	0.59		
Total	**151.95**	**250**			

The findings reveal a statistically significant difference in perception scores across training levels ($F = 4.17$, $p = 0.017$). Post-hoc comparisons showed that degree holders rated PBL more positively than certificate holders, while diploma holders fell in between.

This suggests that teachers with higher qualifications are not only better prepared to implement PBL but also more likely to value it as an effective pedagogical approach. This aligns with UNESCO (2018), which stresses that advanced teacher education enhances the appreciation and integration of learner-centered pedagogies. Similarly, Pyle & Danniels (2017) noted that teachers with deeper professional preparation are more confident in adopting play as a structured component of learning rather than treating it as peripheral.

The implication is that teacher education and professional upgrading play a critical role in shaping positive perceptions of PBL. Strengthening pre-service and in-service training opportunities can therefore foster favorable attitudes, leading to better integration of play into classroom practice under the CBC framework.

Utilization of Play-Based Learning Strategies

Teachers were asked how often they used play-based strategies. Table 6 summarizes the responses.

Table 6: Frequency of Use of Play-Based Learning Strategies (n=251)

Strategy Used	Always (%)	Often (%)	Sometimes (%)	Rarely (%)	Never (%)
Outdoor Play	31	39	20	8	2
Role-play & Dramatization	28	36	26	9	1
Toys & Manipulative Tools	19	25	32	20	4
Singing, Dancing, and Rhymes	42	38	15	4	1
Creative Arts	35	30	22	10	3

While most teachers often use singing and outdoor games, fewer regularly use toys, role-play and dramatization or creative arts. Lack of teaching aids and inadequate training were cited as barriers to full implementation of PBL. According to KICD (2022), structured integration of play requires materials, time, and teacher preparedness. This has remained a challenge in many ECDE centers over the years.

Utilization of PBL by Gender

To examine whether gender influenced teachers' utilization of Play-Based Learning strategies, a Chi-square test was conducted. Results are presented in Table 7.

Table 7: Chi-Square Test for Utilization by Gender

χ^2	df	Sig.
5.12	4	0.275

The results indicate that there was no statistically significant difference in the utilization of PBL strategies between male and female teachers ($\chi^2 = 5.12$, df = 4, $p = 0.275$). This suggests that both male and female teachers adopt PBL strategies at similar rates and encounter comparable challenges in implementation. This finding supports Wambugu & Kirimi (2023), who observed that the effectiveness and adoption of PBL in Kenyan ECDE settings depend more on teacher training, availability of resources, and institutional support than on gender differences. Similarly, OECD (2020) emphasized that structural barriers such as large class sizes and limited teaching aids affect all teachers equally, regardless of gender.

These results imply that interventions to strengthen PBL integration such as targeted in-service training and provision of adequate resources should focus on systemic support rather than gender-specific approaches.

Utilization of PBL by Teaching Experience

A Chi-square test was conducted to determine whether teachers' teaching experience influenced their utilization of Play-Based Learning (PBL) strategies. Results are presented in Table 8.

Table 8: Chi-Square Test for Utilization by Teaching Experience

χ^2	df	Sig.
16.72	8	0.032

The results show a statistically significant association between teaching experience and PBL utilization ($\chi^2 = 16.72$, df = 8, $p = 0.032$). Further analysis revealed that less experienced teachers reported greater use of strategies such as singing, creative arts, and role-play, whereas more experienced teachers were more likely to rely on outdoor play and structured activities.

These findings resonate with Walsh et al. (2010), who noted that novice teachers are often more open to innovative and interactive play-based approaches, while older, more experienced teachers tend to favor

traditional and teacher-centered methods due to long-established pedagogical habits. Similarly, Ngugi & Nyang'ara (2024) argue that sustained professional development is crucial to help experienced teachers adapt to learner-centered pedagogies like PBL.

The implication is that teaching experience shapes pedagogical preferences, and while newer teachers may bring innovation, experienced teachers can be empowered through mentorship and targeted in-service training to integrate play more effectively into structured lessons. This supports the CBC's emphasis on lifelong teacher learning and pedagogical flexibility.

Utilization of PBL by level of Teacher Training

An ANOVA test was conducted to determine whether teachers' professional training significantly influenced their utilization of Play-Based Learning (PBL) strategies. The results are shown in Table 9.

