

Strengthening the Capacity of Teachers on Play-Based Learning in Sub-Saharan Africa



Evidence from Kenya

BASELINE REPORT
JULY 2023



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Acknowledgments

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Executive Summary

Quality early childhood education (ECE) can improve schooling outcomes, particularly for the most marginalized. Playful learning experiences help all children acquire foundational learning skills for academic accomplishment. Play is a valued and ever-present cultural aspect promoting positive learning experiences. Across Africa, play has been a critical tool in children's early socialization and development. However, teacher professional development does not always focus on building skills in play facilitation. The use of learning through play (LtP) approaches has been documented in several parts of Africa, but there are limited data on how teachers' competencies can be strengthened.

The Kenyan government is committed to implementing LtP approaches in pre-primary education through national policies and ECE standard guidelines. Nevertheless, there are implementation challenges, particularly in terms of how best to support teachers and parents to facilitate this approach. There are also limited data about the importance of using LtP approaches to meet the increasing educational needs of marginalized children, such as those with disabilities. Further, information on how to facilitate the use of locally available low-cost materials and resources by parents and teachers to develop play items, is scanty.

We therefore conducted a study to generate knowledge on context-based innovation levers and conditions for implementing and scaling LtP approaches. The study also aims to strengthen the capacities of teachers, parents, and other relevant stakeholders to design and implement play-based approaches at the pre-primary and early primary levels. Further, the study will mobilize knowledge exchange to promote policy uptake on LtP approaches.

The study employs an action research design using a mixed-methods approach combining quantitative and qualitative methodologies. Ten public schools were chosen in consultation with county government officials. The study participants included preschool teachers and parents. The study is being conducted in three counties: Kajiado, Kiambu, and Nairobi City.

For the qualitative aspect, the team conducted focus group discussions (FGDs) and key informant interviews (KIIs) to understand key issues around LtP. FGDs with caregivers and teachers explored existing LtP approaches at home and school, the role of caregivers and teachers, and capacity gaps in implementation in school and at home. Further, we sought to understand the barriers to and facilitators of the implementation of LtP approaches. The team administered KIIs to key ECE policymakers and implementers to understand their roles in implementing LtP, current approaches, and capacity gaps. For the quantitative component, the study team interviewed 92 teachers from the 30 primary schools and 192 parents from the participating preschools. We explored current LtP approaches at home and school in relation to four main domains (fine motor, gross motor, language, and socio-emotional skills).

Descriptive analysis was used to present the quantitative study outcomes. Thematic analysis was used to analyze the qualitative data in line with the key questions. All transcripts were read in-depth, codes were generated and categorized to form the themes, which were analyzed independently.

The results indicated that most study participants were aware of existing LtP approaches. They understood that LtP approaches could be used to promote children's language and socio-emotional skills. However, the results pointed to a gap in the capacities of teachers and parents in implementing LtP approaches for all children, including those with disabilities. The findings also indicated that caregivers and teachers did not use a variety of play activities, particularly those improvised using locally available materials. There seemed to be limited awareness about disabilities among participants. The results showed that most fathers thought that involvement in promoting LtP approaches was not their direct responsibility. Some of

the major facilitators in implementing LtP approaches included provision of adequate play materials and funding, training teachers on material development, and establishing a collaborative link between parents and school. The main barriers included inadequate play materials, limited skills among teachers to adapt play materials for children with disabilities, and low knowledge and awareness of the use of various locally and culturally available play materials at home and in school. Further, there was a weak link between home and school, and this hindered the effective use of play-based approaches in school and at home.

Capacity strengthening of teachers and parents is important for the implementation of the LtP model. Areas such as material development and the inclusion of children with disabilities require more attention. We recommend greater involvement of male caregivers, including male teachers, in LtP activities. In addition, the link between school and home should be strengthened to enhance effective use of LtP approaches in both settings. Increased capitation and leveraging existing reforms by the KICD may be beneficial to sustaining the implementation of LtP models.



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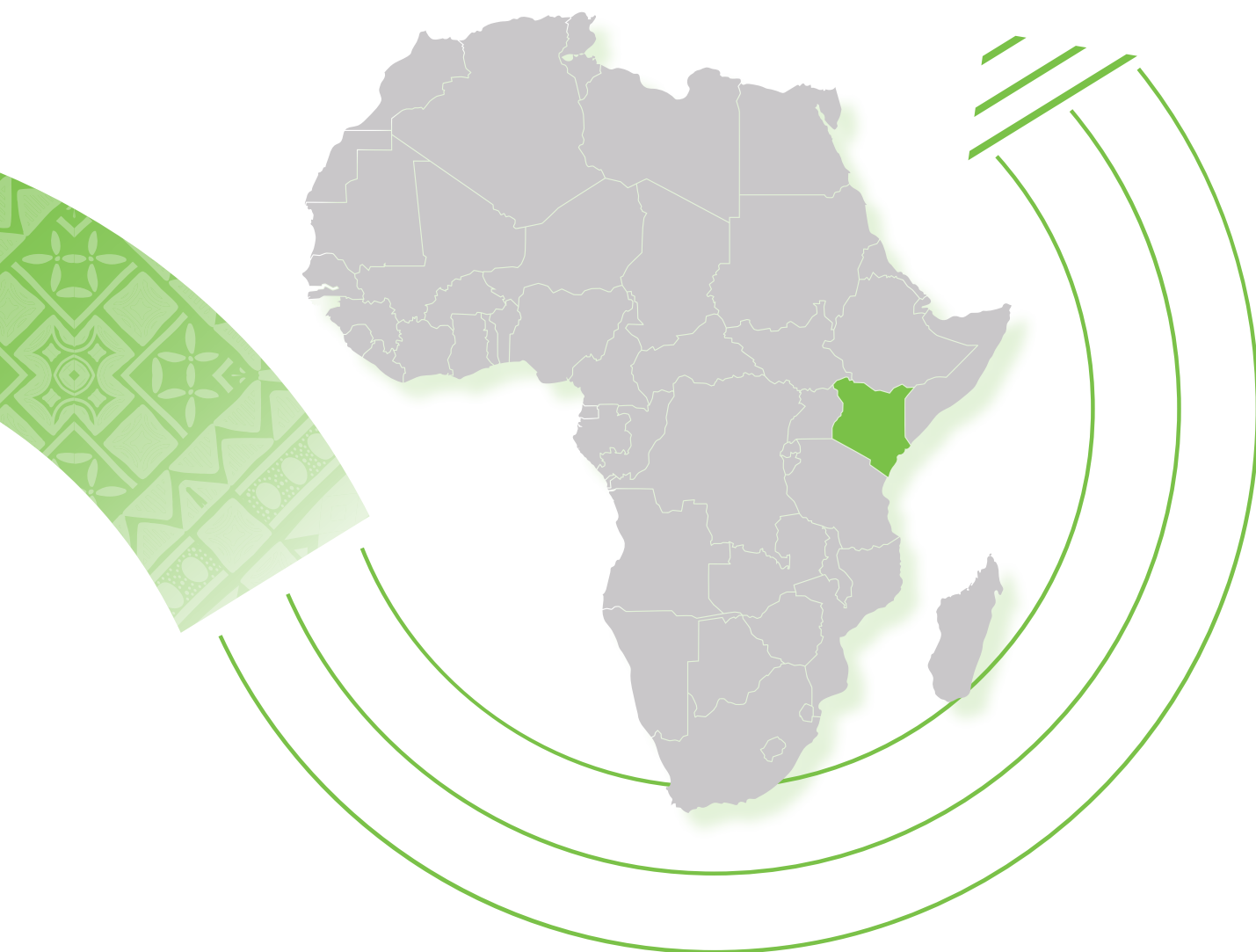
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Abbreviations and Acronyms

APHRC	African Population and Health Research Center
CBC	Competency-Based Curriculum
CEMASTE	Center for Mathematics, Science and Technology Education in Africa
ECE	Early Childhood Education
ECDE	Early Childhood Development and Education
ESRC	Ethics, Scientific and Review Committee
FGDs	Focus Group Discussions
KICD	Kenya Institute of Curriculum Development
KIIs	Key Informant Interviews
KCSE	Kenya Certificate of Secondary Education
KPHC	Kenya Population and Housing Council
LtP	Learning through Play
MoE	Ministry of Education
NACOSTI	National Commission for Science, Technology, and Innovation
NCPD	National Council for Population and Development
SDGs	Sustainable Development Goals
SSA	Sub-Saharan Africa
UNICEF	United Nations Children's Fund

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CHAPTER ONE

Introduction

1.1 BACKGROUND OF THE STUDY

Quality early childhood education (ECE) can improve school readiness, positively influence learning outcomes, and increase primary and secondary school completion rates, particularly for marginalized children (1). Play is a valued and ever-present aspect of culture that has been found to promote positive learning experiences if fully utilized (2). Across Africa, play has been a key tool in children's early socialization and development through songs, riddles, and games. Play is also a recognized tool for learning, which is reflected in policy commitments (3). However, teacher professional development does not always focus on building skills in play facilitation, a gap that warrants addressing. LtP approaches have been documented in several parts of Africa to improve learning outcomes for children. Still, there is a dearth of studies on how teachers' competencies to facilitate LtP approaches confidently and effectively can be developed and supported.

While the government of Kenya has committed to implementing LtP approaches in pre-primary education through national policies and ECE standard guidelines, challenges exist with implementation, particularly regarding how best to support teachers and other stakeholders to facilitate this approach (4). The Ministry of Education (MoE) is enforcing 100% transition of learners from primary to secondary school level. The basis for such successful directives and guidelines lies in the foundational years of learning. Play has been recognized as a key low-cost and culturally meaningful avenue that caregivers, teachers, and other key stakeholders could adopt to facilitate the smooth transition of children from preschool to early primary levels (5). Learning extends beyond the classroom (6). Therefore, parents and communities, generally, have a vital role in their preschoolers' learning (7). Nonetheless, limited information exists on whether parents actively engage in LtP approaches, and if they do, who the key play facilitators are (mothers, fathers, or others), and how this affects children.

In Kenya, teachers have the largest contact hours with children at school. They are considered key enablers in transition and are therefore critical in strengthening the implementation of LtP approaches through school readiness programs such as *Tayari* (a Kiswahili word which means 'ready') (8,9). Limited data exist in Kenya about the importance of using LtP approaches to meet the increasing educational needs of marginalized children, such as those with disabilities (10). Further, there are limited data regarding the use of locally available low-cost materials to develop play items to promote children's learning and holistic development (11).

1.2 OBJECTIVES

The overall aim of the study is to adapt, test, refine, and facilitate scaling innovations to workforce development to support LtP approaches to enhance the quality of learning in pre-primary school, with a focus on children from marginalized communities.

The specific objectives of the study include:

1. To generate knowledge on context-based innovation levers and conditions for scaling LtP approaches;
2. To strengthen capacities of teachers, parents, and other relevant stakeholders to design and implement play-based approaches at pre-primary and early primary levels;
3. To mobilize knowledge exchange to promote policy uptake on LtP approaches to strengthen the smooth transition from preschool to primary school.

