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Madrasa Early Childhood Programme, Kenya, Transition to Scale (MECP-K)

Endline Report

FINAL REPORT

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Presented to Aga Khan Foundation

Submitted by:

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# Table of Contents

[Acronyms v](#_Toc88305958)

[1. Executive Summary 1](#_Toc88305959)

[Summary of Findings 1](#_Toc88305960)

[2. Introduction 5](#_Toc88305961)

[3. Study Design and Methodology 6](#_Toc88305962)

[3.1 Child Assessment 6](#_Toc88305963)

[3.1.1 Sample Size Determination 7](#_Toc88305964)

[3.1.3 Sampling Frame 8](#_Toc88305965)

[3.1.4 Piloting and Enumerator Training 9](#_Toc88305966)

[3.1.5 Data Collection 9](#_Toc88305967)

[3.1.6 Data Analysis 9](#_Toc88305968)

[3.2 Qualitative 9](#_Toc88305969)

[3.2.2 Training, Piloting and Data Collection 10](#_Toc88305970)

[3.3 Ethical Considerations 11](#_Toc88305971)

[3.4 Limitations 11](#_Toc88305972)

[4. Classroom and Teacher Findings 12](#_Toc88305973)

[4.1 Impact of School Closures due to COVID-19 on Children 12](#_Toc88305974)

[4.1.1 Home Activities and Learning during COVID-19 14](#_Toc88305975)

[4.2 Classroom Observation 17](#_Toc88305976)

[4.2.1 Indicator #8 – Classroom Practices by ECDE Teachers 19](#_Toc88305977)

[4.2.2 Indicator #9 – Quality Learning Environments 22](#_Toc88305978)

[4.2.3 Analysis of Classroom Observation by Criteria and Domains 23](#_Toc88305979)

[4.3. Board of Management Assessment 28](#_Toc88305980)

[4.4. Teacher Survey 28](#_Toc88305981)

[4.4.1 Indicator #14 – Knowledge of MECP Curriculum 29](#_Toc88305982)

[4.4.2 Indicator #10 – Teachers who have Received Quality Mentoring and Support from County/Zonal Officials 32](#_Toc88305983)

[4.4.3 Frequency of Visits from County/Zonal Officials (Indicator 19) 33](#_Toc88305984)

[4.4.4 Level (Quality) of Mentoring and Support from County/Zonal Officials (Indicator 18) 34](#_Toc88305985)

[4.4.5 Indicator #12b – Parental/Caregiver Support of ECDE Services 37](#_Toc88305986)

[5. Child Assessment Findings 39](#_Toc88305987)

[5.1 Overview of Child Assessment 39](#_Toc88305988)

[5.2 Indicator #1 - Gross and fine motor skills 45](#_Toc88305989)

[5.3 Indicator #2 - Cognitive functions 47](#_Toc88305990)

[5.3 Indicator #3 - Receptive and expressive language 49](#_Toc88305991)

[5.4 Indicator #4 – Socio-emotional capacities 52](#_Toc88305992)

[5.5 Observations related to Child Assessment 54](#_Toc88305993)

[5.6 Potential Explanations of Results 57](#_Toc88305994)

[Appendix 1: List of Sampled Linked Primary Schools 58](#_Toc88305995)

[Appendix 2: Data Analysis Plan 60](#_Toc88305996)

[Appendix 3: Listing and Consent Form 67](#_Toc88305997)

[Appendix 4: Tool 1- Child Assessment 68](#_Toc88305998)

[Appendix 5: Tool 2- Classroom Observation 75](#_Toc88305999)

[Appendix 6: Tool 3- Teacher Survey 81](#_Toc88306000)

[Appendix 7: Qualitative Data Collection Tools 88](#_Toc88306001)

## List of Tables

[Table 1: Summary of Findings 1](#_Toc86558254)

[Table 2: Summary of Difference-in-Difference Estimations of Program Impact: Child assessment 2](#_Toc86558255)

[Table 3: Revised Child Assessment Methodology 7](#_Toc86558256)

[Table 4: Baseline and Endline Initial Sampling Frame and Listing Exercise 8](#_Toc86558257)

[Table 5: Number and Percentage of Children assessed using the Child Assessment, 9](#_Toc86558258)

[Table 6: School Site Selection for Qualitative Activities 10](#_Toc86558259)

[Table 7: Focus Group Discussions and Key Informant Interview Participation 10](#_Toc86558260)

[Table 8: Average Percentage Scores of Emotions Felt when Children were asked about School Closures because of COVID-19, by County, Gender and MECP-K status 12](#_Toc86558261)

[Table 9: Average Number and Percentage Scores of what Children state they are Worried about at School because of COVID-19, by County, Gender, and MECP-K status 13](#_Toc86558262)

[Table 9: Average Number and Percentage Scores of the Reasons why Children felt various Emotions regarding the School Closures because of COVID-19 13](#_Toc86558263)

[Table 11: Average Number/Percentage Scores of the Activities Children partook in when at Home during COVID-19 School Closures 14](#_Toc86558264)

[Table 12: Average Number and Percentage Scores of Children stating Someone helped them Learn at Home during COVID-19, by County, Gender, and MECP-K status 15](#_Toc86558265)

[Table 13: Average Number/Percentage Scores of Individuals who helped Children Learn at Home during COVID-19, by County, Gender, and MECP-K status 16](#_Toc86558266)

[Table 14: Average Number/Percentage Scores of Learning Activities Children did at Home during COVID-19 School Closures, by County, Gender, and MECP-K status 17](#_Toc86558267)

[Table 15: Teacher Characteristics, by County 17](#_Toc86558268)

[Table 16*:* Average Class Enrollment, Class Presence on Day and Absences, by County and Gender 18](#_Toc86558269)

[Table 17: Number and Percentage of Target Male and Female ECDE Teachers with Improved Classroom Practices, by County, Gender 19](#_Toc86558270)

[Table 18: Number and Percentage Scores of Teacher’s Classroom Practices, by County and Gender 21](#_Toc86558271)

[Table 19: Number and Percentage of ECDE centres with Improved Quality Learning Environments 22](#_Toc86558272)

[Table 20: Number and Percentage Scores of ECDE Centre Learning Environments, by County 23](#_Toc86558273)

[Table 21: Average Percentage Scores of Sections in the Classroom Observation Tool and times increase, by County 24](#_Toc86558274)

[Table 22: Average Percentage Scores for each question in the Classroom Observation Tool, by County 25](#_Toc86558275)

[Table 24: General Teacher Characteristics, by County, Gender and Teaching Experience 28](#_Toc86558276)

[Table 24: Number and Percentage of Target Male and Female ECDE Teachers with Core Knowledge of MECP Curriculum Concepts and Approaches, by County, and Gender 29](#_Toc86558277)

[Table 25: Percentage of Correctly Answered MECP Curriculum Questions by ECDE Teachers, by County 30](#_Toc86558278)

[Table 26: Average, Median and Minimum/Maximum Number Scores of Correctly Answered MECP Curriculum Questions by Targeted ECDE Teachers, by County, and Gender 30](#_Toc86558279)

[Table 27: Percentage of ECDE Teachers that Correctly Answered MECP Curriculum Questions 31](#_Toc86558280)

[Table 28: Percentage of Target ECDE Teachers that Correctly Answered each of the MECP-K COVID-19 Questions, by County and Gender 32](#_Toc86558281)

[Table 29: Number and Percentage of ECDE Teachers that report receiving Quality Mentoring and Support from a County/Zonal Official, by County, Gender, Gender of County Official 33](#_Toc86558282)

[Table 30: Number and Percentage of Target Male and Female ECDE Teachers that reported Receiving a Visit from a County/Zonal Official, by County 34](#_Toc86558283)

[Table 31: Number and Percentage of Target ECDE Teachers that reported the different levels of Quality Mentoring and Support during a visit from a County/Zonal Official, by County 35](#_Toc86558284)

[Table 32: Percentage of ECDE Teachers with “Yes” responses regarding the Quality of Mentoring and Support during a Visit from a County/Zonal Official, by County 35](#_Toc86558285)

[Table 33: Number and Percentage of Target ECDE Teachers that reported Adequate Parental/Caregiver Support of ECDE Services, by County 37](#_Toc86558286)

[Table 34: Percentage of Target ECDE Teachers that Contacted Parents for Various Reasons during School Closures during the COVID-19 Pandemic 38](#_Toc86558287)

[Table 35: Number/Percentage of Children reported to have Disabilities 40](#_Toc86558288)

[Table 36: Average Percentage Scores for Indicators of the Child Assessment, by County, Gender, and MECP-K status 41](#_Toc86558289)

[Table 37: Average Percentage Scores of Individual Questions for the Child Assessment, by County, Gender, and MECP-K status 43](#_Toc86558290)

[Table 38: Results of Difference-in-Difference Analyses for Indicator 1: Gross and Fine Motor Skills 45](#_Toc86558291)

[Table 39: Average, Median and Minimum/Maximum Percentage Scores and Effect Size of Questions related to Gross and Fine Motor Skills, by County, Gender, and MECP-K status 46](#_Toc86558292)

[Table 40: Summary Average Scores of Gross and Fine Motor Skills, by County, Gender, MECP-K status 46](#_Toc86558293)

[Table 41: Results of Difference-in-Difference Analyses for Indicator 2: Cognitive Function 47](#_Toc86558294)

[Table 42: Average, Median and Minimum/Maximum Percentage Scores and Effect Size of Cognitive Function, by County, Gender, and MECP-K status 48](#_Toc86558295)

[Table 43: Average Percentage Scores of Cognitive Function, by County, Gender, and MECP-K status 49](#_Toc86558296)

[Table 44: Results of Difference-in-Difference Analyses for Receptive and Expressive Language 50](#_Toc86558297)

[Table 45: Average, Median and Minimum/Maximum Percentage Scores and Effect Size of Receptive and Expressive Language, by County, Gender, and MECP-K status 50](#_Toc86558298)

[Table 46: Average Percentage Scores of Individual Questions related to Receptive and Expressive Language, by County, Gender, and MECP-K status 51](#_Toc86558299)

[Table 47: Results of Difference-in-Difference Analyses for Socio-emotional Capacities 52](#_Toc86558300)

[Table 48: Average, Median and Minimum/Maximum Percentage Scores and Effect Size of Questions related to Socio-Emotional Capacities, by County, Gender, and MECP-K status 53](#_Toc86558301)

[Table 49: Average Percentage Scores of Questions related to Socio-Emotional Capacities, 54](#_Toc86558302)

[Table 50: Average Percentage Scores of Observations during the Child Assessment, by County, Gender, and MECP-K status 56](#_Toc86558303)

## List of Figures

[Figure 1: Ratings of Usefulness of the ECDE County/Zonal Officials Visit at Endline for Improving Classroom Practices reported by Target ECDE Teachers, by County 36](#_Toc86558304)

[Figure 2: Ratings of Frequency of Participation of Parental/Caregiver Support of ECDE Services reported by Target ECDE Teachers 38](#_Toc86558305)

# Acronyms

|  |  |
| --- | --- |
| AKF | Aga Khan Foundation |
| BOM | Board of Management |
| CAPI | Computer-Assisted Personal Interviews |
| DAP | Data Analysis Plan |
| DID | Difference-in-Difference |
| ECDE | Early Childhood Development and Education |
| FGD | Focus Group Discussion |
| GCC | Grand Challenges Canada |
| KII | Key Informant Interviews |
| MECP-K | Madrasa Early Childhood Programme, Kenya |
| ODK | Open Data Kit |
| POs | Project Officers |
| PPS | Probability proportional to school size |
| RMAF | Results-based Management and Accountability Framework |

# 1. Executive Summary

The following report discusses the endline findings for the *Scaling Up Affordable, Quality, and Contextually Relevant Pre-school Provision in Kenya* project of MECP-K in Kisumu and Kisii counties of Kenya, funded by Grand Challenges Canada (GCC), and implemented by Madrasa Early Childhood Development Programme, Kenya (MECP-K).

The MECP-K, an affiliate of Aga Khan Foundation (AKF) East Africa, and its transition to scale initiative, funded by Grand Challenges Canada (GCC) and Aga Khan Foundation Canada (AKFC) aims to scale impact of the five core components of the well-established MECP ECDE model. MECP-K has been in operation since 1986 mainly in Coast Region of Kenya. The overall purpose is to learn how the model can be effectively and efficiently integrated into pre-schools and the supporting government and community systems in new geographies in Kisii and Kisumu counties.

The project is a two-year initiative which aimed to implement a holistic pre-school model in the Nyanza region in Kisumu and Kisii counties. In order to assess the effectiveness and impact of this model into new regions, a series of performance indicators were developed for the collection and analysis of data to inform its success.

In 2020, COVID-19 caused a pause in program implementation, and subsequently several changes were made to program implementation, including only working with one phase rather than two phases of schools. The study implemented at endline with both teachers and children also integrated questions related to their experience regarding COVID-19, and several qualitative exercises were added to gain a more holistic understanding of the impact of COVID-19 and help to explain project results.

### Summary of Findings

***Child Assessment***

Table 1 below presents the summary of findings for both the quantitative baseline and endline data collection periods against each of the indicators collected through the i) child assessment; ii) classroom observation; iii) teacher survey; and iv) Board of Management (BOM)[[1]](#footnote-2) assessment. Overall, across all indicators there have been positive changes since the baseline.

Table 1: Summary of Findings

| Indicator | Baseline | Endline |
| --- | --- | --- |
| Child Assessment |  |  |
| Indicator #1: Proportion of boys and girls with improved[[2]](#footnote-3) gross and fine motor skills after 1 year of intervention | MECP-K: 87.1%  Girls: 87.6%  Boys: 86.5% | MECP-K: 92.3%  Girls: 90.1%  Boys: 94.5% |
| Indicator #2: Proportion of boys and girls with improved cognitive functions after 1 year of intervention | MECP-K: 35.8%  Girls: 37.6%  Boys: 34.0% | MECP-K: 47.2%  Girls: 49.1%  Boys: 45.3% |
| Indicator #3: Proportion of boys and girls with improved receptive language and expressive language after 1 year of intervention | MECP-K: 33.8%  Girls: 36.1%  Boys: 31.5% | MECP-K: 48.3%  Girls: 46.9%  Boys: 49.8% |
| Indicator #4: Proportion of boys and girls with improved socio-emotional capacities after 1 year of intervention | MECP-K: 33.4%  Girls: 32.5%  Boys: 34.4% | MECP-K: 53.8%  Girls: 52.9%  Boys: 54.7% |
| Classroom Observation |  |  |
| Indicator #8: Number and percentage of target male and female ECDE teachers with improved classroom practices (meeting minimum standards) | (0) 0.0% | Total: (63) 52.1%  Females: (57) 51.4%  Males: (6) 60.0% |
| Indicator #9: Number and percentage of ECDE centres with improved[[3]](#footnote-4) quality learning environments | (0) 0.0% | Total: (17) 35.4% |
| Teacher Survey |  |  |
| Indicator #10: Number and percentage of ECDE teachers receiving quality termly mentoring and support from county/zonal officials | (29) 20.4%  Females: (24) 18.6%  Males: (3) 27.3%) | (34) 30.1%  Females: (28)27.5%  Males: (6) 54.5%[[4]](#footnote-5) |
| Indicator #12b: Level of frequency that parents and or caregivers support the provision of high quality and contextually relevant ECDE services (% of teachers that report ‘often’ or ‘always in terms of parental involvement) | (6) 4.3% report ‘often’ or ‘always’ | Activities with parents removed from programming |
| Indicator #14: Number and percentage of teachers with core knowledge of MECP-K curriculum concepts and approaches, disaggregated by county | (1) 0.68% | Total: (8) 7.1%  Kisumu: (5) 9.6%  Kisii: (3) 4.9% |
| BOM Assessment |  |  |
| Indicator #11: Number and percentage of School Boards of Management (BOM) that are effective | (18) 37.5% | Survey not undertaken |

Table 2 below provides the difference-in-difference (DID) estimations for the four child assessment indicators. The DID effects for the three indicators of cognitive function, receptive and expressive language skills, and socio-emotional capacities are significant, indicating MECP-K’s impact on improving children’s skills in these areas. MECP-K children had notably lower averages for these three indicators at baseline, and although they did not surpass the control group at endline, the improvement of MECP-K children related to that of the control group was significantly better.

Table 2: Summary of Difference-in-Difference Estimations of Program Impact: Child assessment

| Indicator | Averages by period | | DID Estimations End line vs. Baseline |
| --- | --- | --- | --- |
| Baseline | End line |
| Indicator 1: Gross and Fine Motor Skills | | | |
| Treatment | 87.1 | 92.3 | -1.949 (0.098) |
| Control | 86.3 | 93.2 |
| Indicator 2: Cognitive Function | | | |
| Treatment | 35.8 | 47.2 | 5.424 \*\* (3.082) |
| Control | 44.4 | 49.8 |
| Indicator 3: Receptive and Expressive Language Skills | | | |
| Treatment | 33.8 | 48.3 | 5.310 \*\* (2.762) |
| Control | 43.8 | 52.6 |
| Indicator 4: Social-Emotional Capacities | | | |
| Treatment | 33.4 | 53.8 | (3.204)  6.772 \*\* |
| Control | 41.1 | 54.7 |

Notes: Sample averages presented at baseline and endline. DID Estimations refer to treatment effect measured by the interaction of treatment by time. T-statistics presented in parentheses. \*\*\*Parameter is significant at p<=0.001 level; \*\*Parameter is significant at p<=0.01 level; \*Parameter is significant at p<=0.05 level.