Table 9: ANOVA for Utilization by Training

Source	**SS**	**df**	**MS**	**F**	**Sig.**
Between Groups	8.42	2	4.21	6.35	0.002
Within Groups	164.48	248	0.66		
Total	**172.90**	**250**			

The results indicate a statistically significant difference in the utilization of PBL strategies across different training levels ($F = 6.35$, $p = 0.002$). Post-hoc comparisons (not shown in the table) revealed that teachers with Diploma or Degree qualifications reported significantly higher use of PBL strategies compared to those with only Certificate-level training.

This finding is consistent with Murungi (2013), who established that professional training strongly predicts teachers' ability to adopt play-based pedagogies. Similarly, Pyle & Bigelow (2015) argue that well-trained teachers are better equipped to integrate play with curriculum objectives, demonstrating greater confidence and pedagogical creativity.

The implication is that teacher professional training is a key determinant of PBL integration, underscoring the need for investment in capacity-building programs and structured in-service training to enhance teachers' skills in delivering play-centered learning under the Competency Based Education (CBE).

Challenges in Implementing Play-Based Learning

Respondents identified several challenges that hindered the effective implementation of Play-Based Learning (PBL). The results are shown in Table 10.

Table 10: Challenges in Using Play-Based Learning (n=251)

Challenge	**Frequency**	**Percentage (%)**
Inadequate play materials	196	78.0
Overcrowded classrooms	178	71.0
Lack of in-service training	161	64.0
Time constraints	138	55.0
Negative attitude from school heads	95	38.0

The findings indicate that the most pressing challenges are inadequate play materials (78%) and overcrowded classrooms (71%). Additionally, 64% of teachers cited lack of in-service training as a major limitation, while more than half (55%) reported time constraints. Notably, 38% mentioned resistance or lack of support from school heads.

These findings align with Mutua & Gikonyo (2021), who found that rural ECD centers in Kenya often struggle with infrastructural deficits and unsupportive administrative structures that hinder interactive pedagogies like

PBL. Similarly, Ng'asike (2019) highlighted that play-based approaches require adequate resources, manageable class sizes, and continuous professional development for sustainability.

The implications are significant: without addressing these structural and administrative barriers, the integration of PBL into ECDE classrooms will remain limited despite teachers' generally positive perceptions. Investment in teacher training, provision of adequate learning/play materials, and supportive school leadership is therefore essential for the successful adoption of PBL in line with the Competency-Based Education (CBE).

Qualitative Insights from Interviews

To further enrich the quantitative findings, qualitative data from teacher interviews were thematically analyzed. The analysis revealed recurring patterns reflecting both systemic and classroom-level realities shaping Play-Based Learning (PBL) implementation. Four key themes emerged resource constraints, training gaps, curriculum–policy mismatch, and positive attitudes but limited practice. These are summarized in Table 11 with illustrative quotes and supporting literature.

Table 11: Thematic Analysis of Interview Responses

Theme	Description	Illustrative Quotes	Supporting Literature
Resource Constraints	Teachers highlighted inadequate materials, lack of toys, and limited physical space as barriers to effective PBL.	"The curriculum design tells us to play, but we can't play because our classes are too full, and we have no toys or space." **T4**	Mutua & Gikonyo (2021) emphasize that rural ECDE centers face infrastructural and material shortages, limiting interactive pedagogies.
Training Gaps	Teachers reported insufficient professional development in integrating play into structured learning.	"I attempt to tell stories by role playing, but I've never had specific training on play-based approaches." **T9**	Ngugi & Nyang'ara (2024) argue that effective PBL requires ongoing mentorship and teacher training.
Curriculum–Policy Mismatch	A gap exists between CBC's emphasis on PBL and actual classroom realities due to systemic limitations.	"The curriculum expects us to use play, but we lack the tools and preparation to make it happen effectively." **T7**	KICD (2021) highlights challenges in aligning CBC policy goals with classroom-level implementation.
Positive Attitudes but Limited Practice	Teachers value play and acknowledge its benefits, but lack of resources and training hinder full integration.	"Play is good for children, but sometimes I just end up using songs because it's easier and requires no materials." **T11**	Pyle & Danniels (2017) found that teachers often value PBL but rely on minimal strategies when unsupported.