CHAPTER TWO

Methodology

2.1 STUDY SITE

The study is being conducted in three counties: Kajiado, Kiambu, and Nairobi City Counties. In Kajiado County, the study is being undertaken in Kajiado Central sub-County, one of the five administrative sub-counties. We selected Kajiado to better understand the contextual factors affecting the use of play-based approaches in a rural area. Kajiado is home to a nomadic pastoralist community, characterized by low levels of education. Kiambu County was selected to represent a peri-urban area, as it has a mixed population of those living in the outer limits of urban centers and rural settings. In Kiambu, the study is being conducted in Limuru sub-County.

Nairobi City County was selected to represent an urban setting. In Nairobi, the study is being conducted in Makadara sub-County, which hosts some of the largest informal settlements in Kenya as well as middle-income residential areas.

2.2 STUDY DESIGN AND PARTICIPANTS

The study employs an action research design using a mixed-methods approach combining both quantitative and qualitative methodologies. Our study samples were drawn from selected schools in the three counties. We worked closely with early childhood development and education (ECDE) County and sub-County Directors to identify ten schools in each county. The study participants included preschool teachers, parents (mothers and fathers), and county officials. Participants in the qualitative interviews were purposefully selected and included parents and teachers and ECE officials at the national, county, and sub-county levels. For the quantitative aspect, the study team interviewed all 92 preschool teachers and at least four parents from each of the 30 participating preschools.

2.3 DATA COLLECTION PROCEDURES

Qualitative data collection was carried out by field interviewers with college-level education in a relevant or related field, and with experience in conducting qualitative interviews. Quantitative data collectors were selected based on having obtained a minimum of grade C+ in the Kenya Certificate of Secondary Examination (KCSE), and with experience in carrying out quantitative surveys. Additionally, a field supervisor/ quality assurance monitor with a college-level education in a relevant field was recruited to coordinate field work and ensure quality of data through spot checks and editing of the data. All field interviewers who were resident within the study locations were fluent in English, Kiswahili, and the local dialects.

After recruitment, field interviewers were trained by the research team in line with APHRC's standards. The one-week training covered topics such as the purpose and objectives of the study, ethical considerations, data collection procedures and data quality. This training was both information- and problem solving-based.

At the end of the training, a pilot testing exercise was conducted under realistic field conditions. The purpose of the pilot testing was to ascertain the validity of the study tools, correct any issues with the tools and provide field interviewers an opportunity to practice administering the tools prior to data collection. Field interviewers for the qualitative and quantitative components were trained separately.

Quantitative data for the teacher and parent surveys were captured electronically using SurveyCTO. One-on-one interviews with teachers and parents were conducted at a time and place that were convenient for the participants. On average, the interviews took about 30 minutes to complete. Qualitative data were collected through focus group discussions (FGDs) and key informant interviews (KIIs). The qualitative interviews took between one and two hours to complete. The interviews were audio recorded and transcribed verbatim.

2.4 DATA QUALITY AND MANAGEMENT

The data were uploaded to the APHRC server, where they were accessible only by the principal investigator (PI), project manager, and statistician. Trained team leaders, with oversight from the APHRC research team, supervised the data collection exercise. Field team leaders verified the completeness of the data collected by each field interviewer before uploading them to the server. Discrepancies were rectified by the team leader and the APHRC team lead as soon as they were captured. To enhance the integrity of the data, the team conducted regular spot checks and sit-ins on about 5% of the sample size across each field interviewer during the data collection exercise.

The quality of the qualitative data was enhanced by recruiting and training qualified field interviewers with experience in qualitative data collection. The research team reviewed samples of the qualitative transcripts to ensure all the items were included as reflected in the FGD and KII guides. The pre-testing of tools and debriefing after the data collection also enhanced the quality of the data. The interviews were transcribed verbatim by an experienced transcriber and double-coded (about 10% of the transcripts) to ensure consistency in the application of the codes.

2.5 DATA ANALYSIS

Quantitative data were cleaned and analyzed using Stata. We conducted a descriptive analysis to present information on the study outcomes. Thematic analysis was used to systematically analyze all qualitative data (in line with the fundamental questions) through five stages: familiarization, defining themes, coding, charting, and interpretation. During the familiarization stage, all transcripts were read in-depth, and we generated codes by interrogating the data and linking narrative content. In the final stages, we categorized the codes to identify overarching themes. Members of the research team then met to jointly deliberate on the themes and developed a codebook that they used to carry out the thematic analysis independently.

2.6 ETHICAL CONSIDERATIONS

The study protocol was reviewed by the APHRC's internal Scientific Review Committee. Ethics approval was obtained from Amref Health Africa's Ethics and Scientific Review Committee (ESRC). Permission to conduct the study was provided by the National Commission for Science, Technology, and Innovation (NACOSTI). Pre-visits were made to the sampled ECDE centers to sensitize the county education officials and head teachers about the study, and to seek their permission to visit the schools. Informed consent was obtained from all participants before the interviews were conducted. All participants were informed that their participation was voluntary, and that they were free to withdraw their participation at any point during the study, without any negative consequences. Participants were assured that their identities would be kept anonymous, and that all data would be kept confidential.

CHAPTER THREE

Results

3.1 PARTICIPANTS' CHARACTERISTICS

3.1.1 Caregivers'/parents' socio-demographic characteristics

Table 1 presents information on the socio-demographic characteristics by county (Kajiado, Kiambu, and Nairobi). The mean age of participants across the three counties was 37.0 years. Most participants were female (71.4%) and married (80.7%). About 36.1% reported primary education as their highest level of education. Almost half the participants in Kajiado County had no education, a rate which was significantly higher ($p = 0.001$) than that of participants in Kiambu and Nairobi Counties. There was no significant difference in the occupation levels across the three counties ($p = 0.065$).

Table 1: Parents' socio-demographic characteristics by county

	Kajiado N=44	Kiambu N=36	Nairobi N=39	Total N=119
Parent's age (years)				
Mean (SD)	38.7 (10.7)	36.5 (8.7)	35.7 (7.2)	37.0 (9.1)
Gender				
Female	32 (72.7%)	24 (66.7%)	29 (74.4%)	85 (71.4%)
Male	12 (27.3%)	12 (33.3%)	10 (25.6%)	34 (28.6%)
Marital status				
Married	34 (77.3%)	31 (86.1%)	31 (79.5%)	96 (80.7%)
Never married	1 (2.3%)	2 (5.6%)	4 (10.3%)	7 (5.9%)
Widowed	7 (15.9%)	0 (0.0%)	1 (2.6%)	8 (6.7%)
Divorced/ Separated	2 (4.5%)	3 (8.3%)	3 (7.7%)	8 (6.7%)
Highest level of formal education completed				
None	20 (45.5%)	0 (0.0%)	1 (2.6%)	21 (17.6%)
Primary	14 (31.8%)	18 (50.0%)	11 (28.2%)	43 (36.1%)
Secondary	6 (13.6%)	8 (22.2%)	7 (17.9%)	21 (17.6%)
College	3 (6.8%)	7 (19.4%)	15 (38.5%)	25 (21.0%)
University	1 (2.3%)	3 (8.3%)	5 (12.8%)	9 (7.6%)
Occupation				
Not employed	16 (36.4%)	8 (22.2%)	10 (25.6%)	34 (28.6%)
Employed (Salaried)	4 (9.1%)	7 (19.4%)	7 (17.9%)	18 (15.1%)
Business	7 (15.9%)	7 (19.4%)	15 (38.5%)	29 (24.4%)
Farming	7 (15.9%)	6 (16.7%)	0 (0.0%)	13 (10.9%)
Employed (Waged/Casual)	10 (22.7%)	8 (22.2%)	7 (17.9%)	25 (21.0%)
Number of children				
Mean (SD)	4.5 (1.9)	2.8 (1.4)	2.6 (1.1)	3.4 (1.7)

3.1.2 Teachers' socio-demographic characteristics

Information on the demographic characteristics of teachers (N = 92) is presented in **Table 2**. The mean age of teachers in the three participating counties was 41.8 years, with no significant differences across the three counties. A high proportion of teachers (97%) was female. Over 90% of the teachers interviewed had attained college-level formal education. Close to 90% reported that they were employed by the government employs. About 47% of the teachers reported that they had taught for more than five years, while 97% mentioned that they had more than five years of teaching experience.

Table 2: Teachers' socio-demographic characteristics by county

	Kajiado N=24	Kiambu N=31	Nairobi N=37	Total N=92
Teachers' age (years)				
Mean (SD)	41.2 (6.3)	41.6 (6.9)	42.3 (8.0)	41.8 (7.2)
Gender				
Female	21 (88%)	31 (100%)	37 (100%)	89 (97%)
Male	3 (13%)	0 (0%)	0 (0%)	3 (3%)
Position in school				
Center Manager	4 (17%)	0 (0%)	10 (27%)	14 (15%)
Head of ECD class	6 (25%)	10 (32%)	0 (0%)	16 (17%)
ECD teacher	14 (58%)	16 (52%)	27 (73%)	57 (62%)
Assistant teachers	0 (0%)	5 (16%)	0 (0%)	5 (5%)
ECDE classes currently teaching				
Playgroup (0-3 years)	0 (0%)	0 (0%)	3 (8%)	3 (3%)
PP1	12 (50%)	16 (52%)	15 (41%)	43 (47%)
PP2	12 (50%)	15 (48%)	19 (51%)	46 (50%)
Highest level of formal education completed				
Secondary	0 (0%)	0 (0%)	1 (3%)	1 (1%)
Tertiary education	24 (100%)	31 (100%)	36 (97%)	91 (99%)
Highest level of professional teacher training completed				
Certificate in education (P1/P2/P3)	0 (0%)	4 (13%)	1 (3%)	5 (5%)
Diploma in education	0 (0%)	6 (19%)	3 (8%)	9 (10%)
Degree (Bachelor of Education)	0 (0%)	0 (0%)	1 (3%)	1 (1%)
Certificate in ECDE	13 (54%)	9 (29%)	5 (14%)	27 (29%)
Diploma in ECDE	10 (42%)	12 (39%)	24 (65%)	46 (50%)
Degree in ECDE	1 (4%)	0 (0%)	2 (5%)	3 (3%)
Other (KCSE)	0 (0%)	0 (0%)	1 (3%)	1 (1%)
Employer				
County	16 (67%)	31 (100%)	35 (95%)	82 (89%)
BOM	8 (33%)	0 (0%)	1 (3%)	9 (10%)
Other (NGO)	0 (0%)	0 (0%)	1 (3%)	1 (1%)
How long have you been teaching in this school?				
Less than a year	3 (13%)	0 (0%)	11 (30%)	14 (15%)
1 - 5 years	1 (4%)	11 (35%)	23 (62%)	35 (38%)
More than 5 years	20 (83%)	20 (65%)	3 (8%)	43 (47%)
How long have you been a teacher?				
1 - 5 years	0 (0%)	0 (0%)	3 (8%)	3 (3%)
More than 5 years	24 (100%)	31 (100%)	34 (92%)	89 (97%)

3.2 UNDERSTANDING OF THE CONCEPT OF LTP

3.2.1 Parents' understanding of the LTP concept

The qualitative interviews revealed that most parents believed that LTP involved guiding children on the types of games that interest them, interacting with them, and getting involved in games such as racing car tires and rolling sticks.