***Impact of COVID-19 on Children***

In March 2020, all ECDE centres were closed based on government regulations in response to Coronavirus (COVID-19). Children spent eight months at home while they waited for schools to re-open in January 2021. The study explored how children felt about school closures due to COVID-19. The most common emotion expressed by children was ‘sad’ (68.2%)[[5]](#footnote-6), with slightly more non-MECP-K children noting this compared to MECP-K children (73.7% and 64.4%, respectively). Children that were sad provided the reasons that they missed learning (62.5%) or missed school (6.6%), missed their friends (27.0%), missed their teacher (15.3%), or because of/worried about COVID-19 (9.1%). Other emotions that were expressed by children through FGDs were ‘worry’, ‘scared’, and ‘lonely’, most notably in Kisumu. Possible explanations for this could be either related to facilitation skills, or more likely that children in Kisumu were more comfortable in engaging with strangers.

The most common activities the children reported undertaking at home were helping out at home (78.6%), playing with their siblings or by themselves (55.8%), and learning (reading, writing). There were very few differences between children attending MECP-K and non-MECP-K ECDE centres. Overall, 68.2% of surveyed children said that someone helped them to learn at home, with little difference between county, gender, and MECP-K status. Siblings were the most frequently cited (35.1% for sisters and 29.7% for brothers), followed by mothers (32.6%) and fathers (13.7%).

***Classroom Observations***

A total of 121 classrooms were observed at endline from the same sample schools that were observed at baseline. Like baseline, the vast majority of teachers were female (91.7%; Kisumu: 96.6%, Kisii: 87.3%).

52.1% of teachers (51.4% female and 60.0% male) had improved classroom practices at endline (with 0% at baseline). The average scores for teacher classroom practices also more than doubled from baseline to endline representing a significant change (F-value[[6]](#footnote-7): 536.5, p=<0.001; large effect sizes between 2.7 and 3.6 for both total and disaggregated scores). Although scores were lower in Kisii than Kisumu (F-value: 68.3, p=<0.001), Kisii teachers on average more than tripled their scores.[[7]](#footnote-8)

In terms of gender, females had started with slightly higher average scores than males but were found to have almost identical average scores at baseline (not significant, F-value: 1.1, p=0.30). Notably, no teachers at endline scored 0, which had occurred at baseline, with the lowest minimum score of 16 points or 26.7% at endline. The maximum score also increased very substantially from 35 points (58.3%) at baseline to 55 points (91.7%) at endline.

In terms of quality learning environments, 35.4% of ECDE centres had quality learning environments. The average scores for quality learning environments more than doubled since baseline (F-value: 296.6, p=<0.001; large effect sizes between 3.0 and 3.9 for both total and county disaggregated scores). The gap between Kisumu and Kisii quality learning environment scores also decreased.

Overall, average percentage scores for all sections of the Classroom Observation have increased since baseline. The range of scores have increased from 16.8% to 33.3% at baseline to 55.9% to 68.2% at endline. The highest increases seen were for teaching and learning materials (40.2 percentage point increase or 3.4x increase), and daily routine (39.7 percentage point increase or 2.8x increase).

***Teacher Survey***

Finally, of the study schoolteachers who participated in the knowledge assessments, 7.1% had core knowledge of MECP-K curriculum concepts and approaches based on the benchmark of meeting 8 out of 12 correct answers. While this is an increase from the one individual (0.68%) at baseline, this is still significantly short of reaching the target (adjusted OR: 11.1, 95%CI: 1.4-90.5; Wald’s=0.024, p=0.024) (*X*2=5.9, df=1, p=0.014). No significant differences were found by county or gender for teachers meeting the benchmark.

# 2. Introduction

The following report outlines the findings from the baseline and endline data collection rounds for ten performance indicators for the *Scaling Up Affordable, Quality, and Contextually Relevant Pre-school Provision in Kenya* project of MECP-K in Kisumu and Kisii counties of Kenya, funded by Grand Challenges Canada (GCC) and Aga Khan Foundation Canada (AKFC), and implemented by MECP-K.

The project is a two-year initiative which aims to implement a holistic pre-school model in Nyanza region - Kisumu and Kisii counties. To assess the effectiveness and impact of this model into new regions, a series of performance indicators were developed for the collection and analysis of data to inform its success. The findings and recommendations of the study will also contribute towards a better understanding and delivery of Early Childhood Development and Education (ECDE) services at pre-primary school level thereby contributing to the realization of sustainable development goal (SDG) 4.2 of ensuring that all girls and boys have access to quality early childhood development, care, and pre-primary education in preparation for primary education.

In 2020, COVID-19 caused a pause in program implementation, and subsequently several changes were made to program implementation, including only working with one phase rather than two phases of schools and eliminating work with the BOM. The study questionnaires implemented at endline with both teachers and children also integrated questions related to their experience regarding COVID-19. Additionally, several qualitative exercises with children and parents, as well as county officials were added to gain a more holistic understanding of the impact of COVID-19 and help to explain project results.

The following report highlights the findings from the ten performance indicators and is structured by data collection tool and associated indicators. It also highlights the study design and methodology, key findings, and limitations, where relevant. Findings are presented in either tabular or graph format and are disaggregated by relevant characteristics and variables. Baseline data collection covered the period between June 2019 and February 2020, while the endline covered the period between June and September 2021. Four quantitative data collection tools were utilized at baseline, but only three at end line as the BOM assessment was not undertaken due to a change in implementation strategy. All quantitative data collection was conducted using digital devices using Open Data Kit (ODK) application and Kobo Toolbox platform, except for the teacher knowledge survey which was self-administered (completed by teachers independently during training sessions).

The following performance indicators, as per the Monitoring and Evaluation plan, developed in July 2019 were examined:

**Child Assessment**

* Indicator #1: Proportion of boys and girls with improved gross and fine motor skills after 1 year of intervention, disaggregated by sex and county
* Indicator #2: Proportion of boys and girls with improved cognitive functions after 1 year of intervention, disaggregated by sex and county
* Indicator #3: Proportion of boys and girls with improved receptive language and expressive language after 1 year of intervention, disaggregated by sex and county
* Indicator #4: Proportion of boys and girls with improved socio-emotional capacities after 1 year of intervention, disaggregated by sex and county

**Classroom Observation**

* Indicator #8: Number and percentage of target male and female ECDE teachers with improved classroom practices (meeting minimum standards), disaggregated by sex and county
* Indicator #9: Number and percentage of ECDE centres with improved quality learning environments, disaggregated by county

**Teacher Survey**

* Indicator #10: Number and percentage of ECDE teachers receiving quality termly mentoring and support from county/zonal officials, disaggregated by county
* Indicator #12b: Level of frequency that parents and/or caregivers support the provision of high quality and contextually relevant ECDE services, disaggregated by county
* Indicator #14: Number and percentage of teachers with core knowledge of MECP curriculum concepts and approaches, disaggregated by county[[8]](#footnote-9)
* Level (quality) of mentorship and support received by teachers[[9]](#footnote-10)
* Frequency of visits by ECDE County and Zonal Officials to teachers for support, disaggregated by county[[10]](#footnote-11)

**BOM Assessment[[11]](#footnote-12)**

* Indicator #11: Number and percentage of School Boards of Management (BOM) that are effective, disaggregated by county

See Appendix 4-6 for paper-based copies of the data collection tools.

# 3. Study Design and Methodology

The MECP-K study used a quasi-experimental design to respond to indicators 1 to 4 of the Results-based Management and Accountability Framework (RMAF). As a result of the COVID-19 pandemic and the decision to work with only cohort 1 schools[[12]](#footnote-13), the previously proposed cohort design approach[[13]](#footnote-14) was no longer applicable. Instead, the study re-sampled the baseline[[14]](#footnote-15) schools to facilitate the examination of changes over time for MECP-K ECDE children and non-MECP-K ECDE children. Additionally, qualitative exercises were added to further explore the impact of the COVID-19 pandemic.

### 3.1 Child Assessment

Students were sampled from Primary schools, specifically those attending Primary 1 (P1), linked to MECP-K ECDE centers to assess the impact of ECDE training. Because of the lack of non-MECP-K ECDE students attending some of these primary schools, additional linked schools were identified and sampled (See Appendix 1: Sampled Schools).

Table 3: Revised Child Assessment Methodology

| **TIME POINTS** | **Sept 23rd-Oct 11th, 2019** | **Feb 2020 (baseline)** | **Jun/Jul 2021 (endline)** | **Sept/Oct 2021 (endline)** |
| --- | --- | --- | --- | --- |
| School Cohort/ Phase 1 Schools | Teachers (training and monitoring) | a) Primary 1 - children who  Attended MECP-K supported ECDE  ------------------------------  b) Primary 1 - children who  did not attend MECP-K supported ECDE | Teachers (survey and classroom observation) | a) Primary 1 - children who attended MECP-K supported ECDE) (31 weeks of improved ECDE)  ------------------------------  b) Primary 1 - children who  did not attend MECP-K supported ECDE |

At baseline, a two-stage cluster sampling was utilized, with ECDE schools acting as the clusters. With the total number of intervention schools at 113, a total of 50 schools were sampled using a stratified sample based on county (25 schools Kisumu / 25 schools Kisii). The schools sampled at endline were the same as those utilized during the baseline study, which were randomly selected using the probability proportional to school size (PPS) method. The ‘ppssstrat’ command in R was utilized to make the random selection (e.g., package ‘pps’), utilizing the populations of students in Pre-Primary 2 (PP2)[[15]](#footnote-16) to draw the PPS sample and making the assumption that the population sizes (PP2 and associated P1 class sizes) are similar as transitioning students in Primary 1 (P1) will be sampled. The original school sample population included only primary schools with a MECP-K ECDE center attached; however, because the underlying assumption that while most children will transition from pre-primary to primary school classes in the same school, the primary schools will also attract children from other sources (non MECP-K children) did not completely hold, it was necessary to sample non-MECP-K children from other primary schools that were in the vicinity to the original sampled school.

### 3.1.1 Sample Size Determination

A 95% confidence level and 7% margin of error (moe) using the formula, ME= z√((P (1-P))/n) [[16]](#footnote-17), was utilized to determine the sample sizes for the child survey. A non-response rate of 5% was also used. Because two-stage cluster sampling was being used, the sample was doubled[[17]](#footnote-18). Specifically, at 95% and 7% MOE a total of 191 children should be sampled. With the 5% non-response this increases to 206. The sample size must then be doubled to account for cluster sampling; resulting in 412 students (see Table 1). With a sample size of 412 students, 8.24 students need to be sampled in each school (412/50 = 8.24). Since it is not possible to sample 8.24 students the number must be rounded to 9 students and because equal numbers of boys and girls should be sampled the number is further increased to 10. Thus, the result is a sample size of 500 students for both MECP-K and non-MECP-K supported ECDE schooling, leading to a final sample of 1000 students.

Children were randomly chosen[[18]](#footnote-19) using a student list obtained from a listing exercise across all sampled schools and linked schools. For each school, the distribution of the 20 children was as follows:

1. 5 boys who attended a MECP-K ECDE centre
2. 5 girls who attended a MECP-K ECDE centre
3. 5 boys who did not attend any ECDE centre with an ECDE/MECP-K ECDE trained teacher
4. 5 girls who did not attend any ECDE centre with an ECDE/MECP-K ECDE trained teacher

### 3.1.3 Sampling Frame

A total of 500 students in each arm (MECP-K ECDE centres and those from another ECDE or non-trained MECP-K teacher) was the target sample for both baseline and endline (Table 4). In order to randomize the selection of students to conduct the child assessment, a listing exercise took place in advance of enumerator training in the sampled schools. Due to the challenge in (e.g., there were not enough non-MECP-K students in sample schools) obtaining the necessary sample of students for each group, linked schools were added. These linked schools were those in the vicinity to the original sampled school. For the endline, a telephone/virtual approach was taken to carry out the listing exercise and obtain parental consent (See Appendix 3 for listing and consent form)

Table 4: Baseline and Endline Initial Sampling Frame and Listing Exercise

| County | Number of P1[[19]](#footnote-20) Sampled Schools | Number of Linked Schools | MECP-K | | | Non-MECP-K | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Girls | Boys | Total | Girls | Boys | Total |
| Baseline/Endline Original Sample | | | | | | | | |
| Kisumu | 25 |  | 125 | 125 | 250 | 125 | 125 | 250 |
| Kisii | 25 |  | 125 | 125 | 250 | 125 | 125 | 250 |
| Total | 50 |  | 250 | 250 | 500 | 250 | 250 | 500 |
| Baseline Listing Exercise | | | | | | | | |
| Kisumu | 25 | 16 | 395 | 314 | 709 | 424 | 334 | 758 |
| Kisii | 25 | 11 | 266 | 289 | 555 | 230 | 208 | 438 |
| Total | 50 | 27 | 661 | 603 | 1264 | 654 | 542 | 1196 |
| Endline Listing Exercise | | | | | | | | |
| Kisumu | 25 | 7 | 324 | 279 | 603 | 104 | 115 | 219 |
| Kisii | 25 | 17 | 385 | 423 | 808 | 240 | 247 | 487 |
| Total | 20 | 24[[20]](#footnote-21) | 709 | 702 | 1411 | 344 | 362 | 706 |

The final sample and number of children assessed during the child assessment is illustrated in Table 5 below for both the baseline and endline. Notably, at endline, all children provided consent, no assessments stopped after the first five questions, and no children were identified as having intellectual disabilities. At both baseline and endline the ultimate required sample size of 412 was met for treatment children (MECP-K), while the final sample fell slightly short for the control children (non-MECP-K) with 338 despite listing exercises having sufficient numbers. This is partially explained due to the timing of the survey where children were sent home early during mid-term periods.

**Table 5: Number and Percentage of Children assessed using the Child Assessment,**

**by County, Gender and MECP-K status**

| County | Baseline (n=857) | | | | | | Endline (n=824) | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| MECP-K | | | Non-MECP-K | | | MECP-K | | | Non-MECP-K | | |
| Girls | Boys | Total | Girls | Boys | Total | Girls | Boys | Total | Girls | Boys | Total |
| Final Sample/Data Used for Analysis | | | | | | | | | | | | |
| Kisumu | 113 | 114 | 227 | 113 | 93 | 206 | 119 | 116 | 235 | 68 | 73 | 141 |
| Kisii | 122 | 117 | 239 | 95 | 90 | 185 | 126 | 125 | 251 | 97 | 100 | 197 |
| Total | 235 | 231 | 466 | 208 | 183 | 391 | 245 | 241 | 486 | 165 | 173 | 338 |

### 3.1.4 Piloting and Enumerator Training

Piloting of the child assessment was conducted at baseline by the MECP-K team in two primary schools on January 10, 2020. As a result of the pilot, minor modifications were made to the tool and enumerator guide for clarity. A five-day enumerator training was conducted with 28 enumerators (14 females and 14 males) in Kisumu from August 9 to 13, 2021 and 24 enumerators were selected to participate in data collection. The training focused on understanding the questions and conducting the exercises, child-friendly data collection methodologies, ethical considerations and child safeguarding policies, use of tablets, and overall study protocols. Kassagam, Ongalo and Kibwayi Primary schools in Kisumu were selected as practice schools for enumerators to test their skills on Day 4 of the training.

### 3.1.5 Data Collection

Data collection for the endline child assessment took place between August 18 and September 3, 2021, taking 10 days. Within this period there was a one-week school holiday. Initially, enumerators were grouped into three teams across the two counties, with support from two supervisors, one in each county. The composition of enumeration teams; however, changed depending on the progress of completing schools on the list. Male enumerators collected data with boys, while female enumerators collected data with girls.

Data from MECP-K teachers was collected through classroom observations conducted by MECP-K project officers (POs) and self-administered teacher surveys in mid-2021.

### 3.1.6 Data Analysis

Data collected was downloaded as CSV or XLS files and analysis was carried out using MS Excel or was imported into the software R-project for analysis. Analysis are primarily descriptive and include means and proportions and effect sizes. Additionally, statistical tests including ANOVAs and Chi-square tests (baseline and endline MECP-K teacher comparisons) and difference-in-difference (DID) (baseline and endline MECP-K and non- MECP-K child comparisons) have been undertaken. Data has been disaggregated by the various levels of disaggregation including sex and county, and other variables deemed necessary by the findings of the project. It should be noted that child assessment sample size calculations were based upon totals and disaggregation has the caveat that the margin of error of results obtained increases with each disaggregation level. All data has been anonymized.

Data analysis for all indicators followed a data analysis plan (DAP) which was generated to outline core definitions and criteria and computation processes. The DAP was developed in conjunction with data collection tools at baseline (see Appendix 2).

## 3.2 Qualitative

The purpose of the qualitative component was to i) explore the experiences of children and the impacts the pandemic may have had in their learning/play, socialization, etc.; ii) to talk with key informants about the impacts and adaptations required within the school system (e.g., teachers and ECD county officials) to provide context and deeper insights; and iii) talk with parents to understand more about home learning and the impacts on children.

The sampling strategy was based on purposeful criterion sampling using selected variables to ensure differentiation. Sampling of sites (schools) was carried out in four Primary 1 schools, two in each county, in the same quantitative sampling frame based on the following criteria:

* County differentiation – Kisumu versus Kisii
* Sub-county differentiation- within a county
* Geographical differentiation – Rural schools versus urban schools[[21]](#footnote-22)

Table 6: School Site Selection for Qualitative Activities

| Site | County | Sub-County | Geographical classification | School Name |
| --- | --- | --- | --- | --- |
| Site 1 | Kisumu | Nyakach | Urban | Agai Primary |
| Site 2 | Kisumu | Kisumu West | Rural | Ogal Primary |
| Site 3 | Kisii | Kitutu Chache North | Urban | Nyansakia Primary |
| Site 4 | Kisii | Bomachoge Chache | Rural | Kineni Primary |

A total of 20 Focus Group Discussions (FGDs) drawing on child-friendly methodologies were conducted in the four school sites. This involved a combination of MECP-K boys and girls and non-MECP-K boys and girls. All FGDs were segregated by children’s gender, and group size was kept to 4-6 children only. As with the quantitative protocols, parental consent was obtained in advance as well as the assent of the child. Individual respondent selection for these FGDs was based on having an ECD education through MECP-K and those without were selected from the listings conducted through the quantitative component. All FGDs were conducted in Kiswahili or local language and data collection tools were translated and back translated to ensure consistency and quality (see Appendix 7 for qualitative tools).