SUMMARY OF MAJOR FINDINGS

1. **Demographics:** The majority of pre-primary teachers in Kericho County were female, aged 31-40 years, and held certificate-level qualifications, reflecting national ECDE staffing trends.
2. **Perceptions of PBL:** Teachers overwhelmingly agreed that play enhances children's creativity, social skills, and cognitive development. However, many lacked confidence in integrating play into structured lessons. Teachers with higher qualifications (Diploma/Degree) held significantly more positive perceptions compared to certificate holders.
3. **Utilization of PBL:** Singing, rhymes, and outdoor games were the most frequently used play strategies, while manipulative tools and creative arts were less utilized due to lack of resources. Utilization of PBL was significantly higher among teachers with advanced training, while gender showed no influence. Less experienced teachers reported greater openness to play-based methods compared to their senior counterparts.
4. **Challenges in PBL Implementation:** The major barriers were inadequate play materials, overcrowded classrooms, insufficient training, and limited time due to curriculum coverage pressures. Teachers with lower qualifications reported more training- and time-related constraints.
5. **Qualitative Insights:** Teachers emphasized the gap between CBE policy expectations and classroom realities, particularly the mismatch between curricular demands and available resources.

CONCLUSION AND IMPLICATIONS

This study examined pre-primary teachers' perceptions and utilization of Play-Based Learning (PBL) in Kericho County within the context of Kenya's Competency-Based Curriculum (CBC). Findings revealed that while teachers overwhelmingly acknowledged the cognitive, social, and creative benefits of PBL, its practical implementation was constrained by inadequate resources, overcrowded classrooms, insufficient training, and limited institutional support. Importantly, the study demonstrated that teachers' level of professional training significantly influenced both their perceptions and the extent of PBL utilization, while gender and teaching experience showed weaker associations.

Contributions of the Study

The study contributes to Early Childhood Education in three important ways. First, it provides empirical evidence from a rural Kenyan context, where few studies have explored how CBE reforms are translated into classroom practice at the pre-primary level. Second, it highlights the critical role of teacher qualifications in shaping positive attitudes and frequent use of PBL strategies, thereby extending global literature (e.g., UNESCO, 2018; Pyle & Bigelow, 2015) to the Kenyan setting. Third, by integrating both quantitative and qualitative data, the study gives a holistic picture of the alignment and misalignment between CBE policy intentions and classroom realities.

Broader Implications

The findings carry several implications on policy, practice and equity:

1. **For Policy:** There is urgent need to align teacher training frameworks with the CBC's emphasis on play-based pedagogy. Upgrading certificate-level teachers and providing structured in-service training could bridge the confidence and competence gaps observed.
2. **For Practice:** School leaders and local education officers should prioritize provision of affordable, locally sourced play materials and support teachers in embedding play within structured lessons, not merely as recreational activity.
3. **For Equity:** By showing that gender does not significantly affect perceptions or utilization, the study reinforces the inclusivity of PBL as a pedagogy that benefits children regardless of their teachers' demographics, provided systemic barriers are addressed.

Directions for Future Research

This research opens pathways for further inquiry in the following areas:

1. Longitudinal studies could track whether improved training and resources translate into sustained PBL integration and better learner outcomes.
2. Experimental or quasi-experimental designs could isolate the causal impact of PBL on literacy, numeracy, and socio-emotional skills.
3. Comparative studies across counties or between rural and urban contexts would shed light on contextual disparities, while qualitative case studies could explore how teachers creatively adapt PBL under resource constraints.

REFERENCES

1. Bodrova, E., & Leong, D. J. (2015). Tools of the mind: The Vygotskian approach to early childhood education (3rd ed.). Pearson.
2. Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. Qualitative Research in Psychology, 3(2), 77–101. https://doi.org/10.1191/1478088706qp063oa
3. Creswell, J. W. (2014). Research design: Qualitative, quantitative, and mixed methods approaches (4th ed.). SAGE Publications.