"Playing with the children means interacting with them and being close to them. It also means guiding them to know what they don't know. When I am free as a parent, I can also play with the child games like car tire racing and stick rolling." **FGD with mothers**

Male caregivers believed that play is a way of bonding and being close to their children. Moreover, fathers understood LTP as being an approach through which children play with toys and, in turn, enjoy what they are doing as they learn. Further, they highlighted that children's choice of play depended on their gender. According to the father, boys preferred playing football, and girls engaged in cooking activities.

"Playing with children is a way of bringing your children closer to you and making them feel free around you. When a child plays, the child becomes free of stress. Secondly, when a child likes a certain game, their interest in it also increases, and hence their talent grows as they learn. Playing with toys makes the children happy, as it is very good for young children." **FGD with fathers**

3.2.2 Teachers' understanding of the LTP concept

Most teachers understood the concept of LTP as being a natural way of learning for young children. According to the teachers, children learn by playing different games and engaging in various activities such as painting, building blocks, swinging, swimming, and playing with balls. Moreover, teachers mentioned that LTP enables children to learn about concepts using model objects such as fruits. In this way, children would develop vocabulary and cognitive skills.

"For instance, if they are learning about fruits, there should be actual or modeled ones. The learning should not only be oral; but the children also need to feel and touch. Also, when the children are to learn about money, and they role-play buying and selling, they will be excited and at the same time learn new vocabulary like money, coins, and notes." **FGD with teachers**

3.2.3 Policy implementers' understanding of LTP

Policy implementers reported that LTP is the process of incorporating play into every learning activity for young children. They believed that playful learning entailed creating role-play learning experiences using materials such as bottles. Further, policy implementers indicated that LTP involved children collaborating among themselves by engaging in role play.

"...for example, when you're teaching a certain concept, you need to either use play or a song for the little learners to understand whatever you are teaching, and then the teachers would also make some things that look like sweets, you know, and then they put them inside the bottle so that they can look like the sweets." **KII with a policy implementer**

3.3 CURRENT LTP APPROACHES

3.3.1 How LtP is integrated into daily activities with children at home

As shown in **Table 3**, the quantitative results were similar the qualitative findings. Most of the sampled caregivers indicated that they used household activities such as washing clothes (63.9%) and cooking (59.7%) as opportunities to engage children in play. Only 4% of parents reported that going to the market with their children was an opportunity for them to engage in play activities with their children.

Table 3: Integration of learning into daily activities at home

	Kajiado N=44	Kiambu N=36	Nairobi N=39	Total N=119
How do you include learning through play in your daily activities with your child?				
When washing clothes	32 (72.7%)	18 (50.0%)	26 (66.7%)	76 (63.9%)
When cooking	30 (68.2%)	17 (47.2%)	24 (61.5%)	71 (59.7%)
When going to the market	0 (0.0%)	1 (2.8%)	4 (10.3%)	5 (4.2%)
When bathing the child	6 (13.6%)	7 (19.4%)	11 (28.2%)	24 (20.2%)

Parents mentioned that they played games such as football with their children while at home. At other times, engaged in passive play through watching cartoons. Interestingly, participants reported that children were engaged in different play activities based on gender; for example, cooking and cleaning were regarded as LtP activities for girls, while football was meant for boys.

“A child can learn through play that at home, we have both girls and boys whose preferred games are very different. Boys are more engaged in football, whereas girls are more involved in cooking, where at times, the girl will tell the mother to let her cook. This makes the child familiar with cooking, which will be of great help to her.” FGD with fathers

3.3.2 How LtP is integrated into daily activities with children at school

Teachers reported that LtP approaches were integrated into children’s daily indoor or outdoor play activities. To promote the development of fine and gross motor skills in children, they would be grouped to participate in activities such as ball games, swimming, dancing, painting, skipping ropes, rolling tires etc. Some teachers also mentioned that they regularly incorporated song and dance into classroom activities in specific subject areas.

“We have songs for every learning activity. If it is mathematics, we have songs for number work; for languages, we also have songs for letters and sounds. Sometimes we model the numbers; we do the painting. When we are doing language and handling letter sounds, we sing them, then color or paint them.” FGD with teachers

3.3.3 Existing LtP approaches at home

Parents mentioned that different types of LTP approaches existed at home. For instance, mothers reported that children are engaged in activities such as sewing using thread, a pair of scissors, and needles. In addition, play activities such as cutting carrots or washing clothes are also practiced. Fathers mentioned drawing, painting, and coloring as some of the activities they engage in with their children. Fathers also mentioned that they used opportunities such as church attendance to expose their children to activities through which they could learn.

“Sometimes you find that your child requests thread, a pair of scissors, and a needle because they want to sew. I am doing laundry, and he also wants to do it with me, so I usually give him light ones like socks to wash. At times when I am preparing meals, he also wants to do it with me, so I let him cut the carrots” FGD with mothers

“When there’s a picture she wants to draw, you must be there to guide and monitor what she is doing. You also show her how to paint by telling her how and what color to use. On Saturdays, when there is time, I take her out, and then in the sun, I must take her to church for exposure.” FGD with fathers

As presented in **Figure 1**, the quantitative findings corroborated the views of parents expressed during the qualitative interviews. For instance, across the three counties, participants reported that drawing, manipulation of small equipment, and modeling were among the most-commonly practiced LTP activities to promote fine motor skills among children.

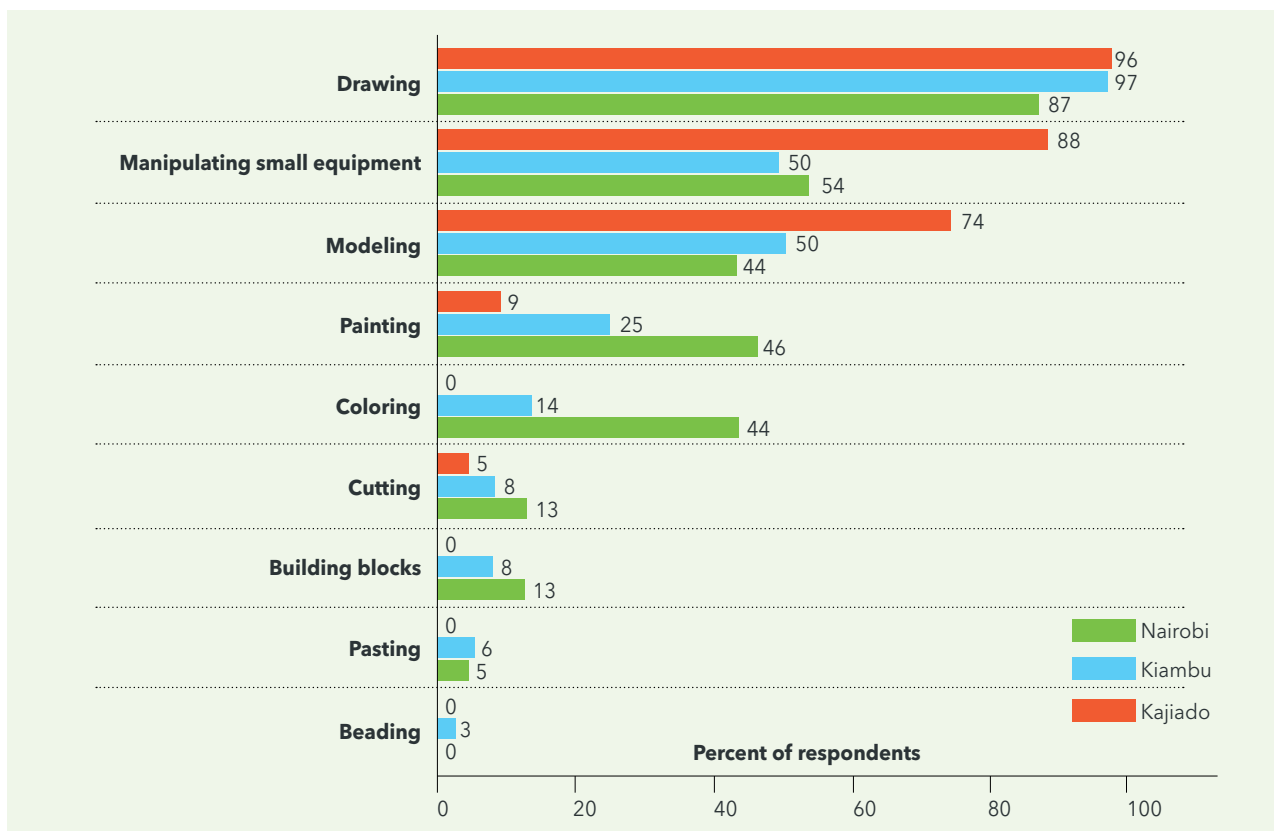


Figure 1: Play activities that promote fine motor skills

Over 80% of the parents indicated that ball games were the main activities that they engaged in with their children to promote gross motor skills. Other activities that were reported, in line with the qualitative findings, were running and skipping.