A total of two Key Informant Interviews (KIIs) with ECD county officials were carried out, one in Nyakatch and the other in Bomachoge.

Table 7: Focus Group Discussions and Key Informant Interview Participation

|  |  |  |  |
| --- | --- | --- | --- |
| Qualitative activity | Kisumu | Kisii | Total |
| FGD with parents | 2 (12 women) | 2 (11 women) | 4 (23 women) |
| FGD with MECP-K girls | 2 (11 girls) | 2 (12 girls) | 4 (23 girls) |
| FGD with MECP-K boys | 2 (11 boys) | 2 (12 boys) | 4 (23 boys) |
| FGD with Non-MEPK-K girls | 2 (10 girls) | 2 (10 girls) | 4 (20 girls) |
| FGD with Non-MEPK-K boys | 2 (9 boys) | 2 (9 boys) | 4 (18 boys) |
| KII with ECD County Officer | 1 (woman) | 1 (man) | 2 (1W/1M) |
|  | 11 (54 people) | 11 (55 people) | 22 (109 people) |

### 3.2.2 Training, Piloting and Data Collection

A three-day facilitator training took place from August 4th – 6th, 2021 with recruited facilitators, led by MECP-K. The training focused on facilitation skills, FGD and KII guides and tools, child-friendly and appropriate approaches, and application of the study protocol. Facilitators were also trained on ethical guidelines and protocols as they apply to human subject research and child-centered approaches and interactive exercises for children, interview process, informed consent, assent of children, participant privacy, psychological safety of survey participants, and data security. A half-day practice was carried out in a nearby pilot school (Metembe and Riragi) with facilitators to ensure proper adherence to the protocol and application of the participatory child FGD exercises.

Data collection for the qualitative component took place between August 18 and September 3, 2021.

## 3.3 Ethical Considerations

Approval to carry out the endline study was obtained from the National Commission for Science, Technology and Innovation (NACOSTI). The following key ethical considerations were implemented:

* *Safeguarding and Child Protection:* Safeguarding principles were integrated into both the training of enumerators and facilitators and data collection processes, including: providing children additional reassurance that they can choose to participate or not, or stop at any time; enumerators/facilitators decisions to end data collection if any observation of stress; the reporting of any suspected incidence of abuse to supervisors; and signed obligation by enumerators and facilitators to adhere to the safeguarding and child protection policies of the organization.
* *Informed Consent:* During the listing exercise to identify children for participation in the child assessment and qualitative component, informed consent was obtained from each parent whether the child was randomly selected or not. Verbal assent was also obtained from each child for both quantitative and qualitative components and children had the option to not participate or stop the process at any time throughout the assessment.
* *Anonymity and Data Security:* To protect anonymity and safety of children, no names were used in the analysis and data was anonymized/masked. Names were only used in order to interact with the child during the assessment/discussion. Quantitative data is only reported in aggregate form and small numbers are suppressed or omitted altogether, where applicable. Following AKF protocols, data collected through Computer-Assisted Personal Interviews (CAPI) devices were password protected and post-approval of the study report, data will be destroyed from any servers. This equally applies to qualitative field notes and transcriptions.

## 3.4 Limitations

As with any evaluation and data collection process there are limitations that occur. The following should be noted in relation to the evaluation findings:

* It should be noted that due to the COVID-19 global pandemic there was a formal suspension of project activities between August and December 2020, thereby affecting the delivery of the teacher training program and transition of children from pre-primary to primary. This also resulted in a change in the study design from a time series to a more typical baseline-endline quasi-experimental design. While this is not a limitation from a data perspective, it is important to recognize that the time lapse between cohorts from pre-primary to primary differs at baseline and endline.
* A qualitative component was added during the endline phase. While facilitators were trained, the quality of discussions with children indicates that facilitators may have been less experienced. Exploration of some questions with children is thereby limited to one-word answers, particularly around discussions on emotions and home learning.
* The control (non-MECP-K) sample for the child assessment was slightly below (baseline: n=391, endline: n=338) the desired sample size (n=412) and thus decreases the reliability of statistical tests. Also, all statistical tests on disaggregated data (e.g., gender and county) must be regarded with caution as sample sizes were calculated for totals. This is partially explained due to the timing of the survey where children were sent home early during mid-term periods.

# 4. Classroom and Teacher Findings

## 4.1 Impact of School Closures due to COVID-19 on Children

In March 2020, all ECDE centres were closed based on government regulations in response to Coronavirus (COVID-19). Children spent eight months at home while they waited for schools to re-open in January 2021. The study explored how children felt about school closures due to COVID-19 both through the child assessment and FGDs.

The most common emotion was ‘sad’ (68.2%)[[22]](#footnote-23), with slightly more non-MECP-K children noting this compared to MECP-K children (73.7% and 64.4%, respectively). Similarly, in Kisii, ‘sadness’ was indicated more frequently by children than in Kisumu with 73.4% and 62.9%, respectively (Table 8). Children that were sad provided the reasons that they missed learning (62.5%) or missed school (6.6%), missed their friends (27.0%), missed their teacher (15.3%), or because of/worried about COVID-19 (9.1%).

The second most noted emotion was ‘happy’, with 17.5% of children stating this. In contrast, those children that mentioned they were happy provided the reasons that they like being home with their family (61.1%) and that they don't like school (25.7%) (Table 8). Only a small percentage of children said they felt bad[[23]](#footnote-24) (4.6%), angry (2.2%), had no emotion (2.2%), or did not know (4.0%).

These findings are consistent with FGDs held with children in both MECP-K and non-MEPK-K schools; however, only MECP-K boys and girls also expressed that they were ‘happy’ because they had not contracted COVID-19 or become sick, that COVID is ending or that because “they wash their hands, germs will not stay on [their] hands”[[24]](#footnote-25).

Table 8: Average Percentage Scores of Emotions Felt when Children were asked about School Closures because of COVID-19, by County, Gender and MECP-K status

| Emotions | Endline (n=824) | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| ECDE | | County | | Gender | | Total |
| MECP-K | non-MECP-K | Kisumu | Kisii | Girls | Boys |
| Sad | 64.4 | 73.7 | 62.9 | 73.4 | 63.3 | 72.3 | 68.2 |
| Bad | 6.0 | 2.7 | 2.2 | 7.0 | 3.7 | 5.4 | 4.6 |
| Angry | 2.9 | 1.2 | 1.5 | 2.9 | 2.1 | 2.2 | 2.2 |
| Okay | 1.0 | 0.0 | 1.0 | 0.2 | 0.8 | 0.4 | 0.6 |
| No emotion | 2.3 | 2.1 | 3.4 | 1.0 | 2.7 | 1.8 | 2.2 |
| Happy | 18.5 | 16.0 | 21.2 | 13.8 | 18.6 | 16.5 | 17.5 |
| Do not know | 4.5 | 3.3 | 7.1 | 1.0 | 7.2 | 1.3 | 4.0 |
| Other | 0.4 | 1.2 | 0.7 | 0.7 | 1.6 | 0.0 | 0.7 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

Other emotions that were expressed by children through FGDs were ‘worry’, ‘scared’, and ‘lonely’, most notably in Kisumu. Both girls and boys from MECP-K and non-MECP-K schools recounted that the curfews and presence of police scared them.

*“I felt scared. Police were standing in the roads, and they did not want children to play in the road and grownups to walk in the roads”. (FGD with Girls, MECP-K school, Kisumu)*

*“Corona scared me. In the evening at 7pm, you were not supposed to be found outside.” (FGD with Girls, MECP-K school, Kisumu)*

*“Also they were afraid to go to school because of Corona, but once you assure them that they is no corona at school as long as they wash their hands and wear mask, they would then be willing to go to school.” (FGD with mothers, Kisii)*

When students were asked what specifically worries them the most about going to school because of COVID-19, they said getting sick (78.6%), followed by nothing (55.8%), and dying (33.0%) (Table 9).

**Table 9: Average Number and Percentage Scores of what Children state they are Worried about at School because of COVID-19, by County, Gender, and MECP-K status**

| Worries | ECDE | | County | | Gender | | Total |
| --- | --- | --- | --- | --- | --- | --- | --- |
| MECP-K | non-MECP-K | Kisumu | Kisii | Female | Male |
| Number | | | | | | | |
| Nothing | 272 | 188 | 192 | 268 | 219 | 241 | 460 |
| Getting sick | 384 | 264 | 291 | 357 | 336 | 312 | 648 |
| Getting others sick | 5 | 7 | 7 | 5 | 4 | 8 | 12 |
| Wearing masks | 16 | 20 | 22 | 14 | 18 | 18 | 36 |
| Dying | 168 | 104 | 79 | 193 | 129 | 143 | 272 |
| No response / Don't know or remember | 19 | 8 | 4 | 23 | 15 | 12 | 27 |
| Other, please specify | 7 | 2 | 9 | 0 | 9 | 0 | 9 |
| Total | 486 | 338 | 376 | 448 | 410 | 414 | 824 |
| Percentage | | | | | | | |
| Nothing | 56.0 | 55.6 | 51.1 | 59.8 | 53.4 | 58.2 | 55.8 |
| Getting sick | 79.0 | 78.1 | 77.4 | 79.7 | 82.0 | 75.4 | 78.6 |
| Getting others sick | 1.0 | 2.1 | 1.9 | 1.1 | 1.0 | 1.9 | 1.5 |
| Wearing masks | 3.3 | 5.9 | 5.9 | 3.1 | 4.4 | 4.3 | 4.4 |
| Dying | 34.6 | 30.8 | 21.0 | 43.1 | 31.5 | 34.5 | 33.0 |
| No response / Don't know or remember | 3.9 | 2.4 | 1.1 | 5.1 | 3.7 | 2.9 | 3.3 |
| Other, please specify | 1.4 | 0.6 | 2.4 | 0.0 | 2.2 | 0.0 | 1.1 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

Table 10: Average Number and Percentage Scores of the Reasons why Children felt various Emotions regarding the School Closures because of COVID-19

| Reason | Sad | Bad | Angry | Okay | No emotion | Happy | Do not know | Other | Total |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Number | | | | | | | | | |
| Missed my friends | 152 | 3 | 6 | 0 | 1 | 2 | 0 | 0 | 164 |
| Missed my teacher | 86 | 1 | 3 | 0 | 0 | 2 | 0 | 0 | 92 |
| Missed learning (e.g. reading, writing, playing, modelling) | 351 | 15 | 10 | 0 | 1 | 0 | 0 | 2 | 379 |
| I don’t like school | 0 | 0 | 0 | 2 | 1 | 38 | 0 | 0 | 41 |
| I like being at home with my family | 0 | 0 | 0 | 3 | 1 | 88 | 0 | 0 | 92 |
| Because of / worried about COVID-19 | 51 | 7 | 0 | 0 | 0 | 0 | 0 | 1 | 59 |
| School closure /missed school | 37 | 8 | 1 | 0 | 0 | 6 | 0 | 0 | 52 |
| Enjoyed playing at home | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 1 | 10 |
| I don’t know | 30 | 1 | 2 | 1 | 11 | 8 | 33 | 1 | 87 |
| Other, please specify | 20 | 3 | 1 | 1 | 4 | 12 | 0 | 1 | 42 |
| Total | 562 | 38 | 18 | 5 | 18 | 144 | 33 | 6 | 824 |
| Percentage | | | | | | | | | |
| Missed my friends | 27.0 | 7.9 | 33.3 | 0.0 | 5.6 | 1.4 | 0.0 | 0.0 | 19.9 |
| Missed my teacher | 15.3 | 2.6 | 16.7 | 0.0 | 0.0 | 1.4 | 0.0 | 0.0 | 11.2 |
| Missed learning (e.g. reading, writing, playing, modelling) | 62.5 | 39.5 | 55.6 | 0.0 | 5.6 | 0.0 | 0.0 | 33.3 | 46.0 |
| I don’t like school | 0.0 | 0.0 | 0.0 | 40.0 | 5.6 | 26.4 | 0.0 | 0.0 | 5.0 |
| I like being at home with my family | 0.0 | 0.0 | 0.0 | 60.0 | 5.6 | 61.1 | 0.0 | 0.0 | 11.2 |
| Because of / worried about COVID-19 | 9.1 | 18.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 16.7 | 7.2 |
| School closure /missed school | 6.6 | 21.1 | 5.6 | 0.0 | 0.0 | 4.2 | 0.0 | 0.0 | 6.3 |
| Enjoyed playing at home | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 6.3 | 0.0 | 16.7 | 1.2 |
| I don’t know | 5.3 | 2.6 | 11.1 | 20.0 | 61.1 | 5.6 | 100.0 | 16.7 | 10.6 |
| Other, please specify | 3.6 | 7.9 | 5.6 | 20.0 | 22.2 | 8.3 | 0.0 | 16.7 | 5.1 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

### 4.1.1 Home Activities and Learning during COVID-19

The most common activities the children reported undertaking at home were helping out at home (78.6%), playing with their siblings or by themselves (55.8%), and learning (reading, writing). There were very few differences between children attending MECP-K and non-MECP-K ECDE centres, while girls (82.0%) reported helping out at home slightly more often than boys (75.4%). The most notable difference was that 43.1% of Kisii children stated that they undertook learning activities at home, compared to 21.0% of children from Kisumu (Table 11).

During COVID-19 school closures, the National Government broadcasted learning programs on television and radio. While the accessibility rates would assumably be higher for Kisumu, an urban area, than in Kisii, the interpretation of learning activities may explain the variation. Learning may generally be interpreted as ‘reading’ and ‘writing’ and children, particularly in Kisii, may think of these learning activities as physical book-based activities as data suggests in Table 11. At the same time, when asked a subsequent question (Table 12), on whether someone helped them with home-based learning activities, the results between the two counties are similar with 66.3% and 66.8% respectively.

Table 11: Average Number/Percentage Scores of the Activities Children partook in when at Home during COVID-19 School Closures

| Activity | ECDE | | County | | Gender | | Total |
| --- | --- | --- | --- | --- | --- | --- | --- |
| MECP-K | non-MECP-K | Kisumu | Kisii | Female | Male |
| Number | | | | | | | |
| Played with siblings or myself | 272 | 188 | 192 | 268 | 219 | 241 | 460 |
| Helped out at home | 384 | 264 | 291 | 357 | 336 | 312 | 648 |
| Nothing, was bored | 5 | 7 | 7 | 5 | 4 | 8 | 12 |
| Watched TV | 16 | 20 | 22 | 14 | 18 | 18 | 36 |
| Learning (reading, writing) | 168 | 104 | 79 | 193 | 129 | 143 | 272 |
| Visited relatives | 19 | 8 | 4 | 23 | 15 | 12 | 27 |
| I don’t remember | 7 | 2 | 9 | 0 | 9 | 0 | 9 |
| Other, please specify | 33 | 15 | 23 | 25 | 22 | 26 | 48 |
| Total | 486 | 338 | 376 | 448 | 410 | 414 | 824 |
| Percentage | | | | | | | |
| Played with siblings or myself | 56.0 | 55.6 | 51.1 | 59.8 | 53.4 | 58.2 | 55.8 |
| Helped out at home | 79.0 | 78.1 | 77.4 | 79.7 | 82.0 | 75.4 | 78.6 |
| Nothing, was bored | 1.0 | 2.1 | 1.9 | 1.1 | 1.0 | 1.9 | 1.5 |
| Watched TV | 3.3 | 5.9 | 5.9 | 3.1 | 4.4 | 4.3 | 4.4 |
| Learning (reading, writing) | 34.6 | 30.8 | 21.0 | 43.1 | 31.5 | 34.5 | 33.0 |
| Visited relatives | 3.9 | 2.4 | 1.1 | 5.1 | 3.7 | 2.9 | 3.3 |
| I don’t remember | 1.4 | 0.6 | 2.4 | 0.0 | 2.2 | 0.0 | 1.1 |
| Other, please specify | 6.8 | 4.4 | 6.1 | 5.6 | 5.4 | 6.3 | 5.8 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

This is consistent with discussions with children in both counties and from MECP-K and non-MECP-K schools who highlight that during their time at home they spent a lot of time helping with household chores, caring for younger siblings, taking care of livestock, etc. Many children also highlight that they also had a lot of opportunities to play.

*“I liked helping my mother in cooking, cooking ugali and fish, cleaning utensils and cleaning the compound.” (FGD with Non-MECP-K Boys, Kisumu)*

Conversely, only children in MECP-K schools, Kisumu specifically, mentioned that aside from household chores, that learning made a part of their day at home during school closures.

*“Washing utensils, writing, sweeping the house and when I finish I write again.” (FGD with MECP-K Girls, Kisumu)*

*“On the day when we were told to go home, [my sibling/family member] told me to remove my uniform so that s/he can teach me. On other days, I washed utensils and then when finished, s/he teaches me letters, ABCD, s/he teaches me all things.” (FGD with MECP-K Girls, Kisumu)*

Overall, 68.2% of surveyed children said that someone helped them to learn at home. There was little difference between county, gender, and MECP-K status, with all averages ranging between 66.3% and 70.0% (Table 12). Children were then asked to indicate who helped them learn, with 35.1% saying sisters, 32.6% mothers, 29.7% brothers, 13.7% fathers, and 8.5% other relatives. There was very little difference in scores between county or MECP-K status; however, there were notable differences by gender. Mothers were reported to help both boys and girls quite equally, while fathers and brothers tended to help boys learn more often, and sisters and other relatives helped girls learn more often (Table 13).