4. Creswell, J. W., & Plano Clark, V. L. (2018). Designing and conducting mixed methods research (3rd ed.). SAGE Publications.
5. Fisher, K. R., Hirsh-Pasek, K., Golinkoff, R. M., & Gryfe, S. G. (2008). Conceptual split? Parents' and experts' perceptions of play in the 21st century. Journal of Applied Developmental Psychology, 29(4), 305–316. https://doi.org/10.1016/j.appdev.2008.04.006
6. Gliem, J. A., & Gliem, R. R. (2003). Calculating, interpreting, and reporting Cronbach's alpha reliability coefficient for Likert-type scales. Midwest Research-to-Practice Conference in Adult, Continuing, and Community Education, 82–88.
7. Hewes, J. (2006). Let the children play: Nature's answer to early learning. Early Childhood Learning Knowledge Centre.
8. Kenya Institute of Curriculum Development (KICD). (2017). Basic education curriculum framework. KICD.
9. Kenya Institute of Curriculum Development (KICD). (2021). Report on the implementation of the CBC in early years education. KICD.
10. Kenya Institute of Curriculum Development (KICD). (2022). Teacher preparedness for CBC implementation in pre-primary schools in Kenya. KICD.
11. Ministry of Education [MoE]. (2021). Basic education statistical booklet 2020/2021. Ministry of Education.
12. Mugenda, O. M., & Mugenda, A. G. (2003). Research methods: Quantitative and qualitative approaches. Acts Press.
13. Murungi, C. G. (2013). Reasons for low enrolment in ECD programmes in Kenya. International Journal of Education and Research, 1(5), 1–10.
14. Mutua, C., & Gikonyo, L. (2021). Challenges facing ECDE implementation in rural Kenya. Journal of Early Childhood Studies, 5(2), 88–95.
15. Mwai, A. (2021). Barriers to play-based learning in Kenyan ECD classrooms. KEBS Press.
16. Ng'asike, J. (2019). Teachers' preparedness for play-based curriculum implementation. Journal of Early Childhood Education in Africa, 7(2), 45–60.
17. Ngugi, R., & Nyang'ara, M. (2024). Enhancing teacher competence in CBC through play pedagogy. African Journal of Early Childhood Education, 8(1), 101–114.
18. Oketch, M., Muthoni, J., & Cheruiyot, B. (2022). Investing in early years: Barriers and breakthroughs in Kenyan ECDE programs. International Education Journal: Comparative Perspectives, 21(3), 54–69.
19. Organisation for Economic Co-operation and Development (OECD). (2020). Starting Strong V: Transitions from early childhood education and care to primary education. OECD Publishing. https://doi.org/10.1787/6528da40-en
20. Otieno, J. (2019). Teachers' preparedness for play-based curriculum implementation. Journal of Early Childhood Education in Africa, 7(2), 45–57.
21. Piaget, J. (1951). Play, dreams and imitation in childhood. Routledge & Kegan Paul.
22. Pyle, A., & Bigelow, A. (2015). Play in kindergarten: An interview and observational study in three Canadian classrooms. Early Childhood Education Journal, 43(5), 385–393. https://doi.org/10.1007/s10643-014-0666-1
23. 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 and Development, 28(3), 274–289. https://doi.org/10.1080/10409289.2016.1220771
24. UNESCO. (2018). Learning through play: Strengthening learning through play in early childhood education programmes. UNESCO Publishing.
25. UNICEF. (2018). Learning through play: Strengthening learning through play in early childhood education programmes. UNICEF.
26. Vygotsky, L. S. (1978). Mind in society: The development of higher psychological processes. Harvard University Press.
27. Walsh, G., McMillan, D., & McGuinness, C. (2010). Implementing a play-based curriculum: Insights from research. International Journal of Early Years Education, 18(1), 17–30. https://doi.org/10.1080/09669761003661204
28. Wambugu, F., & Kirimi, M. (2023). Teachers' perceptions of play in competency-based curriculum implementation. Kenya Journal of Education Studies, 5(1), 33–47.

29. Whitebread, D., Basilio, M., Kuvalja, M., & Verma, M. (2012). The importance of play: A report on the value of children's play with a series of policy recommendations. Toy Industries of Europe.
30. Yamane, T. (1967). Statistics: An introductory analysis (2nd ed.). Harper & Row.
31. Zosh, J. M., Hopkins, E. J., Jensen, H., Liu, C., Neale, D., Hirsh-Pasek, K., Solis, S. L., & Whitebread, D. (2018). Learning through play: A review of the evidence. Lego Foundation.