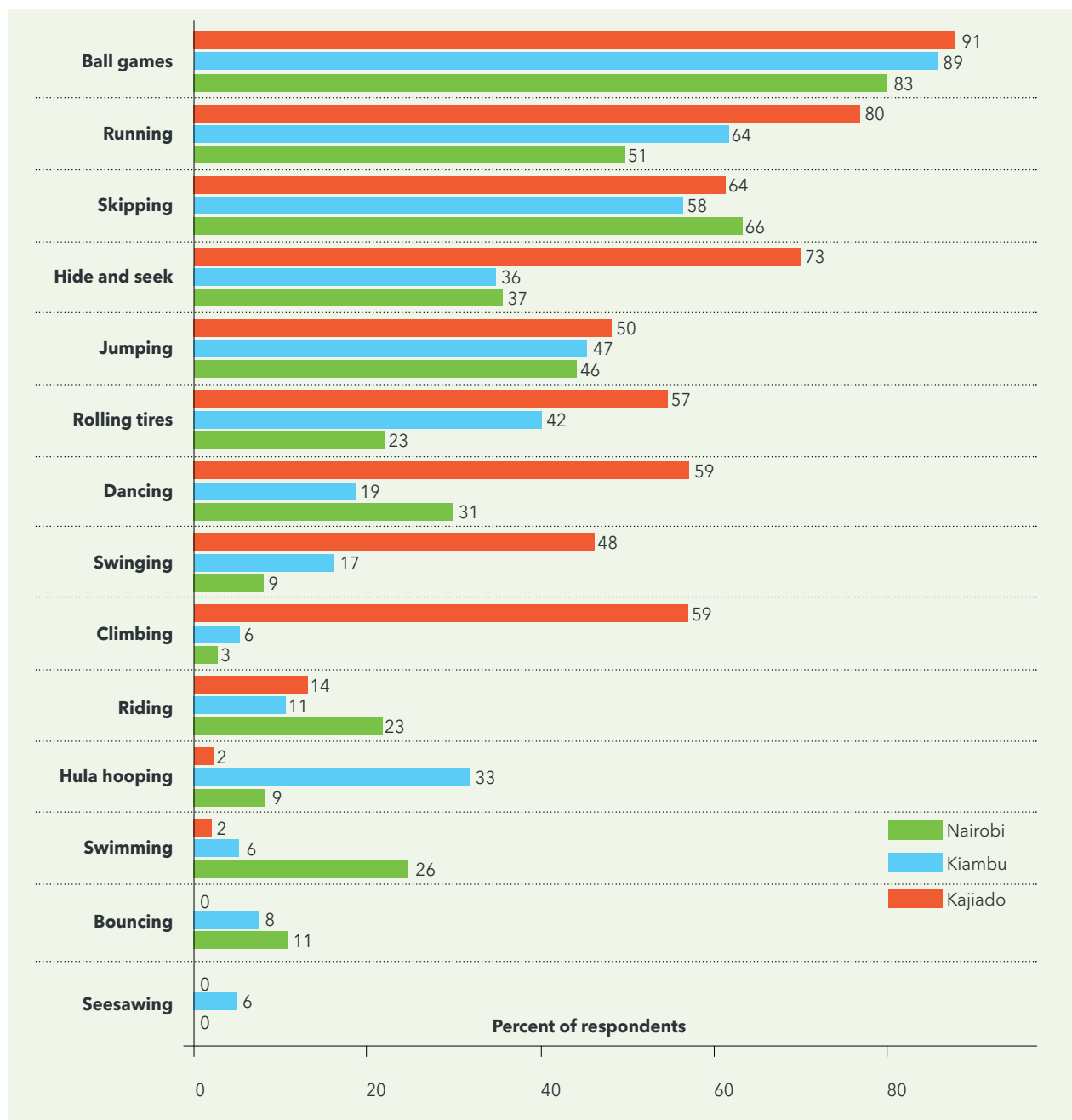


Figure 2: Play activities that promote gross motor skills

Similar to the qualitative findings, the results from the quantitative survey revealed that singing, storytelling, and reading were the main activities that were used to promote language skills among children at home (Figure 3).

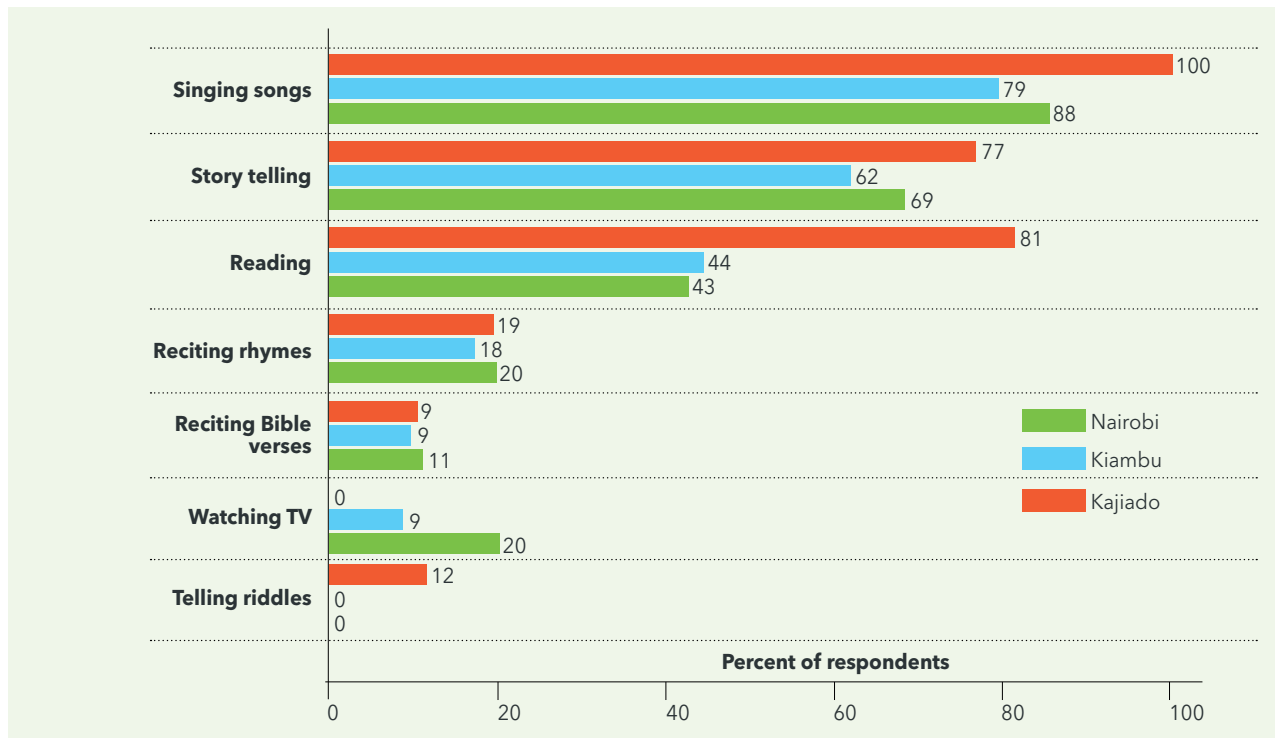


Figure 3: Play activities that promote language skills

Figure 4 shows that most parents used sharing, role play, and teamwork activities to promote socio-emotional development among children.

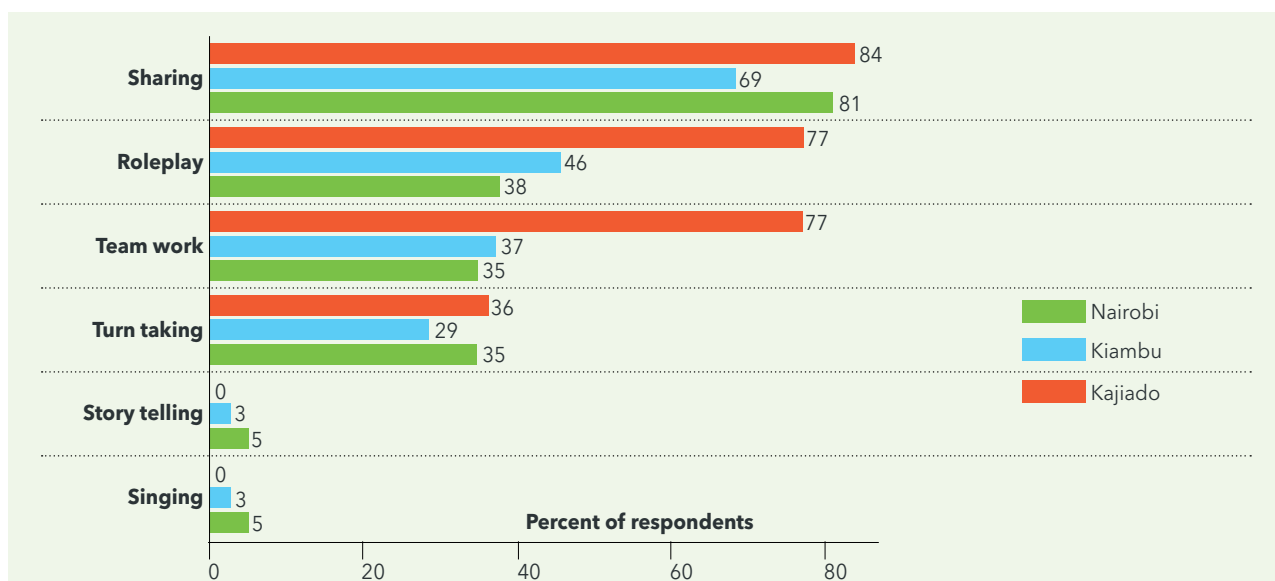


Figure 4: Play activities that promote social-emotional skills at home

3.3.4 Existing LtP approaches at school

Most teachers mentioned that the main LtP approaches used in school were singing, reciting poems, and dancing during indoor activities. In addition, teachers mentioned that playful activities such as counting, throwing, and catching various objects promoted learning among children.

“They learn through play when they sing and recite poems. It is very exciting for them, and they become very happy as they learn and participate in the activities. In addition, when they are doing mathematics, they can use balls as they count while throwing and catching, and they will enjoy it.” FGD with teachers

Teachers reported that they integrated play into indoor and outdoor activities in school. According to the teachers, children usually jumped as they counted numbers from 1 to 20, which facilitated the understanding of mathematical concepts and development of language skills. As part of indoor play activities, teachers mentioned that children were involved in painting and modeling.

“... Learning through play has been well integrated into psychomotor activities. Children jump as they count numbers, and this develops their mathematical skills. We have songs for every learning activity that develops their language skills. If it is mathematics, we have number work; for languages, we have songs and sounds. Sometimes we model the numbers, or we do the painting.” FGD with teachers

The quantitative results mirrored the qualitative findings as teachers indicated that modeling, drawing, painting, and manipulation of small objects (**Figure 5**) were the main activities that they used to promote fine motor skills among children.