**Table 12: Average Number and Percentage Scores of Children stating Someone helped them Learn at Home during COVID-19, by County, Gender, and MECP-K status**

| Help | ECDE | | County | | Gender | | Total |
| --- | --- | --- | --- | --- | --- | --- | --- |
| MECP-K | non-MECP-K | Kisumu | Kisii | Female | Male |
| Number | | | | | | | |
| Yes | 338 | 224 | 251 | 311 | 287 | 275 | 562 |
| No | 143 | 111 | 117 | 137 | 115 | 139 | 254 |
| I don’t remember | 5 | 3 | 8 | 0 | 8 | 0 | 8 |
| Total | 486 | 338 | 376 | 448 | 410 | 414 | 824 |
| Percentage | | | | | | | |
| Yes | Yes | 69.5 | 66.3 | 66.8 | 69.4 | 70.0 | 66.4 |
| No | No | 29.4 | 32.8 | 31.1 | 30.6 | 28.0 | 33.6 |
| I don’t remember | DNK | 1.0 | 0.9 | 2.1 | 0.0 | 2.0 | 0.0 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

**Table 13: Average Number/Percentage Scores of Individuals who helped Children Learn at Home during COVID-19, by County, Gender, and MECP-K status**

| Individual | ECDE | | County | | Gender | | Total |
| --- | --- | --- | --- | --- | --- | --- | --- |
| MECP-K | non-MECP-K | Kisumu | Kisii | Female | Male |
| Number | | | | | | | |
| My mom | 110 | 73 | 85 | 98 | 92 | 91 | 183 |
| My dad | 43 | 34 | 37 | 40 | 33 | 44 | 77 |
| My brother(s) | 99 | 68 | 74 | 93 | 51 | 116 | 167 |
| My sisters(s) | 127 | 70 | 88 | 109 | 129 | 68 | 197 |
| Other relative | 26 | 22 | 9 | 39 | 32 | 16 | 48 |
| No response / Don't know or remember | 2 | 1 | 1 | 2 | 2 | 1 | 3 |
| Other, please specify | 13 | 8 | 13 | 8 | 10 | 11 | 21 |
| Total | 338 | 224 | 251 | 311 | 287 | 275 | 562 |
| Percentage | | | | | | | |
| My mom | 32.5 | 32.6 | 33.9 | 31.5 | 32.1 | 33.1 | 32.6 |
| My dad | 12.7 | 15.2 | 14.7 | 12.9 | 11.5 | 16.0 | 13.7 |
| My brother(s) | 29.3 | 30.4 | 29.5 | 29.9 | 17.8 | 42.2 | 29.7 |
| My sisters(s) | 37.6 | 31.3 | 35.1 | 35.0 | 44.9 | 24.7 | 35.1 |
| Other relative | 7.7 | 9.8 | 3.6 | 12.5 | 11.1 | 5.8 | 8.5 |
| No response / Don't know or remember | 0.6 | 0.4 | 0.4 | 0.6 | 0.7 | 0.4 | 0.5 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

FGDs with children across both counties, gender, and MECP-K and non-MECP-K children equally highlight that siblings were the primary person who helped with home learning, specifically in numeracy (counting) and sounds and reading. This was generally because they were in school and more literate than their parents. In a few minor cases children indicated that no one helped them learn, while in a couple of other cases they mentioned a parent or a neighbour who was also a teacher. Parents highlighted that they found home learning to be challenging and at times they were not equipped to take this engagement on.

*“The challenge I got was how to teach a child because the child was saying am not teaching him how their teacher used to teach them.” (FGD with Mothers, Kisumu)*

*“For me I have a neighbor who is a teacher. So she is the one who was helping my grade 1 child because when I tried to teach him, he would refuse because I am not his teacher. I used to call my neighbors child so that they can be taught together with my child.” (FGD with Mothers, Kisii)*

*“Yes, The challenge was the handwriting of the one that was helping my grade one child. She often complained on how some letters were written and compare with how their teacher writes. Another challenge is they would fight most of the time.” (FGD with Mothers, Kisii)*

The learning activities that household members most commonly undertook with the children were teaching them letters (67.3%), teaching them numbers (59.6%), reading to them (39.3%), painting or drawing with them (13.3%), and providing either writing or other exercises for them to do (11.4%). There was very minimal difference and no general trends between MECP-K and non-MECP-K ECDE children. As aforementioned, the county-wide learning programmes on television and radio were accessible to all children, provided they had access to these mediums. County-wise, Kisii tended to have higher percentage scores across the various learning activities. Male children more commonly reported being taught their numbers, letters or engaging in painting/drawing, whereas girls more commonly reported being read to or being provided with exercises (Table 14).

**Table 14: Average Number/Percentage Scores of Learning Activities Children did at Home during COVID-19 School Closures, by County, Gender, and MECP-K status**

| Activity | ECDE | | County | | Gender | | Total |
| --- | --- | --- | --- | --- | --- | --- | --- |
| MECP-K | non-MECP-K | Kisumu | Kisii | Female | Male |
| Number | | | | | | | |
| Read to me | 127 | 94 | 93 | 128 | 120 | 101 | 221 |
| Taught me numbers | 202 | 133 | 142 | 193 | 156 | 179 | 335 |
| Taught me letters | 223 | 155 | 158 | 220 | 183 | 195 | 378 |
| Painted/drew/colour with me | 47 | 28 | 29 | 46 | 16 | 59 | 75 |
| Played with me | 21 | 10 | 11 | 20 | 17 | 14 | 31 |
| Played games (electronic) with me | 1 | 0 | 1 | 0 | 0 | 1 | 1 |
| Provided exercises/work for me to do | 37 | 27 | 13 | 51 | 55 | 9 | 64 |
| Other, please specify | 14 | 12 | 16 | 10 | 22 | 4 | 26 |
| Total | 338 | 224 | 251 | 311 | 287 | 275 | 562 |
| Percentage | | | | | | | |
| Read to me | 37.6 | 42.0 | 37.1 | 41.2 | 41.8 | 36.7 | 39.3 |
| Taught me numbers | 59.8 | 59.4 | 56.6 | 62.1 | 54.4 | 65.1 | 59.6 |
| Taught me letters | 66.0 | 69.2 | 62.9 | 70.7 | 63.8 | 70.9 | 67.3 |
| Painted/drew/colour with me | 13.9 | 12.5 | 11.6 | 14.8 | 5.6 | 21.5 | 13.3 |
| Played with me | 6.2 | 4.5 | 4.4 | 6.4 | 5.9 | 5.1 | 5.5 |
| Played games (electronic) with me | 0.3 | 0.0 | 0.4 | 0.0 | 0.0 | 0.4 | 0.2 |
| Provided exercises/work for me to do | 10.9 | 12.1 | 5.2 | 16.4 | 19.2 | 3.3 | 11.4 |
| Other, please specify | 4.1 | 5.4 | 6.4 | 3.2 | 7.7 | 1.5 | 4.6 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

## 4.2 Classroom Observation

Round two classroom observations were conducted by MECP-K project officers (POs) in June and July of 2021. The observations covered six observation areas of i) teaching and learning materials; ii) daily routine; iii) adult and child interaction and delivery; iv) teacher attitude; v) indoor teaching and learning environment; and vi) outdoor environment. Data was recorded on tablets provided to each PO.

A total of 121 classrooms were observed at endline from the same sample schools that were observed at baseline (Table 15).[[25]](#footnote-26)

Like baseline, the vast majority of teachers were female (91.7%; Kisumu: 96.6%, Kisii: 87.3%). Similarly, the vast majority of teachers observed had more than five years of teaching experience (93.4%), followed by four to five years of experience (5.0%). Only 1.7% of teachers had three years or less of experience. Most teachers also reported their highest level of education achieved to be College (96.6%; Kisumu: 96.5%, Kisii: 96.8%) (Table 15).

Table 15: Teacher Characteristics, by County

| Variable | Baseline (n=106) | | | | | | Endline (n=121) | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Kisumu | | Kisii | | Total | | Kisumu | | Kisii | | Total | |
| n | % | n | % | n | % | n | % | n | % | n | % |
| Gender | | | | | | | | | | | | |
| Female | 47 | 95.9 | 51 | 89.5 | 98 | 92.5 | 56 | 96.6 | 55 | 87.3 | 111 | 91.7 |
| Male | 2 | 4.1 | 6 | 10.5 | 8 | 7.5 | 2 | 3.4 | 8 | 12.7 | 10 | 8.3 |
| Total | 49 | 100.0 | 57 | 100.0 | 106 | 100.0 | 58 | 100.0 | 63 | 100.0 | 121 | 100.0 |
| Classroom | | | | | | | | | | | | |
| Pre-Primary 1 | 24 | 49.0 | 24 | 42.1 | 48 | 45.3 | 34 | 58.6 | 34 | 55.7 | 68 | 57.1 |
| Pre-Primary 2 | 22 | 44.9 | 32 | 56.1 | 54 | 50.9 | 24 | 41.4 | 27 | 44.3 | 51 | 42.9 |
| Both | 3 | 6.1 | 1 | 1.8 | 4 | 3.8 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| Total | 49 | 100.0 | 57 | 100.0 | 106 | 100.0 | 58 | 100.0 | 61 | 100.0 | 119 | 100.0 |
| Years of Teaching | | | | | | | | | | | | |
| First year (new teacher) | 1 | 2.0 | 1 | 1.8 | 2 | 1.9 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| 1 year | 2 | 4.1 | 2 | 3.5 | 4 | 3.8 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| 2-3 years | 1 | 2.0 | 2 | 3.5 | 3 | 2.8 | 1 | 1.7 | 1 | 1.6 | 2 | 1.7 |
| 4-5 years | 5 | 10.2 | 11 | 19.3 | 16 | 15.1 | 5 | 8.6 | 1 | 1.6 | 6 | 5.0 |
| More than 5 years | 40 | 81.6 | 41 | 71.9 | 81 | 76.4 | 52 | 89.7 | 61 | 96.8 | 113 | 93.4 |
| Total | 49 | 100.0 | 57 | 100.0 | 106 | 100.0 | 58 | 100.0 | 63 | 100.0 | 121 | 100.0 |
| Highest Education Level | | | | | | | | | | | | |
| Secondary | 3 | 6.1 | 1 | 1.8 | 4 | 3.8 | 1 | 1.8 | 0 | 0.0 | 1 | 0.8 |
| College | 44 | 89.8 | 52 | 91.2 | 96 | 90.6 | 55 | 96.5 | 60 | 96.8 | 115 | 96.6 |
| University | 2 | 4.1 | 4 | 7.0 | 6 | 5.7 | 1 | 1.8 | 2 | 3.2 | 3 | 2.5 |
| Total | 49 | 100.0 | 57 | 100.0 | 106 | 100.0 | 57 | 100.0 | 62 | 100.0 | 119 | 100.0 |

Overall, the average classroom size at endline was still larger in Kisii (40 students) than in Kisumu (35 students); however, this gap has decreased since baseline. Similarly, average classroom presence on the observation day was also larger in Kisii (36 students) compared to Kisumu (31 students), and in classroom presence in both counties was slightly higher than at baseline. Like baseline, both Kisii and Kisumu have gender equal enrollment (Table 16).

Table 16*:* Average Class Enrollment, Class Presence on Day and Absences, by County and Gender

| Variable | Baseline (n=106) | | | Endline (n=121) | | |
| --- | --- | --- | --- | --- | --- | --- |
| Girls | Boys | Total | Girls | Boys | Total |
| Average Class Enrollment | | | | | | |
| Kisumu | 16 | 15 | 31 | 18 | 18 | 35 |
| Kisii | 21 | 20 | 41 | 20 | 19 | 40 |
| Average Class Presence on Day | | | | | | |
| Kisumu | 14 | 13 | 27 | 15 | 16 | 31 |
| Kisii | 18 | 16 | 34 | 19 | 17 | 36 |
| Average Number Absent on Day | | | | | | |
| Kisumu | 2 | 2 | 4 | 2 | 2 | 4 |
| Kisii | 4 | 3 | 7 | 2 | 2 | 4 |

### 4.2.1 Indicator #8 – Classroom Practices by ECDE Teachers

The pre-baseline benchmark established for the number and percentage of male and female ECDE teachers meeting minimum standards of improved classroom practices[[26]](#footnote-27) was 41 points (out of 63) or 65% and the project target was set at 65% of teachers meeting this benchmark. The maximum score achieved at baseline was 35 points or 58.3% and no teachers from the 106 classrooms observed, obtained the minimum standard for classroom practices.

This has changed significantly and substantially at endline, with 52.1% (63 teachers from the 121 classrooms observed) meeting or surpassing the benchmark (adjusted[[27]](#footnote-28) odds ratio (OR)[[28]](#footnote-29): 4.49+08, 95%CI[[29]](#footnote-30): 0-Inf[[30]](#footnote-31); Wald’s=0.984) (*X2*=73.8, df=1, p=<0.001). In Kisumu, a total of 74.1% of teachers met the benchmark, surpassing the project target of 65%. Improvement was still required by those teachers in Kisii, as only 31.7% of teachers met the benchmark (adjusted OR: 6.94, 95%CI: 3.1-15.8; Wald’s:=<0.001; p<0.001). Males were slightly more likely (60.0%) to meet the benchmark, than females (51.4%); however, the small population of males must be kept in mind (adjusted OR: 2.79, 95%CI: 0.7-11.6; Wald’s: 0.159; p= non-significant (n.s.)) (Table 17).

Table 17: Number and Percentage of Target Male and Female ECDE Teachers with Improved Classroom Practices, by County, Gender

| County | Baseline (n=106) | | | Endline (n=121) | | |
| --- | --- | --- | --- | --- | --- | --- |
| Female Teachers | Male Teachers | Total Teachers | Female Teachers | Male Teachers | Total Teachers |
| Kisumu | 0 (0.0) | 0 (0.0) | 0 (0.0) | 41 (73.2) | 2 (100.0) | 43 (74.1) |
| Kisii | 0 (0.0) | 0 (0.0) | 0 (0.0) | 16 (29.1) | 4 (50.0) | 20 (31.7) |
| **Total** | **0 (0.0)** | **0 (0.0)** | **0 (0.0)** | **57 (51.4)** | **6 (60.0)** | **63 (52.1)** |

The positive results are most likely a result of the intensification of MECP-K programming since the baseline phase and initial training and support provided to teachers through an individualized and accompaniment approach. County differentials are also explained due to the entry and education level of teachers into ECD centers, generally higher among teachers from Kisumu, than Kisii. Coupled with this, is the fact that the capacity of ECD officers in Kisumu (often themselves ECD graduates), and well-structured systems for routine and on-going monitoring and visits are more evolved in Kisumu.

The average scores for teacher classroom practices more than doubled from baseline to endline and this change was significant (F-value: 536.5, p=<0.001; large effect sizes between 2.7 and 3.6 for both total and disaggregated scores). Although scores were lower in Kisii than Kisumu (F-value: 68.3, p=<0.001), Kisii teachers on average more than tripled their scores.[[31]](#footnote-32) In terms of gender, females had started with very slightly higher average scores than males but were found to have almost identical average scores at baseline (not significant, F-value: 1.1, p=0.30). Notably, no teachers at endline scored 0, which had occurred at baseline, with the lowest minimum score of 16 points or 26.7%. The maximum score also increased substantially from 35 points (58.3%) to 55 points (91.7%) (Table 18).

At baseline, regression analysis utilizing the percentage scores and the classroom size on the day of observation did not show a significant effect (F=2.02, df=1, p=0.16), suggesting that classroom size did not affect the scores of teachers.[[32]](#footnote-33) At endline, the results were significant (F=4.77, df=1, p=0.03); however, the correlation coefficient was negative (-0.19), indicating that teachers with larger class sizes tended to have higher scores (Table 18).

Discussions with county ECDE Officers also support quality teacher practice within MECP-K schools.

*“ You will find teachers with materials in the supported schools. Nyakach, for example, has 148 ECD centers and they are now coming up with material development policies like soon we are going to have one teacher who is good at making material do a sample for a whole week we want to see what you have done for example if its language material development, so you come up with cut outs and models in week 2, and you are going to do painting once you are done you move to another activity. I have seen them excited in making materials.” (ECDE County Official)*

Table 18: Number and Percentage Scores of Teacher’s Classroom Practices, by County and Gender

| Variable | Baseline (n=106) | | | | | | | Endline (n=121) | | | | | | | Effect size |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Average and Standard deviation | | Median and Inter-quartile range | | | Minimum and Maximum | | Average and Standard deviation | | Median and Inter-quartile range | | | Minimum and Maximum | |
| Average | SD | Median | IQR 1 | IQR 3 | Min | Max | Average | SD | Median | IQR 1 | IQR 3 | Min | Max |
| NUMBER (max of 65) | | | | | | | | | | | | | | | |
| Total | 15.1 | 8.0 | 15.0 | 9.0 | 21.0 | 0.0 | 35.0 | 38.2 | 8.7 | 39.0 | 32.0 | 44.0 | 16.0 | 55,0 | 2.77 |
| County | | | | | | | | | | | | | | | |
| Kisumu | 20.3 | 6.2 | 20.0 | 16.0 | 24.0 | 8.0 | 35.0 | 41.8 | 5.7 | 42.5 | 39.0 | 46.0 | 21.0 | 54.0 | 3.60 |
| Kisii | 10.6 | 6.5 | 11.0 | 5.0 | 16.0 | 0.0 | 23.0 | 35.0 | 9.7 | 34.0 | 28.5 | 41.5 | 16.0 | 55.0 | 3.00 |
| Gender | | | | | | | | | | | | | | | |
| Female | 15.2 | 7.9 | 15.5 | 9.0 | 20.8 | 0.0 | 35.0 | 38.2 | 8.7 | 39.0 | 32.0 | 44.0 | 16.0 | 55.0 | 2.76 |
| Male | 13.9 | 8.9 | 11.5 | 9.3 | 22.5 | 0.0 | 25.0 | 38.5 | 9.1 | 40.5 | 32.8 | 45.8 | 24.0 | 49.0 | 2.74 |
| PERCENTAGE | | | | | | | | | | | | | | | |
| Total | 25.1 | 13.3 | 25.0 | 15.0 | 35.0 | 0.0 | 58.3 | 62.9 | 14.6 | 65.0 | 53.3 | 73.3 | 26.7 | 91.7 | 2.72 |
| County | | | | | | | |  | | | | | | | |
| Kisumu | 33.6 | 10.4 | 33.3 | 26.7 | 40.0 | 12.7 | 58.3 | 68.9 | 9.4 | 69.9 | 63.8 | 76.5 | 35.0 | 85.7 | 3.55 |
| Kisii | 17.7 | 10.9 | 18.3 | 8.3 | 26.7 | 0.0 | 38.3 | 57.5 | 16.3 | 55.6 | 46.3 | 69.2 | 26.7 | 91.7 | 2.93 |
| Gender | | | | | | | | | | | | | | | |
| Female | 25.2 | 13.2 | 25.8 | 15.0 | 34.5 | 0.0 | 58.3 | 62.9 | 14.6 | 65.0 | 53.3 | 73.3 | 26.7 | 91.7 | 2.71 |
| Male | 23.1 | 14.9 | 19.2 | 15.4 | 37.5 | 0.0 | 41.7 | 63.6 | 15.1 | 67.5 | 54.6 | 74.6 | 39.7 | 81.7 | 2.70 |

### 4.2.2 Indicator #9 – Quality Learning Environments

The pre-baseline benchmark established for the number and percentage of ECDE centres with quality learning environments was 27 points (out of 42) or 65%. At baseline, the maximum score achieved was 25 points or 59.5% and no ECDE centre obtained the minimum standard for the learning environment. This changed at endline with 35.4% of ECDE centres achieving the minimum standard of quality learning environments (Tables 19 and 20). This was still short of the project target set at 65% of schools meeting the benchmark; however, showed significant improvement since baseline (adjusted OR: 1.72+08, 95%CI: 0-Inf[[33]](#footnote-34); Wald’s=0.99) (*X2*=5.81, df=1, p=<0.016). A minimal difference was found between schools in Kisumu and Kisii meeting the benchmark (adjusted OR: 1.52, 95%CI: 0.5-5.0; Wald’s=0.49; p=n.s.).