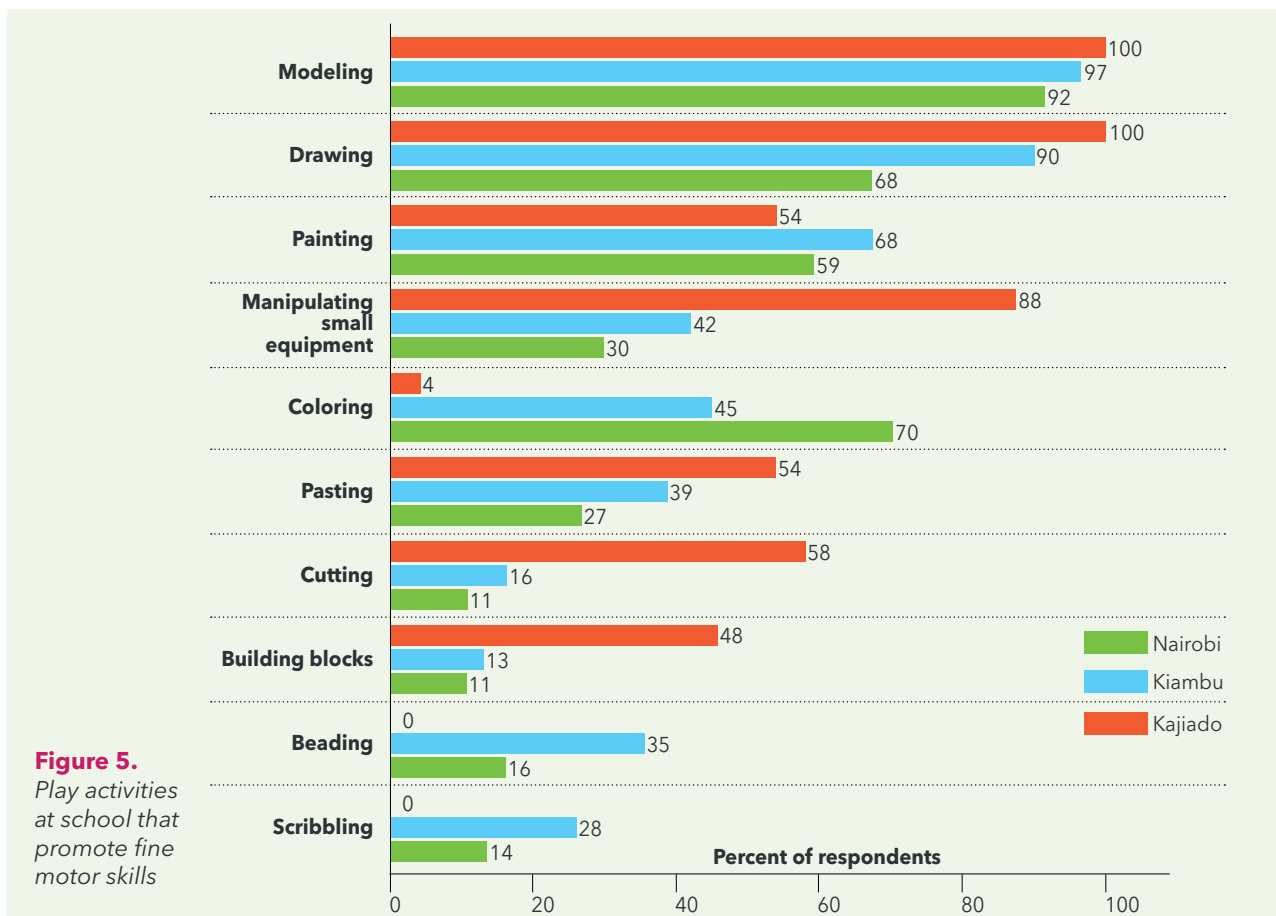


Figure 5. Play activities at school that promote fine motor skills

Skipping, ball games, jumping, and rolling tires were mentioned by the teachers as some of the activities that promote gross motor development as indicated in **Figure 6**.

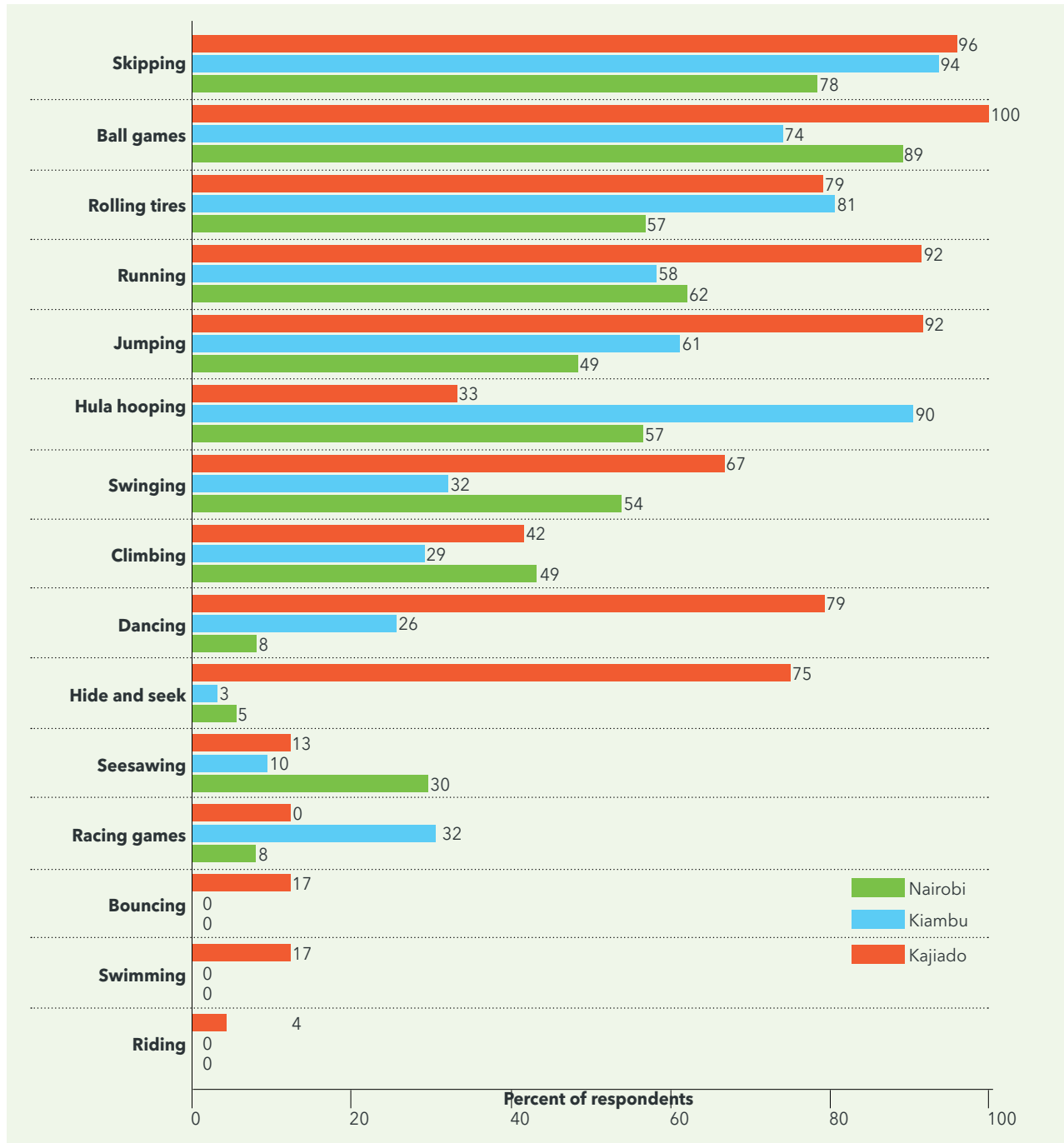


Figure 6: Play activities that promote gross motor in school

In our FGD with parents, songs and sounds were mentioned as some of the activities that promote LtP in schools. Similarly, as indicated in **Figure 7**, the use of songs, storytelling, and rhymes were the main language activities that were reported by participants across the three counties.

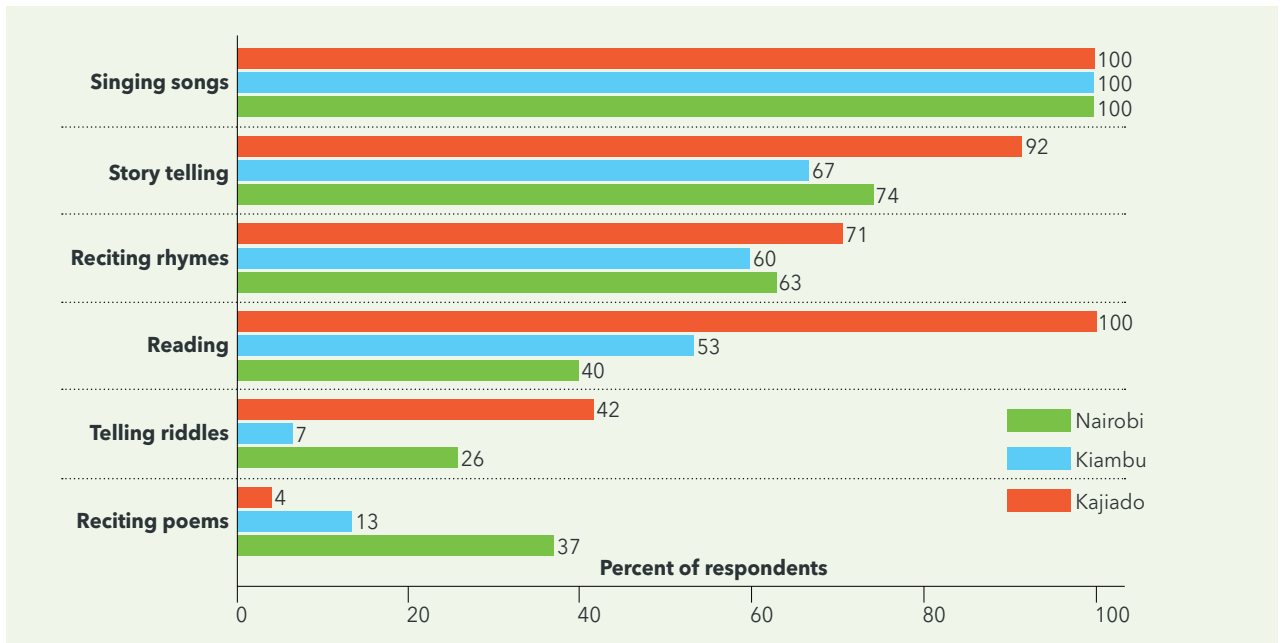


Figure 7: Play activities that promote language skills in school

Parents mentioned that sharing, roleplay, and encouraging teamwork were key activities that were used in school to promote social-emotional development in children, as shown in **Figure 8**.

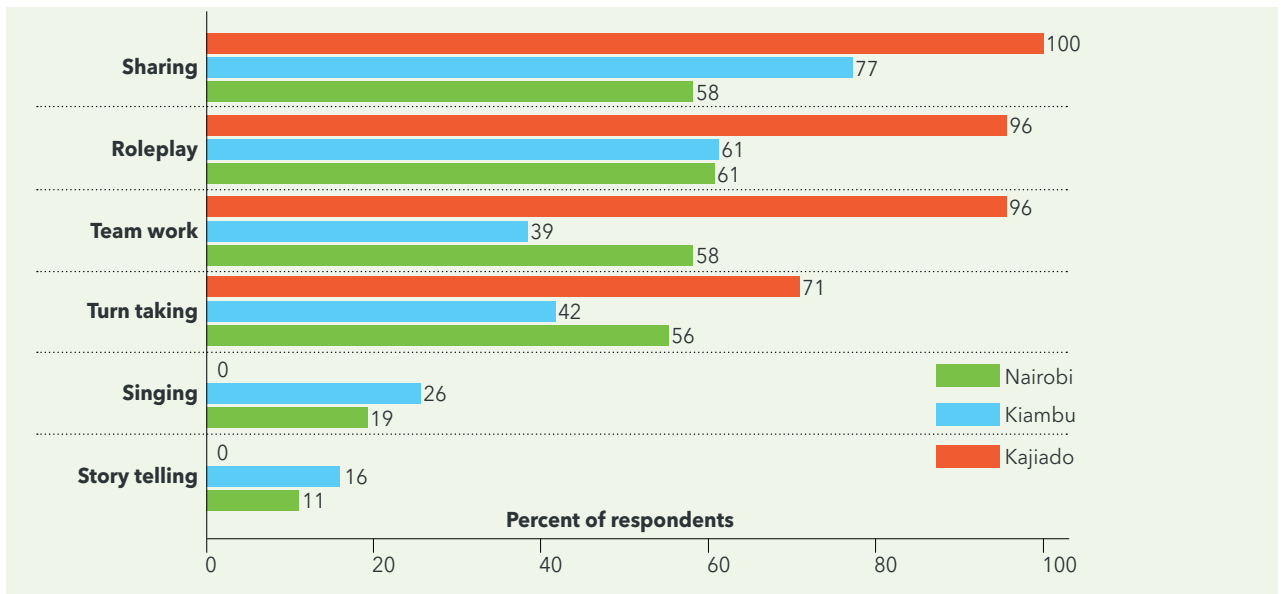


Figure 8: Play activities that promote socio-emotional skills in school

3.3.5 LtP approaches for children with disabilities

Teachers reported that most (62%) of the children with disabilities in school had physical impairments (**Table 4**). Other disabilities included autism, sensory impairments, learning disorders, and cerebral palsy. Schools in Kajiado County which had children with disabilities reported that they were distributed across all disability types.

Table 4: Types of disabilities among learners

	Kajiado	Kiambu	Nairobi	Total
	N=10	N=10	N=10	N=10
School location				
Urban	4 (40%)	3 (30%)	10 (100%)	17 (57%)
Rural	6 (60%)	7 (70%)	0 (0%)	13 (43%)
Have learners with disabilities	5 (50%)	4 (40%)	4 (40%)	13 (43%)
What types of disabilities do your learners have?				
Autism	1 (20%)	1 (25%)	2 (50%)	4 (31%)
Cerebral palsy	1 (20%)	0 (0%)	0 (0%)	1 (8%)
Physical (e.g., arms, legs)	3 (60%)	2 (50%)	3 (75%)	8 (62%)
Sensory (e.g., visual, hearing)	3 (60%)	1 (25%)	0 (0%)	4 (31%)
Learning disabilities	1 (20%)	0 (0%)	1 (25%)	2 (15%)
Attention Deficit Hyperactivity Disorder	1 (20%)	0 (0%)	0 (0%)	1 (8%)

Our results in **Table 5** revealed that less than half of the schools (n = 13, 43%) across all the counties have children with disabilities. The proportion of schools which had made efforts to adapt play materials for learners with disabilities was higher in Kajiado than in Kiambu and Nairobi. Few schools (31%) reported availability of play materials for children with special needs. All the schools in Nairobi that had learners with disabilities indicated that they had received training.

Table 5: LtP approaches for children with disabilities

	Kajiado	Kiambu	Nairobi	Total	P-value
	N=10	N=10	N=10	N=30	
Have learners with disabilities	5 (50%)	4 (40%)	4 (40%)	13 (43%)	0.87
Adaptations made to play materials for children with disabilities	4 (80%)	1 (25%)	0 (0%)	5 (38%)	0.040
Play materials available for children with disabilities	2 (40%)	2 (50%)	0 (0%)	4 (31%)	0.26
Received any training on handling children with disabilities	3 (60%)	1 (25%)	4 (100%)	8 (62%)	0.092

3.4. PERCEIVED BENEFITS OF PLAY

3.4.1 Caregivers' perceptions on the benefits of play for young children

As shown in **Figure 9**, over 75% of caregivers/parents from the three counties reported that play promotes social skills. The majority (over 72%) viewed play as important in promoting learning. According to some of the caregivers, play was also perceived as being important in promoting language and cognitive development.

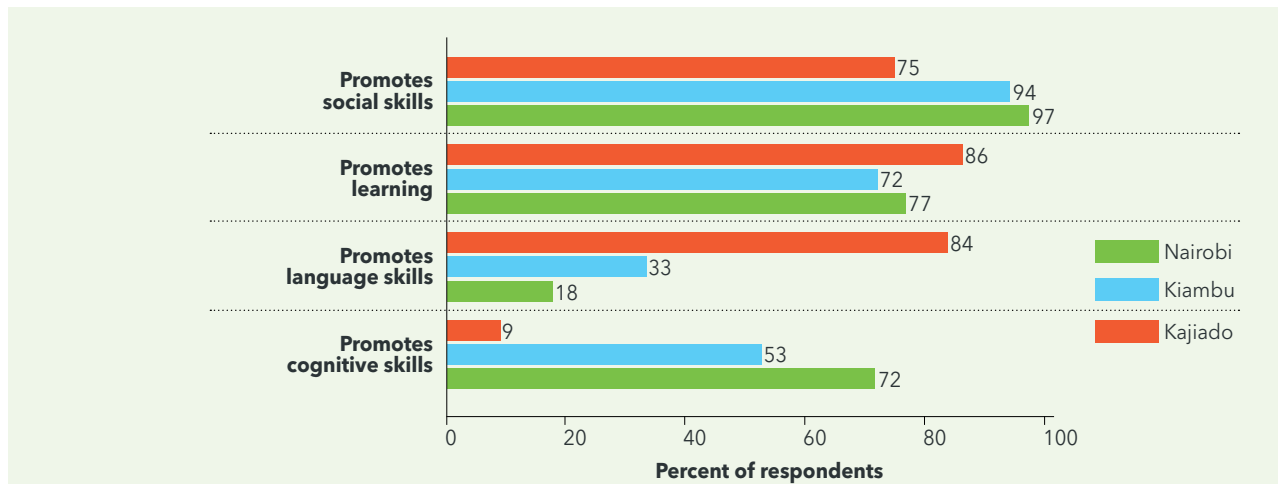


Figure 9: Caregivers' perceptions on the benefits of play for children

During the qualitative interviews, most primary caregivers mentioned that play promoted learning among children. They indicated that during play, children learn key concepts such as counting numbers, a skill which could be used in everyday activities.

"It is through play that she learned. While they play, other children count, and she imitates. Later, I would help her understand, for instance, what 5 as a number means. She has also learned how to differentiate things, like when they play hide and seek. She has learned to differentiate between many things." **FGD with mothers**

Similarly, male caregivers mentioned that engaging with their children through play was a way of bonding and experiencing fun with them. They added that playing with children, particularly using devices such as mobile phones, enabled children to relax and bond with them.

"Playing with children is a way of bonding; that's how we bond, and they can express themselves. When the child is out to play, the muscles become stronger. When the child sees other children happy and playing. The child also becomes happy." **FGD with fathers**

3.4.2 Teachers' perceptions on the benefits of play for young children

Most teachers mentioned that play promotes cognitive development and provides useful opportunities for children to manipulate ideas and discover through discussion how to play a specific game. Teachers reported that the use of strategies such as storytelling facilitated understanding and retention of taught information among children.

"We think it's good for the children. It is the best because when you teach through play, children will understand easily, and you will not struggle to teach. Because now, when you want to teach something and introduce it as a story, they will understand and retain it." **FGD with teachers**

Generally, most teachers reported that children learn best through play when actively involved in role-playing or dramatization activities. They added that when children learn in such a playful environment, they understand better, become more involved, and acquire new vocabulary.

"Learners do understand better when they play and learn simultaneously. For example, when the children are to learn about money and they role-play buying and selling, they will be excited and at the same time learn new vocabulary like money, coins, and notes. When they are playing, the children become active." **FGD with teachers**

Teachers also mentioned that playful activities such as sorting promote the development of children's fine and motor skills, cognitive skills, and imagination skills. Teachers also believe learning through play, using real materials, makes children enjoy learning and promotes mastery of the concepts.

"It makes learning and the concept the teacher is teaching real. When they use the materials, they understand the concept and won't forget it. It is good for children with short memories because they will be engaged. They get to develop their imagination by sorting a group. Developing cognitive, small, and large muscles and skills through play." **FGD with teachers**

3.4.3 Policy implementers' perceptions on the benefits of play for young children

Most policy implementers mentioned that play increases the concentration span of young children and creates a better understanding of learning experiences. They mentioned that play promoted children's cognitive and psychomotor skills. Policy implementers also believed that play experiences that require children to perform activities together promote teamwork among children.

"...it gives them a better understanding of whatever they are learning about rather than just introducing something new to them. Play will develop all the senses in a child, be they cognitive or psychomotor. Yes, play will develop an all-around child." **KII with a policy implementer**

3.5 SUPPORT PROVIDED TO ENHANCE LTP

3.5.1 Support for LtP provided by schools to parents

Results in **Table 6** indicate that a high proportion (69.4%) of caregivers across the three counties did not receive any support from the school on how to support LtP among their children. The few caregivers who mentioned that they had received support indicated that it was in relation to the provision of play and written materials. Only 3 (2.5%) caregivers reported that they had been visited by the teachers at home.

Table 6: Support for LtP approaches provided to caregivers by schools

	Kajiado N=44	Kiambu N=36	Nairobi N=39	Total N=119
What support have you received from the school as you help your child to learn through play?				
Adaptations made to play materials for children with disabilities	0 (0.0%)	15 (41.7%)	11 (28.2%)	26 (21.8%)
Provision of relevant written materials	1 (2.3%)	11 (30.6%)	15 (38.5%)	27 (22.7%)
Visits from the teacher	0 (0.0%)	2 (5.6%)	1 (2.6%)	3 (2.5%)
No support received	43 (97.7%)	18 (50.0%)	22 (56.4%)	83 (69.7%)

3.5.2 Support for LtP provided by caregivers to schools

Some fathers mentioned that they provided play materials and financial support for school trips, school projects such as fencing, and other requests the schools made. They indicated that they also provided materials such as crayons, charts, textbooks, and sacks.

“... whatever items the school requires from the children, I provide. Materials could include books, modeling items, drawing colors, and financial support. When the teacher requests writing and playing materials, we must support them by providing them. That is to say, if the children are going to play somewhere away from the school, I can offer to give them some money. As a parent, those are some of the things that I can buy for my child.” FGD with fathers

Similarly, mothers reported that they provided support to schools to promote implementation of LtP approaches. The type of support mentioned included provision of play materials, ensuring children were clean and appropriately dressed, paying school fees, speaking to parents of children with disabilities, and ensuring children got to school on time as required.

“Through providing play materials needed in school, ensuring children are in proper school uniform, paying school fees, and speaking to parents regarding children with disabilities. Ways of getting a medical assessment and disability cards for those kids. Organizations have also helped children with disabilities in our school by providing them with health insurance.” FGD with mothers

3.5.3 Support for LtP provided by policy implementers to schools

Some policy implementers reported they had supported schools by forging partnerships with organizations to provide materials to the schools and train teachers. In addition, the policy implementers also encouraged teachers to integrate LtP whenever they had monitoring visits to observe lessons.