Table 19: Number and Percentage of ECDE centres with Improved Quality Learning Environments

| County | Baseline (n=50) | | Endline (n=48) | |
| --- | --- | --- | --- | --- |
| Number of Schools meeting benchmark | Result | Number of Schools meeting benchmark | Result |
| Kisumu | 0 | 0.0 | 10 | 40.0 |
| Kisii | 0 | 0.0 | 7 | 30.4 |
| **Total** | **0** | **0.0** | **17** | **35.4** |

One factor to be considered for the minimal percentage point increase since baseline is attributed to the lack of continuity in the monitoring of learning environments as a result of school closures and disruption of the school calendar. Notable differences in learning environments between MECP-K and non-MECP-K schools is also highlighted by ECDE County Officers, including material development, teaching approaches, and curriculum.

*“….storage facilities in MECP-K supported schools was a very new idea. Maybe [in other schools] you see an ordinary cardboard, but here you are able to display at the same time and then there was the type of material that teachers developed. [They] had new ideas and when other schools see material making they could copy from them.”*

*“You can see the way they handle their children and colorful sessions so when they get to the class and sit up to the end of the day.”*

*“Teachers had that notion that the ECD materials are very expensive, but with the coming of MECP-K, [they have] shown us on how to use locally available resources to come up with materials for instruction purposes. Not only that but, even on how to use, to improvise the materials and add value. Also, our teachers initially were not using the professional documents especially with this era of CBC. They had no knowledge on how to develop schemes of work. They had no knowledge on how to develop lesson plans. They had no knowledge on how to develop records of work and progress record. MECP-K came at the right time when the national government was busy training the primary school teachers, the ECD teachers were ignored but the Madrassa program has trained and our teachers now are able to come up with professional records, more especially the schemes of work and the lesson plan.”*

Moreover, these approaches have had some observed impacts on children’s motivation.

*“Of the 14 schools [I have visited]. There are learning corners in classrooms and each learning corner has got materials relevant for that learning area well displayed. Now our children are excited, they have that motivation, now they are manipulating the materials. Teachers were taught about MAMACHOLASU[[34]](#footnote-35) by the Madrassa that is : MA-material, MA-manipulate, CHO-choice, LA-language, Su- support.” (Interview with ECDE County Officer)*

The average score for quality learning environments more than doubled between baseline and endline, which was a significant change (F-value: 296.6, p=<0.001; large effect sizes between 3.0 and 3.9 for both total and county disaggregated scores) (Table 20). The gap between Kisumu and Kisii quality learning environment scores became smaller at endline.[[35]](#footnote-36) At baseline, there was a noticeable difference between the counties, with Kisumu having a score almost twice that of Kisii (33.7% versus 17.6%); however, this gap decreased at endline (63.1% versus 57.5%). Interestingly, the difference in the minimum scores for ECDE centres in the two counties was quite substantial (Kisumu: 50.0%, Kisii 21.4%), while the maximum scores were quite similar, with Kisumu having the highest score (Kisumu: 85.7%, Kisii 87.2%) (Table 20).

Table 20: Number and Percentage Scores of ECDE Centre Learning Environments, by County

| Variable | Baseline (n=50) | | | | | | | Endline (n=48) | | | | | | | Effect size |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Average and Standard deviation | | Median and Inter-quartile range | | | Minimum and Maximum | | Average and Standard deviation | | Median and Inter-quartile range | | | Minimum and Maximum | |
| Average | SD | Median | IQR 1 | IQR 3 | Min | Max | Average | SD | Median | IQR 1 | IQR 3 | Min | Max |
| NUMBER (max of 42) | | | | | | | | | | | | | | | |
| Total | 10.2 | 4.8 | 10.0 | 6.7 | 12.9 | 3.0 | 25.0 | 25.7 | 5.0 | 26.0 | 23.5 | 27.8 | 9.0 | 36.0 | 3.16 |
| County | | | | | | | | | | | | | | | |
| Kisumu | 13.4 | 4.3 | 12.5 | 11.0 | 16.5 | 3.0 | 25.0 | 26.9 | 3.2 | 26.5 | 25.5 | 28.0 | 21.0 | 36.0 | 3.59 |
| Kisii | 6.9 | 2.7 | 6.7 | 4.5 | 9.0 | 3.0 | 13.5 | 24.4 | 6.2 | 24.3 | 20.9 | 27.6 | 9.0 | 34.0 | 3.92 |
| PERCENTAGE | | | | | | | | | | | | | | | |
| Total | 25.7 | 11.7 | 25.0 | 17.1 | 33.0 | 8.0 | 59.5 | 61.4 | 12.1 | 61.9 | 56.0 | 66.8 | 21.4 | 87.2 | 2.99 |
| County | | | | | | | | | | | | | | | |
| Kisumu | 33.7 | 10.1 | 32.1 | 28.2 | 39.3 | 9.1 | 59.5 | 64.3 | 7.8 | 63.1 | 60.7 | 66.7 | 50.0 | 85.7 | 3.41 |
| Kisii | 17.6 | 6.5 | 17.1 | 12.8 | 22.6 | 8.0 | 34.6 | 58.1 | 15.0 | 57.5 | 49.8 | 67.6 | 21.4 | 87.2 | 3.77 |

### 4.2.3 Analysis of Classroom Observation by Criteria and Domains

Overall, average percentage scores for all sections of the Classroom Observation have increased since baseline. The range of scores have increased from 16.8% to 33.3% at baseline to 55.9% to 68.2% at endline. The highest increases seen were for teaching and learning materials (40.2 percentage point increase or 3.4x increase), and daily routine (39.7 percentage point increase or 2.8x increase). Potential explanations for this are a result of reflection sessions which focus on material development and use of improved teacher material development.

Interestingly, while outdoor learning environment had the highest average score at baseline, it had the lowest average score at endline, and thus had the smallest improvement (1.7x increase), an area which MECP-K likely had the least influence. As was found at baseline, Kisumu had higher average percentage scores than Kisii for all sections, although Kisii schools did show more improvement from baseline to endline than Kisumu with the exception of Outdoor Learning Environment (Table 21).

Table 21: Average Percentage Scores of Sections in the Classroom Observation Tool and times increase, by County

| Section | Baseline (n=106 classrooms and 50 ECDE centres) | | | Endline (n=121 classrooms and 48 ECDE centres) | | | Times increase from Baseline to Endline | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Total | Kisumu | Kisii | Total | Kisumu | Kisii | Total | Kisumu | Kisii |
| Teaching and Learning Materials | **16.8** | 24.7 | 10.1 | **57.0** | 66.4 | 48.4 | **3.4** | 2.7 | 4.8 |
| Daily Routine | **22.2** | 29.1 | 16.3 | **61.9** | 70.3 | 54.1 | **2.8** | 2.4 | 3.3 |
| Adult and Child Interaction (Delivery) | **31.4** | 41.5 | 22.7 | **68.2** | 72.3 | 64.4 | **2.2** | 1.7 | 2.8 |
| Teacher Attitude | **27.9** | 37.2 | 19.9 | **62.3** | 64.3 | 60.6 | **2.2** | 1.7 | 3.0 |
| Classroom (Indoor) teaching and Learning Environment | **22.5** | 32.5 | 13.8 | **63.8** | 64.6 | 63.1 | **2.8** | 2.0 | 4.6 |
| Outdoor Environment | **33.3** | 36.9 | 30.1 | **55.9** | 65.2 | 47.2 | **1.7** | 1.8 | 1.6 |

Table 22 below provides the average percentage scores for each of the questions in the classroom observation tool at baseline and endline. Scores for all questions increased from baseline to endline, typically improving between a factor of one to four times. Questions with the greatest improvement include availability of outdoor equipment and materials (sand and water play areas) (5.1 times), the use of five designated learning areas (language, math, environmental, psychomotor, religious) (5.4x), materials being arranged systematically and labelled clearly (6.8x), teachers providing opportunities for both structured and unstructured play (9.8x), and children calling the teacher by name (75.5x). Although this last aspect had one of the lowest average scores (47.1%).

Some of the lowest scoring sections were found in the outdoor environment section, the availability of indoor and outdoor equipment and materials, with the indoor sand and water learning areas (8.6%) having the lowest score, followed by availability of outdoor equipment and materials (sand and water play areas) (45.2%), and the safety of outdoor equipment (48.2%). The use of gender sensitive materials (e.g., using a book with a male driver - teacher goes beyond the stereotype in the material to explore issues of equality) still had a relatively low score (48.8%) at endline, but had improved substantially since baseline (11.9%). Males (43.3%)[[36]](#footnote-37) were still less likely to use gender sensitive materials than females (51.4%). Generally, there was no trend in either male or female teachers having higher scores, and the small sample size of male teachers must always be kept in mind. In contrast, for all questions except that of materials being arranged systematically and labelled clearly, Kisumu teachers/schools had a higher average score than Kisii teachers/schools.

Importantly, the highest scoring questions suggested improvements in gender sensitive teaching skills, with the indoor teaching and learning environment being designed to engage and integrate both boys and girls (74.1%), teachers providing equal opportunities for boys and girls to participate in class activities (asking both girls and boys, non-traditional play, etc.) (70.8%), and caregivers/teachers interacting freely with all children (78.5%).

Table 22: Average Percentage Scores for each question in the Classroom Observation Tool, by County

| Questions | | Baseline (n=106 classrooms and 50 ECDE centres) | | | | | Endline (n=121 classrooms and 48 ECDE centres) | | | | | % total increase/ decrease from Baseline |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Average Percentage Score | Kisumu  (49 Classes) | Kisii  (57 Classes) | Females  (98 Classes) | Males  (8 Classes)[[37]](#footnote-38) | Average Percentage Score | Kisumu  (49 Classes) | Kisii  (57 Classes) | Females  (111 Classes) | Males  (8 Classes)[[38]](#footnote-39) |
| 1.1 | Use of teaching and learning materials during lesson delivery | **20.8** | 32.7 | 10.5 | 20.7 | 20.8 | **59.0** | 67.3 | 52.4 | 58.3 | 66.7 | 38.2 |
| 1.2 | Use of developmentally and age-appropriate teaching and learning activities | **19.2** | 26.5 | 12.9 | 19.4 | 16.7 | **57.6** | 73.7 | 43.9 | 59.5 | 53.3 | 38.4 |
| 1.3 | Teacher provides materials and activities for children to cooperate and interact with each other | **15.4** | 23.8 | 8.2 | 15.6 | 12.5 | **58.4** | 65.5 | 52.9 | 58.9 | 66.7 | 43.0 |
| 1.4 | Use of gender sensitive materials (e.g. using a book with a male driver - teacher goes beyond the stereotype in the material to explore issues of equality) | **11.9** | 15.6 | 8.8 | 12.6 | 4.2 | **48.8** | 63.7 | 36.0 | 51.4 | 43.3 | 36.9 |
| 2.1 | Availability of all updated documents (e.g. schemes of work, lesson plan, record of work, health record, assessment record, attendance register) | **24.8** | 32.7 | 18.1 | 25.2 | 20.8 | **55.9** | 67.8 | 46.0 | 57.7 | 53.3 | 31.1 |
| 2.2 | Daily schedule is written, posted, followed consistently and shared with learners. | **31.4** | 37.4 | 26.3 | 31.3 | 33.3 | **71.6** | 84.2 | 61.4 | 73.3 | 76.7 | 40.2 |
| 2.3 | Logical lesson presentation | **28.3** | 37.4 | 20.5 | 28.2 | 29.2 | **66.7** | 80.1 | 55.6 | 68.8 | 63.3 | 38.4 |
| 2.4 | Teacher is following lesson plan | **26.4** | 36.1 | 18.1 | 26.5 | 25.0 | **63.1** | 73.1 | 55.0 | 65.2 | 60.0 | 36.7 |
| 2.5 | Children activities are based on their individual needs | **17.0** | 26.5 | 8.8 | 17.0 | 16.7 | **52.9** | 63.7 | 43.9 | 54.1 | 50.0 | 35.9 |
| 2.6 | Teacher provides opportunities for both structured and unstructured play | **5.3** | 4.8 | 5.8 | 5.8 | 0.0 | **51.8** | 60.2 | 45.0 | 53.8 | 53.3 | 46.5 |
| 3.1 | Caregivers/ teachers interact freely with all children | **42.1** | 55.1 | 31.0 | 42.9 | 33.3 | **78.5** | 86.5 | 72.5 | 82.3 | 80.0 | 36.4 |
| 3.2 | Caregivers/teachers provide a balance of teacher- and child-initiated activities in large and small groups (grouping techniques). | **15.7** | 25.9 | 7.0 | 15.6 | 16.7 | **52.9** | 68.4 | 39.7 | 53.2 | 53.3 | 37.2 |
| 3.3 | Use of different teaching strategies (e.g. songs, rhymes, stories) | **25.8** | 38.1 | 15.2 | 25.9 | 25.0 | **56.5** | 66.1 | 48.7 | 58.3 | 56.7 | 30.7 |
| 3.4 | Use of positive and natural language (gentle tone, natural voice, polite language, appropriate language to child's age and context, use of child's name) | **32.1** | 42.9 | 22.8 | 32.0 | 33.3 | **67.2** | 69.6 | 66.1 | 70.3 | 73.3 | 35.1 |
| 3.5 | Teacher actively listens and supports children during activities | **45.0** | 56.5 | 35.1 | 45.2 | 41.7 | **68.9** | 72.5 | 66.7 | 71.5 | 76.7 | 23.9 |
| 3.6 | Teacher providing equal opportunities for boys and girls to participate in class activities (asking both girls and boys, non-traditional play, etc.) | **27.7** | 30.6 | 25.1 | 27.2 | 33.3 | **70.8** | 78.4 | 65.1 | 73.0 | 76.7 | 43.1 |
| 4.1 | Teachers displays energy and enthusiasm | **42.5** | 57.1 | 29.8 | 42.5 | 41.7 | **66.7** | 73.1 | 61.9 | 69.4 | 66.7 | 24.2 |
| 4.2 | The teacher shows positive attention in his/her interaction with children (smile, nod, use a calm voice, gets down to the child’s level etc.) | **33.6** | 46.9 | 22.2 | 33.7 | 33.3 | **63.4** | 70.2 | 58.2 | 65.2 | 73.3 | 29.8 |
| 4.3 | The teacher expresses using variations for emphasis, humor, surprise and delight. | **34.9** | 44.2 | 26.9 | 35.7 | 25.0 | **60.6** | 64.3 | 58.2 | 62.8 | 66.7 | 25.7 |
| 4.4 | The children call the teacher by name. | **0.6** | 0.0 | 1.2 | 0.7 | 0.0 | **47.1** | 53.2 | 42.3 | 47.7 | 60.0 | 46.5 |
| 4.5 | The teacher attends to a child if he or she is upset. [Enter N/A if not applicable) | **20.5** | 33.3 | 4.8 | 22.2 | 0.0 | **66.7** | 72.2 | 66.7 | 69.9 | 66.7 | 46.2 |
| 5.1 | Safety of the indoor teaching and learning environment | **32.1** | 48.3 | 18.1 | 33.3 | 16.7 | **65.8** | 69.0 | 64.0 | 67.9 | 73.3 | 33.7 |
| 5.2 | Cleanliness of the classroom environment including the care givers/teachers, materials and toys | **42.5** | 55.8 | 31.0 | 43.2 | 33.3 | **66.9** | 68.4 | 66.7 | 69.7 | 70.0 | 24.4 |
| 5.3 | Classroom arrangement provides adequate space for activities and learning (refer to guide) | **37.4** | 46.3 | 29.8 | 38.4 | 25.0 | **62.3** | 75.4 | 51.3 | 63.7 | 66.7 | 24.9 |
| 5.4 | Learning areas are systematically arranged and labeled | **13.8** | 23.1 | 5.8 | 14.6 | 4.2 | **63.6** | 67.8 | 60.8 | 65.8 | 76.7 | 49.8 |
| 5.5 | The indoor teaching and learning environment is designed to engage and integrate both boys and girls | **34.9** | 49.7 | 22.2 | 36.4 | 16.7 | **74.1** | 87.1 | 63.5 | 77.8 | 66.7 | 39.2 |
| 5.6 | Availability of locally and appropriate number of materials for the number of children, variety, durable, safe, appropriate for age (larger for younger children) | **22.0** | 32.7 | 12.9 | 22.8 | 12.5 | **69.1** | 76.0 | 64.0 | 72.4 | 63.3 | 47.1 |
| 5.7 | Materials are arranged systematically and labelled clearly | **9.1** | 15.0 | 4.1 | 9.9 | 0.0 | **61.7** | 60.8 | 63.5 | 64.3 | 70.0 | 52.6 |
| 5.8 | Materials can be reached (accessible) by children | **17.9** | 29.9 | 7.6 | 19.0 | 4.2 | **64.7** | 66.7 | 64.0 | 67.3 | 66.7 | 46.8 |
| 5.9 | Five designated learning areas (language, math, environmental, psychomotor, religious) | **12.9** | 21.8 | 5.3 | 13.6 | 4.2 | **69.1** | 72.5 | 67.2 | 71.8 | 76.7 | 56.2 |
| 5.10 | Indoor sand and water learning areas | **1.9** | 2.7 | 1.2 | 2.1 | 0.0 | **8.6** | 11.9 | 5.2 | 8.7 | 8.3 | 6.7 |
| 6.1 | Availability of a designated outdoor space | **64.2** | 63.9 | 64.3 | 64.6 | 58.3 | **68.3** | 74.3 | 64.0 | 71.2 | 70.0 | 4.1 |
| 6.2 | Availability of outdoor equipment and materials (sand and water play areas) | **8.8** | 8.5 | 9.1 | 8.8 | 9.5 | **45.2** | 64.3 | 28.6 | 47.1 | 40.0 | 36.4 |
| 6.3 | Safety of outdoor equipment / environment | **30.7** | 42.6 | 20.6 | 31.2 | 23.8 | **48.2** | 62.0 | 36.5 | 50.8 | 50.0 | 17.5 |
| 6.4 | Play equipment and/or locally made materials which are developmentally appropriate and respond to three or more senses | **32.0** | 40.0 | 26.7 | 33.3 | 16.7 | **51.8** | 64.9 | 40.7 | 55.0 | 56.7 | 19.8 |

### 4.3. Board of Management Assessment

The BOM assessment was not carried out at the endline phase as activities with the BOM was removed from the implementation plan.

### 4.4. Teacher Survey

A self-administered teacher survey was done during the final training or classroom observations June/July 2021. This survey focused on assessing core knowledge areas of the MECP-K curriculum, as well as the basic ECDE curriculum, and gathering information regarding mentoring they have received in the past from county officials.

A total of 242 teachers surveys were administered and collected at endline, with 113[[39]](#footnote-40) of these being from the 50 pre-selected sample schools that were sampled for the classroom observations and the child assessment. These numbers were lower than the number of teacher surveys undertaken at baseline, with 321 and 146, respectively. The focus within the report is on those teachers from the 50 pre-selected sample schools, although additional information can be found in the summary table and data tables provided separate from this report. The findings from all teachers were very similar to those reported here from sample teachers.

Of the 113 teachers, 52 (46.0%) were from Kisumu and 61 (54.0%) were from Kisii, while 60 (53.1%) taught pre-primary 1, 47 (41.6%) taught pre-primary 2, and 5 (4.4%) taught both[[40]](#footnote-41). As expected, the demographic findings were similar to those of the classroom observations. The vast majority of teachers were female (90.3%). Moreover, the majority of teachers trained had more than five years of teaching experience (89.4%), up from 63.0% at baseline and likely includes some teachers sampled at baseline that had four to five years of experience (20.5%). Only 5.3% of teachers sampled at endline had three years or less of teaching experience. Finally, most teachers reported their highest level of education achieved to be College (89.4%) (Table 24).

Table 23: General Teacher Characteristics, by County, Gender and Teaching Experience

| Category | Disaggregation | Baseline (n=146) | Endline (n=113) |
| --- | --- | --- | --- |
| County | Kisumu | 74 (50.7%) | 52 (46.0%) |
| Kisii | 72 (49.3%) | 61 (54.0%) |
| Gender | Female teachers | 133 (91.1%) | 102 (90.3%) |
| Male teachers | 11 (7.5%)[[41]](#footnote-42) | 11 (9.7%) |
| Class | Pre-primary 1 | 72 (49.3%) | 60 (53.1%) |
| Pre-primary 2 | 65 (44.5%) | 47 (41.6%) |
| Pre-primary 1 & 2 | 8 (5.5%) | 5 (4.4%) |
| Teaching experience | Three years or less of teaching experience | 24 (16.4%) | 6 (5.3%) |
| Four to five years | 30 (20.5%) | 11 (5.4%) |
| Five years of teaching | 92 (63.0%) | 104 (89.4%) |
| Education | College | 125 (85.6%) | 104 (89.4%) |

### 4.4.1 Indicator #14 – Knowledge of MECP Curriculum

The pre-baseline benchmark established for the number and percentage of male and female ECDE teachers meeting minimum standards of core knowledge of MECP curriculum concepts and approaches was 8 points (out of 12) or 66%. At baseline, only one individual (0.68%) scored higher than the minimum standard (Table 24), this increased slightly to 8 individuals (7.1%) at endline; however, was still significantly short of reaching the target (adjusted OR: 11.1, 95%CI: 1.4-90.5; Wald’s=0.024, p=0.024) (*X2*=5.9, df=1, p=0.014). No significant differences were found by county or gender for teachers meeting the benchmark.

**Table 24: Number and Percentage of Target Male and Female ECDE Teachers with Core Knowledge of MECP Curriculum Concepts and Approaches, by County, and Gender**

| County | Baseline (n=146) | | | Endline (n=113) | | | Total % increase/  decrease from baseline |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Female Teachers | Male Teachers | Total Teachers | Female Teachers | Male Teachers | Total Teachers |
| Kisumu | 0 (0.0) | 0 (0.0) | 0 (0.0) | 5 (10.0) | 0 (0.0) | 5 (9.6) | 9.6% |
| Kisii | 1 (0.75) | 0 (0.0) | 1 (0.75) | 2 (3.8) | 1 (11.1) | 3 (4.9) | 4.2% |
| **Total** | **1 (0.75)** | **0 (0.0)** | **1 (0.68)** | **7 (6.9)** | **1 (9.1)** | **8 (7.1)** | **6.4%** |

\* standard of 66% or more

At endline, the highest percentage of teachers answered five questions correctly (26.5%), followed by six questions (25.3%), which was a significant improvement from baseline where the highest percentage of teachers answered four questions correctly (25.3%), followed by five questions (21.9%). Like baseline, 9 correct answers out of 12, was the highest score achieved (Table 25). Similarly, the overall average at endline was significantly higher (5.3 questions) than at baseline (4.3 questions) (F-value=25.5, df=1, p=<0.001), with a total effect size of 0.64 indicating a moderate amount of change. County and gender disaggregation had similar changes between baseline and endline, except for males, which was slightly less but the very small sample size must be taken into consideration (Table 26). There were no significant differences in average scores for county, gender, or any interactions of these with study period.

Table 25: Percentage of Correctly Answered MECP Curriculum Questions by ECDE Teachers, by County

| Number of Questions Correctly Answered | Baseline (n=146) | | | Endline (n=113) | | |
| --- | --- | --- | --- | --- | --- | --- |
| Kisumu | Kisii | Total | Kisumu | Kisii | Total |
| 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 1 | 2.7 | 1.4 | 2.1 | 0.0 | 0.0 | 0.0 |
| 2 | 6.8 | 15.3 | 11.0 | 1.9 | 1.6 | 1.8 |
| 3 | 14.9 | 19.4 | 17.1 | 11.5 | 11.5 | 11.5 |
| 4 | 28.4 | 22.2 | 25.3 | 11.5 | 18.0 | 15.0 |
| 5 | 24.3 | 19.4 | 21.9 | 26.9 | 26.2 | 26.5 |
| 6 | 14.9 | 11.1 | 13.0 | 23.1 | 27.9 | 25.7 |
| 7 | 8.1 | 9.7 | 8.9 | 15.4 | 9.8 | 12.4 |
| 8\* | 0.0 | 0.0 | 0.0 | 9.6 | 1.6 | 5.3 |
| 9 | 0.0 | 1.4 | 0.7 | 0.0 | 3.3 | 1.8 |
| 10 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 11 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 12 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| \*Indicates the benchmark (8 of 12 correct questions to meet the indicator) | | | | | | |

**Table 26: Average, Median and Minimum/Maximum Number Scores of Correctly Answered MECP Curriculum Questions by Targeted ECDE Teachers, by County, and Gender**

| Disaggregation | Baseline (n=146) | | | | | | | Endline (n=113) | | | | | | | Effect size |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Average and Standard deviation | | Median and Inter-quartile range | | | Minimum and Maximum | | Average and Standard deviation | | Median and Inter-quartile range | | | Minimum and Maximum | |
| Average | SD | Median | IQR 1 | IQR 3 | Min | Max | Average | SD | Median | IQR 1 | IQR 3 | Min | Max |
| NUMBER (max of 12) | | | | | | | |  |  |  |  |  |  |  |  |
| Total | 4.3 | 1.6 | 4.0 | 3.0 | 5.0 | 1.0 | 9.0 | 5.3 | 1.5 | 5.0 | 4.0 | 6.0 | 2.0 | 9.0 | 0.64 |
| County | | | | | | | |  |  |  |  |  |  |  |  |
| Kisumu | 4.4 | 1.4 | 4.0 | 4.0 | 5.0 | 1.0 | 7.0 | 5.4 | 1.5 | 5.0 | 4.8 | 6.3 | 2.0 | 8.0 | 0.68 |
| Kisii | 4.2 | 1.7 | 4.0 | 3.0 | 5.0 | 1.0 | 9.0 | 5.2 | 1.5 | 5.0 | 4.0 | 6.0 | 2.0 | 9.0 | 0.61 |
| Gender | | | | | | | |  |  |  |  |  |  |  |  |
| Female | 4.3 | 1.5 | 4.0 | 3.0 | 5.0 | 1.0 | 9.0 | 5.3 | 1.5 | 5.0 | 4.0 | 6.0 | 2.0 | 9.0 | 0.66 |
| Male | 4.2 | 1.6 | 4.0 | 3.0 | 6.0 | 2.0 | 6.0 | 4.9 | 1.8 | 5.0 | 3.5 | 6.0 | 3.0 | 9.0 | 0.43 |

Just as at baseline, there were four questions that teachers found extremely difficult, with less than 10% providing correct answers (Table 27). These were:

* Which of the following are the result of ‘Key Inquiry Questioning’ during lesson delivery?
* Children’s learning environment should be well labeled. Which of the following are strategies that you can use in a classroom setting?
* Name three types or forms of assessment used in Early Years Learning. Notably, no teachers were able to provide three examples at either baseline or endline.
* How do you ensure that girls and boys are given equal opportunities in classrooms?

Additionally, the same three questions that teachers found relatively easy to answer at baseline, with more than 75% providing correct answers, were also answered well at endline, in addition to one other question around stimulative learning environments (Table 27). These included:

* What does the term ‘sex’ refer to?
* What does the term ‘gender’ refer to?
* Both the father and the mother have equal responsibilities for participation in their child’s preschool learning. TRUE or FALSE?
* Which of following is NOT an element of a stimulative learning environment?

Importantly, nine of the 12 questions had a higher percentage of correct answers at endline compared to baseline (Table 27), suggesting some teacher knowledge improvement. The question on components of the basic ECDE curriculum was answered correctly by 18.6% more teachers at endline, on understanding the meaning of sex and on what factors should be considered when sourcing learning resources was answered correctly by 10% more teachers at endline, and the question on elements related to the schemes of work, was answered correctly by 40% more teachers at endline.

Table 27: Percentage of ECDE Teachers that Correctly Answered MECP Curriculum Questions

| Question theme | Baseline (n=146) | Endline (n=113) |
| --- | --- | --- |
| Percentage | Percentage |
| Components of the basic ECD curriculum | 30.1 | 48.7 |
| Schemes of Work | 30.8 | 70.8 |
| Key enquiry questioning | 2.1 | 0.9 |
| Stimulative learning environments | 74.7 | 78.8 |
| Child learning | 18.5 | 17.7 |
| Children’s learning environments | 0.7 | 4.4 |
| Early years learning assessments | 0.0 | 0.0 |
| Parent engagement (fathers) | 93.2 | 93.8 |
| Term of Sex | 76.7 | 87.6 |
| Term of gender | 82.9 | 91.2 |
| Girls and boys given equal opportunity | 6.8 | 9.7 |
| Sourcing learning resources | 16.4 | 26.5 |

In terms of progress on early years learning assessments, no teacher was able to correctly identify all required answers of checklists, rating scales, project method or journaling, primarily due to pre-primary teachers having higher uptake for practical display of concepts rather than theoretical descriptions. Further, early years learning assessment is a fairly new concept that teachers are struggling to implement. Knowledge based assessments and the response to theoretical concepts is noted as challenging for ECD teachers, who have been provided practical and hands-on training and demonstration. If questions explored the demonstration of these concepts in practice (e.gl, showing a completed assessment), the rates would likely have been higher[[42]](#footnote-43).

Two additional questions were added to assess the acquisition of training knowledge. The first was ‘Children learn concepts from complex to simple concepts, and unknown to known? TRUE or FALSE?’. Overall, 52.2% of teachers provided the correct answer of ‘false’, with male teachers (81.8%) providing the correct response much more frequently than female teachers (49.0%), and teachers from Kisii (65.6%) providing the correct answer more frequently than those from Kisumu (36.5%). The second question ‘Which of the following methods are NOT part of ‘learning by doing’ approach for children’s learning’ was answered correctly much less frequently. The correct answer ‘demonstration by teacher’ was provided by only 10.6% of teachers (females: 9.8%; males: 18.2%, Kisumu: 3.8%, Kisii: 16.4%) and was the answer with the lowest percentage response (tied with the option repetition of skills). Teachers believed that the correct answer was ‘trial and error’ (29.2%), ‘all of the options’ (23.9%), and ‘asking questions’ (20.2%).

Teachers were also asked five questions related to their knowledge on COVID-19, as this topic was covered during recent training. More than half of teachers correctly provided the measure that does not ensure a clean classroom, and one of the two organizations where they should be receiving reliable information on COVID-19. Additionally, most teachers were able to provide one or two of the roles that parents should play when schools were closed. Fewer teachers provided the correct answer of ‘all of above' to when children should be encouraged to wash their hands. Here teachers provided the answer of before and after eating (55.8%) and after going to the toilet (54.9%) more commonly than when beginning a new activity (30.1%) or when touching any surface in the classroom (43.4%), which have become more important during the era of COVID-19. Also, the most common response provided regarding things that one can do when feeling stressed was maintain a healthy lifestyle, including proper diet, sleep and exercise (85.0%) (Table 28).

Table 28: Percentage of Target ECDE Teachers that Correctly Answered each of the MECP-K COVID-19 Questions, by County and Gender

| Question theme  (Correct answer) | County | | Gender | | Total (n=113) |
| --- | --- | --- | --- | --- | --- |
| Kisumu (n=52) | Kisii (n=61) | Female (n=102) | Male (n=11) |
| Which of the following is NOT a measure to ensure a clean classroom? | | | | | |
| Place learning and play materials in a box to rid of any bacteria | 67.3 | 59.0 | 66.7 | 27.3 | 62.8 |
| Where should you get reliable information on COVID-19 ('coronavirus)? | | | | | |
| Kenyan Ministry of Health | 51.9 | 62.3 | 53.9 | 90.9 | 57.5 |
| World Health Organization (WHO) | 42.3 | 57.4 | 49.0 | 63.6 | 50.4 |
| When should children be encouraged to wash their hands? | | | | | |
| A: All of the above | 28.8 | 32.8 | 29.4 | 45.5 | 31.0 |
| What are some of the things you can do when feeling stressed? | | | | | |
| A: All of the above | 11.5 | 1.6 | 5.9 | 9.1 | 6.2 |
| What role can parents play when schools are closed due to COVID-19 (coronavirus)? | | | | | |
| Supervise children when doing extended learning at home | 65.4 | 60.7 | 60.8 | 81.8 | 62.8 |
| Act as role models as children learn through observation and imitation | 71.2 | 91.8 | 81.4 | 90.9 | 82.3 |

### 4.4.2 Indicator #10 – Teachers who have Received Quality Mentoring and Support from County/Zonal Officials

To measure whether an ECDE teacher has received quality mentoring and support from a country/zonal official, the official must have first visited the ECDE center and the teacher’s classroom during the last term. Additionally, the official must have: (1) observed a full lesson; (2) reviewed professional records (lesson plans) or materials: (3) held a meeting with the teacher to provide feedback on their observation; and (4) provided a set of written action points or recommendations for the teacher to follow.[[43]](#footnote-44)

Overall, 30.1% of teachers at endline reported receiving quality mentoring and support from a county/zonal official, which is moderately significant improvement over the 20.4% of teachers reporting this at baseline (adjusted OR: 1.9, 95%CI: 1.1-3.4; Wald’s=0.032, p=0.032) (*X2*=2.6, df=1, p=0.10), but still falling quite short of the 80% target. As discussed in the following two sections, the frequency of visits decreased, but the quality of those who receive visits increased.

Similar trends were found as those at baseline, with males reporting to receive quality monitoring and support from a county/zonal official significantly more often than females (adjusted OR: 2.8, 95%CI: 1.1-7.2; Wald’s=0.032, p=0.032), and teachers from Kisumu being slightly, but not significantly (adjusted OR: 1.7, 95%CI: 0.9-3.0; Wald’s=0.952, p=0.095), more likely to report receiving quality mentoring and support than from Kisii (Table 29). The percentages by county/zonal official gender (female: 56.8%; male: 41.2%) are higher than the total percentage, as gender could only be provided by the teacher if they had in fact received a visit (thus the combined counts for female and male officials at 61[[44]](#footnote-45) is much smaller than the overall total of 113[[45]](#footnote-46)).