“Feed the Children and World Vision International support us in material development. They provide the paint to schools when teachers want to paint some learning materials and have also supported us in training. We also continually encourage and remind our teachers to embrace learning through play whenever we visit a school.” KII with a policy implementer

3.6 ROLES IN PROMOTING LTP APPROACHES

3.6.1 The role of caregivers in promoting LtP approaches

Mothers reported that their roles in promoting LtP involved ensuring that their children were safe and providing play materials and guidance during play activities. The mothers also reported that they got involved in their children’s play activities and encouraged them to hone their talents in specific areas.

“I have to be there to make sure they are safe as they play, so as a parent, I have to monitor what they are doing. Encourage and support the child in the games he or she likes because those games alone can take your child to greater heights. I also ensure that they have enough materials to play with.” FGD with mothers

The quantitative findings supported the qualitative results as parents mentioned that to promote LtP, apart from playing with children, they provided play materials, and play. **Figure 10** provides more details.

3.6.2 The role of teachers in promoting LtP approaches

Teachers reported that their roles in promoting LtP included guiding children during role-play activities and linking play and school learning areas.

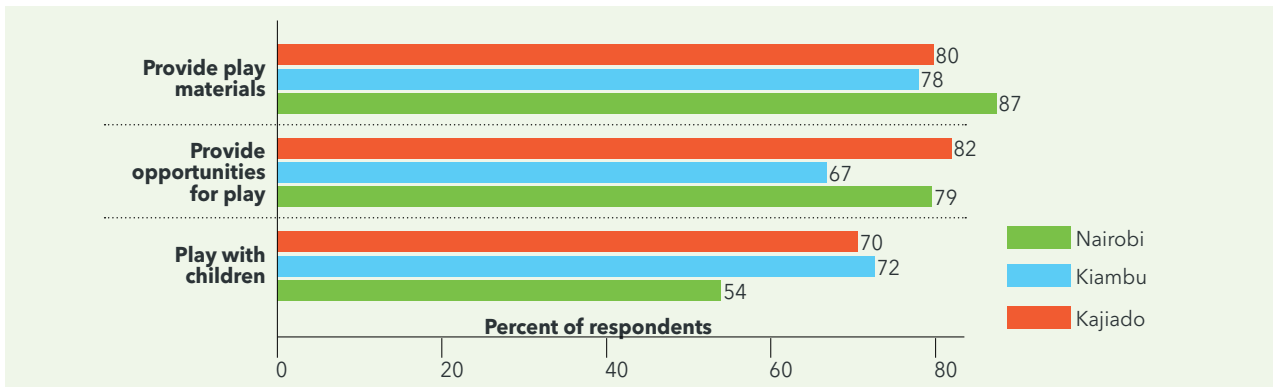


Figure 10: Roles of parents in promoting learning through play

“For example, you can be teaching about jumping; they’re jumping following instructions, and you tell them to jump as they count from one up to ten. So, you have linked mathematics and the outdoors.” **FGD with teachers**

The parents who were interviewed shared similar sentiments, as they recognized that teachers had an important role to teach children how to make play items from locally available materials and ensure that their play environment was safe.

“It is important that teachers train pupils to make play materials from locally available materials, such as molding clay. Ensuring that children play in a clean and safe environment. Guiding children in all aspects.” **FGD with mothers**

Fathers indicated that teachers could promote LtP via storytelling (Bible and other stories), where children are given an opportunity to ask questions through which they could be taught certain concepts.

“It is through storytelling. When narrating stories to them, they are normally not bored; they are very attentive, and, in the process, they do ask questions, and through those questions, I’m able to teach them and to reach them. I think this is one way a teacher can promote learning for the children.” **FGD with fathers**

3.6.3 The role of policy implementers in promoting LtP approaches

Policy implementers reported that their role in promoting the use of LtP approaches included development of a curriculum for children that integrates playful learning using locally available materials. In addition, the policy implementers mentioned that they used material development days as opportunities to train teachers. They have also created partnerships with organizations such as UNICEF to support budgetary needs in implementation of play-based activities.

“We developed a curriculum that integrates playing/learning materials into teaching and learning processes to enhance learning. In addition, we train our teachers on material making using locally available materials so that they do not say that it’s too expensive. When you go to that specific area, you tell them to pick that bottle and that plastic plate. Further, we work with partners such as UNICEF to assist in implementing what we cannot manage because most of our budget is devolved.” **KII with a policy implementer**

3.7 BARRIERS, FACILITATORS, AND ADOPTION OF LTP APPROACHES

3.7.1 Facilitators of the implementation of LtP approaches at home

Mothers reported that schools should support parents by providing play materials and ensuring that playgrounds were safe for children. They mentioned that this would be an important facilitator to promote implementation of LtP approaches at home.

"..... supporting children by providing materials such as skipping ropes and expanding the playground to accommodate all children. The swings should be added so all children can use them during break time."

FGD with mothers

The survey results were similar to the qualitative ones, as the majority (68%) of parents considered support from the school as being important in enhancing the implementation of LtP approaches (**Table 7**). Slightly more than half of the parents (52%) also indicated that it was important for them to support schools.

Table 7: Factors that enhance the implementation of LtP approaches at home

	Kajiado N=44	Kiambu N=36	Nairobi N=39	Total N=119
What factors enhance the implementation of LtP approaches?				
Support from the school	34 (77.3%)	25 (69.4%)	22 (56.4%)	81 (68.1%)
Support from the ministry	36 (81.8%)	9 (25.0%)	7 (17.9%)	52 (43.7%)
Support from parents	19 (43.2%)	20 (55.6%)	23 (59.0%)	62 (52.1%)
Knowledge and awareness	20 (45.5%)	15 (41.7%)	21 (53.8%)	56 (47.1%)
Training on LtP	32 (72.7%)	10 (27.8%)	6 (15.4%)	48 (40.3%)

3.7.2 Facilitators of the implementation of LtP approaches at school

Like parents, most teachers viewed the support from parents for the school, like provision of materials for play, as a facilitator. Some teachers mentioned that they provided play materials to the children during school activities.

"When you send the learners home with materials, they normally bring them. Some schools provide things like swings, but in most schools, car tires are brought by learners." **FGD with teachers**

Similarly, policy implementers reported that improving the school management, and continuous monitoring and assessment of the LtP approaches were key factors in promoting playful learning, as indicated in the quote.

"The leadership and management of the school can contribute so much. Continuous monitoring and assessment in schools is also a key area." **KII with a policy implementer**

3.7.3 Factors for scaling up LtP approaches

Teachers mentioned that they had been trained on how to implement the recently adopted competency-based curriculum (CBC) and material development. With the training, the teachers felt they were equipped to scale up the implementation of the LtP model. Teachers added that they could use the skills acquired in the training on material development to improvise local playing materials and reduce costs.

"...practicing factors such as durability on learning materials would enable children to use more materials and equipment in good condition, which also provides an opportunity for sustaining an LtP program and reducing costs incurred by the schools on the purchase of the playful learning resources." **FGD with a teacher**

The policy implementers mentioned that acquisition of more play materials, hiring more teachers, and sensitization of teachers on the use of locally available materials would be key to the scale-up of LtP approaches. They also stated that through the implementation of schemes of service and the ECD Act 2021, more qualified teachers could be hired to support the implementation and scale-up of LtP approaches.

"Acquisition of more resources and play materials, sensitization of all the ECDE teachers to develop play materials using locally available material, and implementation of the scheme of service to employ trained ECDE teachers and ensure the Teachers' Service Commission registers them are among provisions will lead to the effective implementation of LtP." **KII with a policymaker/implementer**

3.8 PERCEIVED HINDRANCES TO THE IMPLEMENTATION OF LTP APPROACHES

3.8.1 Hindrances to the implementation of LtP approaches at home

As shown in **Table 8**, lack of play materials was considered by the majority (83.2%) of parents as a major hindrance to the implementation of the LtP model across the three counties. Parents also indicated that the lack of support from the school was another hindrance to smooth implementation.

Table 8: Hindrances to implementation of LtP approaches at home

	Kajiado N=44	Kiambu N=36	Nairobi N=39	Total N=119
What factors hinder the implementation of LtP approaches?				
Lack of support from the school	31 (70.5%)	8 (22.2%)	19 (48.7%)	58 (48.7%)
Lack of support from the ministry	36 (81.8%)	4 (11.1%)	7 (17.9%)	47 (39.5%)
Lack of support from parents	12 (27.3%)	16 (44.4%)	19 (48.7%)	47 (39.5%)
Lack of play materials	43 (97.7%)	28 (77.8%)	28 (71.8%)	99 (83.2%)
Lack of knowledge and awareness	21 (47.7%)	8 (22.2%)	6 (15.4%)	35 (29.4%)

3.8.2 Hindrances to the implementation of LtP approaches at school

During the FGDs, fathers cited the lack of trained teachers, lack of infrastructural space where children could play, and lack of play and learning materials as major hindrances to the implementation of LtP approaches at school.

"I would say that play materials are inadequate, so the children are limited to play materials. The availability of adequate play materials would enhance the activities. Secondly, there's a lack of trained teachers. The school should have enough trained teachers to teach the children different play activities. Also, there is inadequate space for children to explore. They are just confined in one place." **FGD with fathers**

Mothers mentioned that most parents were not financially stable, and it was stressful for them when they received requests for support from the school. The cost of living keeps soaring, so buying play materials was also challenging. Mothers added that the implementation of LtP approaches has been hindered by factors such as shortage of teachers and the deplorable physical conditions within school.

“Considering the learners’ population, the teachers aren’t enough. There are so many learners, especially in PP1, but you find only two teachers. The condition of the washrooms is so bad that the teachers must be with the young ones when visiting the washrooms. Some children have mastered washroom usage, but some must be guided most of the time. The washrooms are in a bad state; hence the children are prone to diarrheal diseases because they are not cleaned.” **FGD with mothers**

3.8.3 Hindrances to the implementation of LtP approaches for children with disabilities

Teachers mentioned that the acute shortage of adaptive learning materials, and low knowledge, and skills in the management of children with disabilities hampered the implementation of LtP approaches among children with disabilities. They also indicated that parents were hesitant to disclose information about their children with disabilities for fear of discrimination.

“I called the mother and told her she could help the child, but it seems the mother is in denial. I told the mother I wanted to help her, and we should take the child for an assessment. The mother told me her child has no problems, and I didn’t take anything further.” **FGD with teachers**

Policy implementers mentioned that the lack of adequate and adaptive play materials to address the specific learning needs of children with disabilities was a major barrier. In most schools or classes, teachers use local materials that may not be appropriate for learners with disabilities to implement LtP approaches. Moreover, the policy implementers makers cited the lack of relevant knowledge and skill sets among teachers as a barrier. The limited capacities for early identification of learners with disabilities among teachers and parents, compounded by the high child-to-teacher ratio, led to teachers getting overwhelmed and unable to pay attention to children with learning difficulties in or outside the classroom. Another barrier to integrating LtP in schools, which the policymakers reported, was the lack of clarity regarding policies for children with disabilities in ECDE centers. There is conflicting policy interpretation between the national and subnational governments on the management of children with disabilities at the pre-primary school level.

“The teachers have the materials, but they are not sufficient. The materials that we have in our schools are just for ordinary learners. You know that for children with special needs, it is about adaptive materials and skilled teachers, but most of our teachers are not trained to handle children with different needs. There is a lack of clarity on where special needs are hosted. You know the special needs program is on the docket of the national government. Even the officers managing those programs are from the national government.” **KII with ECDE policy implementer**

3.9 CAPACITY STRENGTHENING TO ENHANCE LTP APPROACHES

3.9.1 Capacity needs in implementation of LtP approaches at school

A high percentage (70%) of teachers reported not having received training exclusively on LtP approaches (Table 9). Training on material making was considered the most important need for the effective implementation of LtP approaches, as reported by the majority (82%) of teachers.

Table 9: Training needs among teachers on the implementation of LtP approaches

	Kajiado N=24	Kiambu N=31	Nairobi N=37	Total N=92
Received any training on learning through play during your professional life	19 (79%)	25 (81%)	20 (54%)	64 (70%)
What kind of training is important for the implementation of LtP approaches?				
Use of various play materials	16 (67%)	19 (61%)	25 (68%)	60 (65%)
Making play materials	22 (92%)	22 (71%)	31 (84%)	75 (82%)
Adaptation of play materials	15 (63%)	14 (45%)	20 (54%)	49 (53%)
Adaptation of play materials for children with special needs	11 (46%)	2 (6%)	2 (5%)	15 (16%)

Teachers mentioned that key areas that could be considered to enhance their capacities to implement LtP approaches included benchmarking with other schools and establishing school assessment and supervision of teachers. They also reported that cooperation among teachers as well as building relationships with well-wishers who would support the provision of learning materials would be key to promoting the implementation of LtP approaches.

“Benchmarking with other neighboring schools and sharing ideas on learning through play activities will be effective in strengthening the capacity of teachers. Cooperation among teachers and parents will also improve the implementation of LtP. Also, assessment and supervision of teachers to ensure quality provision of learning.” **FGD with teachers**

3.9.2 Suggestions to strengthen teachers' capacity in use of LtP approaches

The results shown in **Table 10** were in concurrence with the qualitative findings. A high proportion of the teachers (88%) reported that to strengthen their capacities for the implementation of LtP approaches in their respective schools, it was necessary for schools to provide them with adequate play materials. In addition, most of the teachers (68%) across the three counties mentioned that they would prefer to attend training on making play materials. When compared to Kiambu County (39%), a significantly higher proportion of teachers in Kajiado (100%) and Nairobi (73%) Counties indicated that training was an important factor for consideration by the school leadership in strengthening their capacities in the implementation of LtP approaches.

Table 10: Teachers' capacity strengthening needs in use of LtP approaches

	Kajiado	Kiambu	Nairobi	Total	P-value
	N=24	N=31	N=37	N=92	
What do you think can be done to strengthen the implementation of LtP in this school?					
Training of teachers	24 (100%)	12 (39%)	27 (73%)	63 (68%)	<0.001
Benchmarking with other centers	23 (96%)	4 (13%)	4 (11%)	31 (34%)	<0.001
Funding	15 (63%)	15 (48%)	13 (35%)	43 (47%)	0.11
Provision of play materials	24 (100%)	28 (90%)	29 (78%)	81 (88%)	0.035
Supportive supervision	5 (21%)	0 (0%)	3 (8%)	8 (9%)	0.024
Other	7 (29%)	12 (39%)	20 (54%)	39 (42%)	0.14

Teachers' sentiments were also shared by the policy implementers, who mentioned that strengthening the capacity of teachers was critical to the implementation of LtP approaches.

"Teachers are the most resourceful people to base your decisions on. When we involve teachers, we reach far. For instance, the CBC has been brought so far by the teachers. Having trainers work with teachers will improve learning through play." **KII with a policy implementer**

Furthermore, policy implementers noted that when opportunities for benchmarking with neighboring schools are provided to teachers, they can learn new ideas relevant to teaching and learning. They also reported that adequate funding is necessary to enable schools to purchase learning materials to promote the implementation of LtP approaches.

"...when you try to bring someone out of where they are to see whatever is happening in a different place, that will also encourage this person, and she or he will learn new ideas." The funding can be used for the procurement of materials in schools. With the funding, there will always be materials available in schools to make learning/playing materials." **KII with a policy implementer**

CHAPTER FOUR

Discussion, Conclusion, and Recommendations

4.1 DISCUSSION

The aim of the current study is to adapt, test, refine, and facilitate scaling innovations to workforce development to support LtP approaches to enhance the quality of learning in pre-primary with a focus on children from marginalized communities, including those with disabilities. The baseline survey explored the existing LtP approaches in schools to understand what aspects can be adapted and refined to enhance learning for preschoolers. The findings indicated that study participants (caregivers, teachers, and policy implementers) were aware of directed play activities such as drawing, modeling, coloring, jumping, and ball games. The results further demonstrated that participants understood the importance of LtP approaches in promoting children's language and socio-emotional skills. However, the results illustrated that there were limitations in the capacities of teachers and parents to implement LtP approaches for children, including those with disabilities. Findings indicated that there was limited variety in the types of play activities that caregivers and teachers used. Participants indicated a lack of awareness on the types of disabilities that children had. Further, the results showed that male involvement in promoting LtP approaches was poor, and most fathers thought that this was not their direct responsibility.

Participants recognized the major facilitators and barriers to the implementation of LtP approaches at home and school. There was a weak link between school and home, even though teachers and parents were cognizant of the need for a connection between the two contexts. Other facilitators of implementation of LtP approaches included:

- » The provision of adequate play materials;
- » Training teachers on material development
- » Establishment of a collaborative link between parents and school
- » Partnerships with key stakeholders to support the implementation of LtP approaches.

Major barriers that were pointed out included: inadequacy of play materials;

- » Limited capacities among teachers to adapt play materials for children with disabilities
- » Limited awareness on the use of a variety of locally available and culturally appropriate play materials at home and school.

Participants believed play has a role in facilitating children's learning in school and at home. Participants provided different kinds of support to enhance implementation of LtP approaches. Some forms of support included provision of play materials and ensuring that the play environment was safe for children.

Common play activities that caregivers and their children engage in jointly have been documented in the literature. Activities such as talking, reading, playing games, and outdoor activities that participants in our study mentioned have been found to strengthen the relationship between the caregiver and the child and enhance learning for preschoolers (12,13). Existing evidence has shown that involving children in LtP, particularly during preschool and the early years, has an impact on later academic achievement and promotes the well-being of children (14,15).

Previous studies have reported that teachers had limitations in helping children with disabilities learn through play, findings which are in line with those from the current study (16). Teachers' main challenges have been in maintaining children's interest, guiding the play, and providing opportunities for child-driven play for those with disabilities. An earlier study has reported that teachers can provide various play materials, play with them, or stimulate the senses of children with disabilities (16). This was the case in the current study. The finding from our study that teachers lacked the required competencies and skills to handle children with disabilities demonstrates the need to train and prepare teachers support the learning of children with disabilities as has been suggested previously (17).

Male involvement in learning for preschool children has been found to have a positive effect on the schooling outcomes of their children (18). The findings also affirm that promoting LtP in schools and at home requires collective synergy from mothers and fathers in collaboration with teachers (19,20). The results presented in this baseline study concur with a study carried out in Malawi which confirmed that school systems, parents, and teachers are the key facilitators to determine the utilization of play-based approaches (21). Overall, our study provides information on broad perspectives, gaps, and considerations when implementing capacity strengthening initiatives for teachers on LtP approaches.

4.2 CONCLUSION

Our findings suggest that for effective implementation of LtP in public schools in Kenya, it would be helpful to consider strengthening teachers' capacity through training in areas of inclusion of children with disabilities and material development. The findings further suggest that parents' capacities for using a variety of play approaches and materials could be improved. We think to co-create material development days with caregivers in all project schools and embed this practice within the school leadership. Further, teachers and parents could be involved in home-school co-development of play-based projects through offering children enabling home environment and actively participating in the process. Although the limited male involvement at home (fathers) and in school (male teachers) was a hindrance to implementing LtP approaches, it provides a window of opportunity to consider initiatives to boost their participation. The newly adopted CBC which has aspects of LtP approaches embedded in it provides a good starting point for strengthening the capacity of teachers. Further, the study results showed that policy makers are critical in fronting up education policies which leverage play to promote inclusive early learning. Therefore, we are keen going forward to engage, discuss, and share key findings with policy makers; a process that will culminate into a co-development process of a learning through play model to be tested in preschools.

4.3 RECOMMENDATIONS

Based on the findings of the baseline study, the research team makes the following recommendations for the implementation of LtP approaches:

1

Male Engagement: Male caregivers and teachers could be encouraged to participate in the implementation of LtP approaches for young children through initiatives such as community dialogue, cultural platforms, use of art and radio programmes, all aimed to enhance LtP at the community level. Other strategies that could be adopted include capacity building of service providers at ECD centres and health facilities on gender transformative approaches which include engagement of males in childcare; providing opportunity for dialogue through group counselling sessions; identifying and engagement of male engagement champions as well as advocacy at national and sub-national levels to review and strengthen policies that facilitate men's engagement.

2

Strengthening the Capacity of Teachers and Curriculum Support Officers: Teachers and curriculum support offices are the key implementers of LtP in schools; therefore, strengthening their capacity through training as well as professional development opportunities is key. The opportunities should be comprehensive enough to include promotion of learning and play opportunities for children with disabilities. The county governments could consider partnership with key institutions such as the Kenya Institute of Curriculum Development (KICD), Kenya Institute of Special Education (KISE) as well as local non-governmental organizations (NGOs), private sector and service providers to enhance teachers' capacity to effectively implement LtP approaches in schools.

3

Promoting Playful Parenting: The link between home and school should be strengthened to promote playful parenting and LtP at home and in the communities. A number of innovative approaches could be considered including

- a. Voluntary home visits, teachers could follow up on how parents have involved their children in LtP and provide suggestions for improvement. This could be done through linkage of playful parenting with both positive outcomes for both parents and child.
- b. Conduct joint field excursions with parents to stimulate their perceptions about play
- c. Using existing spaces i.e child welfare clinics, supermarkets, shops, libraries, bus stops and parks to engage parents and share playful parenting messages.
- d. Using both mainstream and digital media to harness parents interests as well as working with them to develop and disseminate messages on playful parenting that reflect their experiences, challenges and expectations.
- e. Involving parents in developing materials and provide information on home-based

4

Collaboration with the Ministry of Education: The national government, through the Ministry of Education (MoE), could consider increases in the budgetary allocation for the ECDE sector through capitation or conditional grants which include provision teaching and play equipment and materials; as well as teacher professional development.

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Thursday
a b c d e f g h

Menu

Day	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Breakfast
Lunch
Dinner

quite Centre

h i k l m
v w x y z



Strengthening the Capacity of
Teachers on Play-Based Learning
in Sub-Saharan Africa

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