Table 29: Number and Percentage of ECDE Teachers that report receiving Quality Mentoring and Support from a County/Zonal Official, by County, Gender, Gender of County Official

| Disaggregation | Baseline (n=142) | | | Endline (n=113) | | |
| --- | --- | --- | --- | --- | --- | --- |
| Number of Teachers receiving quality mentoring and support[[46]](#footnote-47) | Total Count[[47]](#footnote-48) | Percentage of Teachers (final indicator target is 80%) | Number of Teachers receiving quality mentoring and support | Total Count | Percentage of Teachers (final indicator target is 80%) |
| Female teacher | 24 | 129 | **18.6** | 28 | 102 | **27.5** |
| Male teacher | 3 | 11 | **27.3** | 6 | 11 | **54.5** |
| Kisumu | 16 | 71 | **22.5** | 18 | 52 | **34.6** |
| Kisii | 13 | 71 | **18.3** | 16 | 61 | **26.2** |
| By female official | 15 | 49 | **30.6** | 25 | 44 | **56.8** |
| By male official | 14 | 45 | **31.1** | 7 | 17 | **41.2** |
| Total | 29 | 142 | **20.4** | 34 | 113 | **30.1** |

### 4.4.3 Frequency of Visits from County/Zonal Officials (Indicator 19)

The ECDE county/zonal official should be visiting an ECDE centre at least once a term to carry out support and mentoring functions. Thus, to achieve this indicator, an ECDE teacher must report that the country/zonal official visited the ECDE center and the teacher’s classroom during the last term.

The frequency of visits, with 56.6% (Kisumu: 63.5%; Kisii: 50.8%) of teachers reporting both a school and classroom visit during the last term, has decreased since baseline, where 66.9% (Kisumu: 69.0%; Kisii: 64.8%) received a visit (adjusted OR: 0.7, 95%CI: 0.4-1.2; Wald’s=0.194, p=0.16 n.s.) (*X2*=2.4, df=1, p=0.12 n.s.) (Table 30). Thus, the indicator target of 80% was not met. In terms of county/zonal officials visiting the school, overall, 63.7% (Kisumu: 69.2%; Kisii: 59.0%) of teachers reported this, again less than that reported at baseline (71.1%; Kisumu: 70.4%; Kisii: 71.8%). Subsequently at endline, eight teachers[[48]](#footnote-49) – three in Kisumu and five in Kisii - indicated that the ECDE country/zonal official did not visit their classroom at all. Generally, the deterioration in visit frequency was more pronounced in Kisii than Kisumu. Interviews with officials indicate that they are able to visit approximately 20 schools per month (1 a day) and considering that there are approximately 1,843 schools in Kisumu and 1,190 in Kisii, as well as budget availability, the frequency of visits is unlikely to increase. Additional factors for this decrease in the frequency of visits may be linked to both COVID-19 restrictions on in-person school visits, as well as county-level budgets that as a result of COVID-19 were re-distributed, prioritizing funds to COVID-19 related activities, such as implementing safety protocols.

Table 30: Number and Percentage of Target Male and Female ECDE Teachers that reported Receiving a Visit from a County/Zonal Official, by County

| Disaggregation | Baseline (n=142) | | | Endline (n=113) | | |
| --- | --- | --- | --- | --- | --- | --- |
| Number of Teachers receiving a visit | Total Count[[49]](#footnote-50) | Percentage (final indicator target 80%) | Number of Teachers receiving a visit | Total Count | Percentage (final indicator target 80%) |
| Kisumu | 49 | 71 | **69.0** | 33 | 52 | **63.5** |
| Kisii | 46 | 71 | **64.8** | 31 | 61 | **50.8** |
| Total | 95 | 142 | **66.9** | 64 | 113 | **56.6** |

### 4.4.4 Level (Quality) of Mentoring and Support from County/Zonal Officials (Indicator 18)

While not a specific measurement of the project’s RMAF and M&E plan, the teacher survey examined the overall quality of mentorship and support based on the various criteria. Importantly, the percentage of teachers reporting below standard quality of mentoring and support decreased from baseline (66.3%) to endline (46.9%), While the percentage reporting at standard or above quality of mentoring and support increased (baseline: 23.7%, endline: 53.1%) (Table 31).

Table 31: Number and Percentage of Target ECDE Teachers that reported the different levels of Quality Mentoring and Support during a visit from a County/Zonal Official, by County

| Level | Baseline (n=95) | | | Endline (n=64) | | |
| --- | --- | --- | --- | --- | --- | --- |
| Kisumu | Kisii | Total | Kisumu | Kisii | Total |
| Number | | | | | | |
| Below standard (0-3, required) | 31 | 32 | 63 | 15 | 15 | 30 |
| At Standard (4, required) | 4 | 2 | 6 | 0 | 4 | 4 |
| Slightly Above Standard (5) | 13 | 9 | 22 | 16 | 8 | 24 |
| Beyond Standard (all 6) | 1 | 3 | 4 | 2 | 4 | 6 |
| Total | 49 | 46 | 95 | 33 | 31 | 64 |
| Percentage | | | | | | |
| Below standard (0-3, required) | 63.3 | 69.6 | 66.3 | 45.5 | 48.4 | 46.9 |
| At Standard (4, required) | 8.2 | 4.3 | 6.3 | 0.0 | 12.9 | 6.3 |
| Slightly Above Standard (5) | 26.5 | 19.6 | 23.2 | 48.5 | 25.8 | 37.5 |
| Beyond Standard (all 6) | 2.0 | 6.5 | 4.2 | 6.1 | 12.9 | 9.4 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

Percentages of ‘yes’ answers for all of the questions assessing the quality of mentoring and support during a visit from a county zonal official increased from baseline to endline. Of note, the three areas which had the lowest scores at baseline, were those which increased the most at endline, with the highest increase (13%) being teachers noting they were provided with a set of written action points or recommendations to follow-up on (Table 32).

Table 32: Percentage of ECDE Teachers with “Yes” responses regarding the Quality of Mentoring and Support during a Visit from a County/Zonal Official, by County

| Question | Baseline (n=95) | | | Endline (n=64) | | |
| --- | --- | --- | --- | --- | --- | --- |
| Kisumu | Kisii | Total | Kisumu | Kisii | Total |
| Interacted/talked with the children to make them comfortable about the visit | 75.5 | 73.9 | 74.7 | 81.8 | 80.6 | 81.3 |
| Observed a full lesson | 75.5 | 78.3 | 76.8 | 81.8 | 77.4 | 79.7 |
| Held a meeting with the teacher to provide feedback on their observation | 71.4 | 71.7 | 71.6 | 78.8 | 83.9 | 81.3 |
| Reviewed professional records (lesson plans) or materials | 81.6 | 80.4 | 81.1 | 87.9 | 87.1 | 87.5 |
| Provided a set of written action points or recommendations for the teacher to follow | 53.1 | 58.7 | 55.8 | 69.7 | 67.7 | 68.8 |
| Provided an exact date for his/her next visit to the teacher’s class | 6.1 | 15.2 | 10.5 | 15.2 | 22.6 | 18.8 |

Teachers were also asked to rate the usefulness of the ECDE official visits in terms of improving classroom practice on a scale from 1 to 5, where 1 is very low and 5 is very high. Since baseline, there has been an improvement of how teachers rate the usefulness of ECDE official visits. Of the 64 teachers that received an ECDE official visit, the majority of teachers (79.7%; Kisumu: 75.8%; Kisii: 83.9%) provided a rating of 4 as illustrated in Figure 1, which was an improvement since baseline (71.6%; Kisumu: 65.3%; Kisii: 78.3%). Additionally, only 1.6% of teachers provided a rating of three or less at endline, compared to 13.8% at baseline, and 14.1% provided a rating of five at endline compared to 9.5% at baseline. Interestingly, it appears that although teachers in Kisii had lower indicator scores regarding ECDE official visits, they appeared to find these visits more useful than their counterparts in Kisumu (Figure 1).

Figure 1: Ratings of Usefulness of the ECDE County/Zonal Officials Visit at Endline for Improving Classroom Practices reported by Target ECDE Teachers, by County

As aforementioned, the systems and organization of Kisumu ECD county officials is stronger than that of Kisii, where visits are less frequent, and while rates are lower in Kisii, improvements are linked to MECP-K equal support across counties and encouragement from MECP-K in ensuring visits were useful.

Visits by ECDE County Officers do highlight periodic ‘spot checks’ to provide guidance to teachers.

*“To see what the teachers do during the morning. During the spot check you don’t notify the schools so as to find them in their natural settings, there are time you visit schools for advisory purpose it maybe there is a problem, or the numbers are too low, or the program is not running well…* *at the same time we do curricular assessment to ensure there is curricular delivery see how teachers deliver their lessons.” (KII with ECDE County Official, Kisumu)*

Teachers were also asked to comment on their top three priorities for which they need support from an ECDE official to improve their teaching or classroom environment. The most common themes as at baseline revolved around the provision of appropriate and adequate numbers of teaching/learning materials and the improvement of ECDE center infrastructure, including chairs/desks, water sources, classrooms, toilets/latrines, etc.

At endline, these improvements related to facilities (e.g., hand washing stations, spacious classrooms, thermogun) to control COVID-19 were also specifically mentioned. Another common theme revolved around additional support to improve teaching practices, including additional training on the curriculum; assistance for developing lesson plans; and especially increased and regular visits to check on progress and provide guidance. Other priority areas included improvement of remuneration; decreasing teacher to student ratio; supporting/developing school feeding programs; and sensitizing parents on ECDE matters.

### 4.4.5 Indicator #12b – Parental/Caregiver Support of ECDE Services[[50]](#footnote-51)

Finally, teachers were asked to comment on the level of parental engagement[[51]](#footnote-52) through seven questions referring to a variety of opportunities that parents have to participate in supporting their child’s education and the ECDE centre. This indicator[[52]](#footnote-53) was removed from the RMAF as it was decided early on in project implementation that activities associated with engagement with parents would not be undertaken, again for reason of lack of co-financing at the county level for BOM interventions. Thus, it is not surprising that only three teachers (2.7%) provided a score of 75% (indicator benchmark) or greater, slightly lower than at baseline with six teachers (4.3%) (Table 33).

Table 33: Number and Percentage of Target ECDE Teachers that reported Adequate Parental/Caregiver Support of ECDE Services, by County

| Disaggregation | Baseline (n=139) | | | Endline (n=112) | | |
| --- | --- | --- | --- | --- | --- | --- |
| Number of Teachers reporting adequate parental support (75% or greater) | Total Count[[53]](#footnote-54) | Percentage (final indicator target  of 75%) | Number of Teachers reporting adequate parental support (75% or greater) | Total Count | Percentage (final indicator target  of 75%) |
| Kisumu | 6 | 69 | **8.7** | 2 | 51 | **3.9** |
| Kisii | 0 | 70 | **0.0** | 1 | 61 | **1.6** |
| Total | 6 | 139 | **4.3** | 3 | 112 | **2.7** |

Figure 2 (a total of 112 ECDE teachers responded to this question) illustrates the ratings of each of the seven questions related to parental involvement by county. The scoring includes a scale of 0 to 4, where 0 is ‘never’ and 4 is ‘always’. Similar to baseline, parental involvement is stronger in teacher-parent meetings and attending information sessions at the ECDE centers, particularly in Kisumu, compared to some of the more active engagement, such as developing/making or contributing (materials/financial) (although this is quite high in Kisii) to classroom materials. Moreover, the overall participation of fathers continues to be reported as infrequent, particularly in Kisii.

Figure 2: Ratings of Frequency of Participation of Parental/Caregiver Support of ECDE Services reported by Target ECDE Teachers

During the closure of schools during the COVID-19 pandemic 71.7% of teachers (71.6% female; 72.7% male) reported contacting parents. Teachers in Kisumu (82.7%) contacted parents more frequently than teachers in Kisii (62.3%). Teachers commonly reported contacting parents to provide information about COVID-19 preventative measures (69.1%), providing suggestions for child learning at home (61.7%), and less frequently about closure or re-opening of schools (43.2%), and other reasons (16.0%) (e.g., following up on students or providing in kind support to struggling families) (Table 34).

Table 34: Percentage of Target ECDE Teachers that Contacted Parents for Various Reasons during School Closures during the COVID-19 Pandemic

| Reason | County | | Gender | | Total (n=73) |
| --- | --- | --- | --- | --- | --- |
| Kisumu (n=43) | Kisii (n=38) | Female (n=73) | Male (n=8) |
| Provide information about COVID-19 preventative measures | 72.1 | 65.8 | 68.5 | 75.0 | 69.1 |
| Provide information about closure or opening of schools | 51.2 | 34.2 | 43.8 | 37.5 | 43.2 |
| To provide suggestions on how to continue learning at home with their children | 65.1 | 57.9 | 63.0 | 50.0 | 61.7 |
| Other | 23.3 | 7.9 | 16.4 | 12.5 | 16.0 |

It should be noted that in Kisumu, aside from the higher level of engagement of teachers and parents in this county, other development actors such as Comic Relief were present in 20 schools and also supported key messaging around home learning during COVID-19 school closures. Fifteen of these schools were also part of the sample for the child assessment.

Focus group discussions with parents confirm the quantitative findings in terms of teachers contacting them to discuss their children’s continued learning and suggestions for home learning, as well as various key health messaging on the prevention of COVID-19.

*“I got support from the teacher by telling me to tell the child to read and what to do. She asked me whether I’m coaching the child at home by telling me to give her assignment like drawing, counting balls, and matching, etc.” (FGD with Mothers, Kisumu)*

*“We were told [by ECDE teachers] to not to allow children to walk aimlessly. To make them wash their hands regularly and put on their masks…* *To check our young kids not to go far from their house, to avoid the spread.” (FGD with Mothers, Kisumu)*

*“We were told to ensure our children to wear masks, wash their hands, sanitize their hands and keep social distance.” (FGD with Mothers, Kisii)*

Information was equally disseminated on continuous child learning through radio and television.

*“The teachers asked me to buy a storybook for my child. When they closed schools, we were not sure how long this corona will take and how long it will take for school to be opened. Even the teachers were not aware when schools will resume but we were asked to buy story books, charts for them to count numbers among others. What has helped greatly is the radio. When children were released from schools the radio helped to give us guidance on how to help our children. We used to sit down with our children and listen to the radio. I used to encourage them to read because we were not sure when schools were going to resume.” (FGD with Mothers, Kisii)*

At the same time, the majority of discussions reveal that parents in both counties struggled to provide continuous learning for their children while at home. Some noted that they did not have the skills needed to provide ongoing learning, while in other cases, managing both reproductive and productive responsibilities at home prevented them from doing so. At the same time, in the majority of cases, siblings or other family members engaged with children.

*“My older children were involved in guiding the child to learn. Mostly his brother assisted him. Sometimes they used to learn through the television.” (FGD with Mothers, Kisii)*

*“My sibling used to teach me. He used to teach me letters, he used to teach me counting, and English….My sibling helped me to read from 1 to 20. [We] did this every day.”(FGD with MECP-K Girls, Kisumu)*

# 5. Child Assessment Findings

The final tool used a comprehensive child assessment focused on the measurement of four core performance indicators related to child development, including gross and fine motor skills, cognitive function, receptive and expressive language, and socio-emotional capacities. The following section outlines a detailed description of the methodology, sample size determination and findings from the child assessment.

## 5.1 Overview of Child Assessment

The child assessment collected data on four core indicators: Indicator 1 - Gross Motor Skills and Fine Motor Skills; Indicator 2 - Cognitive Function; Indicator 3 - Receptive and Expressive Language Skills; and Indicator 4 - Socio-Emotional Skills and Capacities. Each indicator is discussed in further detail in the following sections.

Overall, at endline, only one child was reported to have a disability, which was physical in nature. It was unknown if 23 children (2.8%) had disabilities, meaning that the teacher was unaware of a disability as children are not assessed. (Table 35).

Table 35: Number/Percentage of Children reported to have Disabilities

| Disability Area | Baseline (n=857) | | Endline (n=824) | |
| --- | --- | --- | --- | --- |
| Number | Percentage | Number | Percentage |
| Physical | 1 | 0.1 | 1 | 0.1 |
| Visual | 2 | 0.2 | 0 | 0.0 |
| Verbal | 1 | 0.1 | 0 | 0.0 |
| Intellectual (removed from dataset) | 0 | 0.0 | 0 | 0.0 |
| None | 787 | 91.8 | 800 | 97.1 |
| Unknown | 67 | 7.8 | 23 | 2.8 |

Overall, average scores for all indicator values have increased since baseline. Indicator 1, Gross Motor Skills and Fine Motor Skills remained having much higher average scores (MECP-K: 92.3%, non-MECP-K: 93.2%), than the other three indicators, which had percentage values in the high-forties and low-fifties for MECP-K children and low-to-mid fifties for non-MECP-K children (Table 36).

Conversely, unlike at baseline where, girls tended to perform better across all indicators, except for socio-emotional skills and capacities, than boys, at endline it was found that boys tended to perform better across the indicators than girls, except for MECP-K girls performing better in the cognitive function section and non-MECP-K girls in the socio-emotional section.

By county, MECP-K ECDE children in Kisumu had higher averages for Indicators 2 and 3 and children in Kisii for Indicators 1 and 4 (this was a change from baseline where children in Kisumu had higher averages across all four indicators). Non-MECP-K ECDE children from Kisumu had higher average values than children from Kisii across all four indicators (Table 36).

Table 36: Average Percentage Scores for Indicators of the Child Assessment, by County, Gender, and MECP-K status

| Indicator and Disaggregation | Baseline (n=857)[[54]](#footnote-55) | | Endline (n=824)[[55]](#footnote-56) | | +/- Change | +/- Change |
| --- | --- | --- | --- | --- | --- | --- |
| MECP-K | Non-MECP-K | MECP-K | Non-MECP-K | MECP-K | Non-MECP-K |
| Indicator 1 - Gross Motor Skills and Fine Motor Skills | | | | | | | |
| **Total** | **87.1** | **86.2** | **92.3** | **93.2** | **5.2** | **7.0** |
| Female | 87.6 | 86.7 | 90.1 | 92.1 | 2.5 | 5.4 |
| Male | 86.5 | 85.6 | 94.5 | 94.3 | 8.0 | 8.7 |
| Kisumu | 90.3 | 87.3 | 91.4 | 94.1 | 1.1 | 6.8 |
| Kisumu, Female | 88.6 | 86.2 | 88.4 | 92.6 | -0.2 | 6.4 |
| Kisumu, Male | 91.9 | 88.6 | 94.5 | 95.5 | 2.6 | 6.9 |
| Kisii | 84.0 | 85.0 | 93.1 | 92.6 | 9.1 | 7.6 |
| Kisii, Female | 86.6 | 87.3 | 91.7 | 91.8 | 5.1 | 4.5 |
| Kisii, Male | 81.3 | 82.6 | 94.6 | 93.4 | 13.3 | 10.8 |

| Indicator 2 - Cognitive Function | | | | | | |
| --- | --- | --- | --- | --- | --- | --- |
| Indicator and Disaggregation | Baseline (n=857) | | Endline (n=824) | | +/- Change | +/- Change |
| MECP-K | Non-MECP-K | MECP-K | Non-MECP-K | MECP-K | Non-MECP-K |
| **Total** | **35.8** | **44.4** | **47.2** | **49.8** | **11.4** | **5.4** |
| Female | 37.6 | 45.1 | 49.1 | 49.7 | 11.5 | 4.6 |
| Male | 34.0 | 43.7 | 45.3 | 49.9 | 11.3 | 6.2 |
| Kisumu | 37.8 | 45.4 | 49.7 | 54.6 | 11.9 | 9.2 |
| Kisumu, Female | 41.1 | 47.7 | 51.4 | 57.0 | 10.3 | 9.3 |
| Kisumu, Male | 34.6 | 42.6 | 48.0 | 52.4 | 13.4 | 9.8 |
| Kisii | 33.9 | 43.3 | 44.9 | 46.4 | 11.0 | 3.1 |
| Kisii, Female | 34.3 | 41.9 | 47.0 | 44.6 | 12.7 | 2.7 |
| Kisii, Male | 33.5 | 44.8 | 42.8 | 48.2 | 9.3 | 3.4 |

| Indicator 3 - Receptive and Expressive Language Skills | | | | | | |
| --- | --- | --- | --- | --- | --- | --- |
| Indicator and Disaggregation | Baseline (n=857) | | Endline (n=824) | | +/- Change | +/- Change |
| MECP-K | Non-MECP-K | MECP-K | Non-MECP-K | MECP-K | Non-MECP-K |
| **Total** | **33.8** | **43.8** | **48.3** | **52.6** | **14.5** | **8.8** |
| Female | 36.1 | 43.6 | 46.9 | 52.2 | 10.8 | 8.6 |
| Male | 31.5 | 44.0 | 49.8 | 52.9 | 18.3 | 8.9 |
| Kisumu | 38.3 | 44.5 | 48.5 | 56.0 | 10.2 | 11.5 |
| Kisumu, Female | 41.4 | 46.2 | 46.6 | 57.6 | 5.2 | 11.4 |
| Kisumu, Male | 35.2 | 42.4 | 50.4 | 54.5 | 15.2 | 12.1 |
| Kisii | 29.5 | 43.1 | 48.2 | 50.2 | 18.7 | 7.1 |
| Kisii, Female | 31.2 | 40.5 | 47.1 | 48.5 | 15.9 | 8.0 |
| Kisii, Male | 27.8 | 45.8 | 49.3 | 51.9 | 21.5 | 6.1 |

| Indicator 4 - Socio-Emotional Skills and Capacities | | | | | | |
| --- | --- | --- | --- | --- | --- | --- |
| Indicator and Disaggregation | Baseline (n=857) | | Endline (n=824) | | +/- Change | +/- Change |
| MECP-K | Non-MECP-K | MECP-K | Non-MECP-K | MECP-K | Non-MECP-K |
| **Total** | **33.4** | **41.1** | **53.8** | **54.7** | **20.4** | **13.6** |
| Female | 32.5 | 39.9 | 52.9 | 56.1 | 20.4 | 16.2 |
| Male | 34.4 | 42.5 | 54.7 | 53.3 | 20.3 | 10.8 |
| Kisumu | 34.3 | 39.6 | 53.3 | 58.2 | 19.0 | 18.6 |
| Kisumu, Female | 37.2 | 41.9 | 51.3 | 59.3 | 14.1 | 17.4 |
| Kisumu, Male | 31.4 | 36.7 | 55.4 | 57.1 | 24.0 | 20.4 |
| Kisii | 32.6 | 42.9 | 54.2 | 52.2 | 21.6 | 9.3 |
| Kisii, Female | 28.1 | 37.6 | 54.4 | 53.9 | 26.3 | 16.3 |
| Kisii, Male | 37.3 | 48.4 | 54.0 | 50.4 | 16.7 | 2.0 |

Table 37 below outlines findings by each question asked in the child assessment, by gender and county for both MECP-K and non-MECP-K children. The general trend across all questions and disaggregation was that children scored higher at endline than at baseline. Where this trend did not quite hold included girls in a number of the gross and fine motor section questions; Kisii non-MECP-K girls and boys for one question each in the cognitive function section; MECP-K Kisumu girls for three questions (and non-MECP-K Kisumu boys for one question) in the receptive and expressive language section; and non-MECP-K Kisii boys for four questions (MECP-K Kisii boys and non-MECP-K Kisumu girls for one question each) in the socio emotional skills and capacity section.

| **Table 37: Average Percentage Scores of Individual Questions for the Child Assessment, by County, Gender, and MECP-K status** | | | | | | | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Indicators and Questions | Baseline (n=857) | | | | | | | | Endline (n=824) | | | | | | | |
| MECP-K | | | | non-MECP-K | | | | MECP-K | | | | non-MECP-K | | | |
| Kisumu | | Kisii | | Kisumu | | Kisii | | Kisumu | | Kisii | | Kisumu | | Kisii | |
| Female | Male | Female | Male | Female | Male | Female | Male | Female | Male | Female | Male | Female | Male | Female | Male |
| Indicator 1 - Gross Motor Skills and Fine Motor Skills | | | | | | | | | | | | | | | | |
| C2. Child hops up to 10 steps on one foot | 86.7 | 90.4 | 89.3 | 84.6 | 86.3 | 88.2 | 88.4 | 88.3 | 97.9 | 98.3 | 96.4 | 98.0 | 98.5 | 97.3 | 96.9 | 96.5 |
| C3. Child stands on one foot | 82.7 | 89.0 | 70.9 | 81.2 | 75.7 | 81.2 | 81.6 | 84.4 | 87.0 | 90.9 | 89.7 | 92.0 | 92.6 | 91.1 | 84.0 | 90.0 |
| C4. Child copies two shapes | 98.5 | 97.4 | 98.4 | 88.6 | 96.8 | 96.1 | 99.3 | 90.0 | 95.2 | 98.6 | 96.6 | 97.9 | 97.1 | 99.1 | 98.6 | 97.3 |
| C5. Child draws a human stick figure | 92.9 | 99.1 | 99.2 | 90.6 | 92.9 | 97.3 | 96.8 | 92.8 | 84.0 | 97.8 | 95.6 | 99.6 | 90.4 | 97.3 | 96.4 | 99.5 |
| C6. Child follows a 4-step folding task | 83.0 | 86.4 | 77.9 | 69.7 | 80.1 | 82.5 | 75.8 | 68.1 | 81.5 | 89.7 | 84.7 | 89.2 | 87.5 | 93.2 | 85.6 | 87.5 |
| Indicator 2 - Cognitive Function | | | | | | | | | | | | | | | | |
| C7. Child can name six body parts | 58.0 | 53.7 | 53.6 | 48.3 | 67.8 | 70.4 | 66.8 | 63.5 | 67.1 | 63.2 | 62.4 | 55.9 | 76.0 | 72.6 | 63.1 | 69.7 |
| C8. Child can match/pair six images | 73.7 | 62.6 | 52.7 | 63.2 | 78.2 | 64.5 | 64.9 | 77.0 | 79.6 | 87.6 | 79.9 | 76.0 | 88.7 | 86.3 | 73.2 | 84.3 |
| C9. Understanding temporal sequence – months of the year | 26.3 | 12.9 | 27.0 | 17.1 | 33.3 | 19.4 | 27.4 | 25.6 | 43.7 | 30.5 | 38.1 | 29.6 | 43.1 | 34.2 | 32.0 | 22.7 |
| C10. Child answers 5 questions based on a short story read | 10.1 | 7.9 | 4.6 | 7.7 | 13.8 | 10.1 | 6.9 | 14.7 | 20.3 | 16.6 | 14.1 | 15.0 | 23.5 | 18.6 | 13.0 | 16.0 |
| Indicator 3 - Receptive and Expressive Language Skills | | | | | | | | | | | | | | | | |
| C11. Child can write their first name | 78.2 | 57.6 | 60.4 | 50.1 | 79.9 | 72.8 | 74.0 | 66.7 | 75.4 | 76.4 | 82.0 | 77.6 | 88.7 | 80.4 | 84.9 | 82.0 |
| C12. Receptive language: Child can listen and follow instructions for (3 step command) | 68.4 | 63.5 | 39.3 | 29.6 | 64.3 | 76.7 | 52.6 | 48.5 | 62.2 | 73.6 | 64.6 | 56.8 | 76.0 | 76.3 | 54.6 | 62.0 |
| C13. Expressive vocabulary: Child can list five dangerous objects in their house | 0.5 | 1.8 | 1.0 | 9.4 | 5.8 | 1.7 | 1.3 | 19.1 | 6.4 | 14.8 | 11.6 | 16.0 | 8.5 | 16.2 | 10.9 | 12.4 |
| C14. The child understands vocabulary related to position | 18.6 | 20.2 | 13.9 | 23.9 | 19.5 | 25.8 | 11.7 | 35.6 | 18.5 | 42.2 | 29.4 | 26.4 | 33.8 | 38.4 | 21.6 | 24.0 |
| C15. The child understands vocabulary related to size and length | 53.5 | 46.5 | 34.8 | 41.9 | 48.7 | 46.2 | 40.5 | 56.7 | 62.6 | 62.5 | 48.4 | 63.2 | 72.1 | 68.5 | 52.1 | 59.5 |
| C16. Child can correctly read two 3 letter words | 50.7 | 43.3 | 45.6 | 32.5 | 64.6 | 52.7 | 63.5 | 60.0 | 67.5 | 60.1 | 67.5 | 65.9 | 79.4 | 64.8 | 68.4 | 74.0 |
| C17. Child can correctly read two 4 letter words | 35.7 | 29.8 | 33.3 | 21.4 | 50.4 | 38.0 | 46.7 | 48.5 | 47.1 | 45.7 | 38.9 | 50.7 | 66.2 | 56.2 | 55.3 | 59.3 |
| Indicator 4 - Socio-Emotional Skills and Capacities | | | | | | | | | | | | | | | | |
| C1a. Self-awareness: Child can state their name | 91.2 | 97.8 | 88.5 | 74.8 | 92.0 | 99.5 | 90.5 | 87.8 | 99.6 | 99.1 | 87.7 | 96.4 | 97.8 | 98.6 | 91.8 | 95.0 |
| C1b. Self-awareness: Child can state their age | 42.0 | 35.1 | 30.3 | 48.3 | 51.3 | 47.3 | 51.1 | 52.2 | 56.7 | 71.6 | 61.1 | 67.6 | 73.5 | 80.1 | 59.3 | 64.5 |
| C1c. Self-awareness: Child can name their primary school | 65.9 | 62.3 | 66.8 | 65.8 | 69.0 | 67.7 | 76.8 | 82.2 | 81.5 | 84.5 | 90.5 | 92.0 | 83.1 | 78.8 | 86.6 | 85.0 |
| C1d. Self-awareness: Child can state where they live | 18.1 | 8.8 | 7.8 | 10.3 | 21.7 | 12.4 | 13.2 | 25.6 | 20.6 | 32.3 | 25.4 | 19.2 | 21.3 | 37.7 | 25.8 | 17.5 |
| C18. Friends: child names friends he/she plays with\* | 49.0 | 29.3 | 28.4 | 38.5 | 51.5 | 40.4 | 46.3 | 51.6 | 66.2 | 69.8 | 74.6 | 66.7 | 82.4 | 60.5 | 71.5 | 63.8 |
| C19. Emotional awareness/regulation: child can identify sad and happy vocabulary and feelings\* | 7.7 | 7.3 | 1.1 | 14.0 | 12.4 | 3.2 | 4.6 | 21.1 | 13.7 | 11.5 | 16.1 | 14.7 | 19.6 | 16.4 | 13.7 | 14.7 |
| C20. Empathy: child can identify how someone else feels\* | 0.9 | 8.8 | 0.4 | 26.9 | 7.5 | 8.6 | 0.5 | 35.6 | 31.1 | 32.8 | 24.6 | 33.2 | 33.1 | 42.5 | 36.1 | 26.0 |
| C21. Solving Conflict: Child identifies solutions to a social conflict situation\* | 2.7 | 2.6 | 0.0 | 23.1 | 17.7 | 15.1 | 4.3 | 31.1 | 26.1 | 19.8 | 28.6 | 15.2 | 27.9 | 26.0 | 24.7 | 16.0 |

## 5.2 Indicator #1 - Gross and fine motor skills

Indicator 1 measures the proportion of boys and girls with improved gross and fine motor skills after one year of intervention disaggregated by sex and county. Gross (large) motor skills refer to the acquisition of movements that promote an individual’s mobility. For preschool aged children, large motor skills include walking on a line, controlling movements in games, and jumping. Fine motor skills on the other hand refer to skills utilized for tasks such as drawing and writing letters, involving hand-eye coordination and muscle control. They include such abilities as picking up objects and holding eating utensils, etc. For preschool-aged children, fine motor skills include the ability to hold a pencil, write, and draw, etc.

For the indicator related to gross and fine motor skills children had significantly higher average scores at endline (MECP-K: 92.3%, non-MECP-K: 93.2%), which increased from the already relatively high scores at baseline (MECP-K: 87.1%, non-MECP-K: 86.2%). These high scores are also illustrated through high median and maximum scores. Like baseline, the endline differences between MECP-K and non-MECP-K children were small and non-significant, as well as when examined by county or gender, illustrated by the small effect sizes (Tables 38 and 39).

The difference-in-difference (DID) effects were non-significant for Indicator 1 indicating no impact of MECK-P for this indicator. Overall, children from Kisumu and boys performed better than children from Kisii and girls (Table 38).

Table 38: Results of Difference-in-Difference Analyses for Indicator 1: Gross and Fine Motor Skills

| Variable | Estimate | SD | t-statistic | Significance |
| --- | --- | --- | --- | --- |
| Treated | 0.920 | 0.821 | 1.121 | 0.262 |
| Time (baseline-endline) | 7.217 | 0.891 | 8.102 | <0.001\*\*\* |
| Interaction (DID) | -1.949 | 1.181 | -1.651 | 0.098 |
| County | 2.089 | 0.585 | 3.570 | <0.001\*\*\* |
| Gender child | 0.193 | 0.854 | 2.045 | 0.041\* |
| Notes: Sample averages presented below for baseline and endline. DID Estimations refer to treatment effect measured by the interaction of treatment by time). \*\*\*Parameter is significant at p<=0.001 level; \*\*Parameter is significant at p<=0.01 level; \*Parameter is significant at p<=0.05 level. | | | | |

Table 39: Average, Median and Minimum/Maximum Percentage Scores and Effect Size of Questions related to Gross and Fine Motor Skills, by County, Gender, and MECP-K status

| Variable | Average and Standard deviation | | | | Median and Inter-quartile range | | | | | | Minimum and Maximum | | | | Effect Size (Cohen d) |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Average | | SD | | Median | | IQR 1 | | IQR 3 | | Min | | Max | |
| MECP-K | non-MECP-K | MECP-K | non-MECP-K | MECP-K | non-MECP-K | MECP-K | non-MECP-K | MECP-K | non-MECP-K | MECP-K | non-MECP-K | MECP-K | non-MECP-K |
| Baseline (n=857) Percentage scores | | | | | | | | | | | | | | |  |
| Total | 87.1 | 86.2 | 13.9 | 13.8 | 92.3 | 92.3 | 84.6 | 76.9 | 100.0 | 92.3 | 0.0 | 38.5 | 100.0 | 100.0 | 0.06 |
| County | | | | | | | | | | | | | | |  |
| Kisumu | 90.3 | 87.3 | 11.9 | 12.2 | 92.3 | 92.3 | 84.6 | 84.6 | 100.0 | 92.3 | 30.8 | 38.5 | 100.0 | 100.0 | 0.25 |
| Kisii | 84.0 | 85.0 | 15.0 | 15.4 | 92.3 | 92.3 | 76.9 | 76.9 | 92.3 | 92.3 | 0.0 | 38.5 | 100.0 | 100.0 | -0.06 |
| Gender | | | | | | | | | | | | | | |  |
| Female | 87.6 | 86.7 | 13.4 | 13.2 | 92.3 | 92.3 | 84.6 | 84.6 | 100.0 | 92.3 | 30.8 | 38.5 | 100.0 | 100.0 | 0.07 |
| Male | 86.5 | 85.6 | 14.4 | 14.5 | 92.3 | 92.3 | 76.9 | 76.9 | 100.0 | 100.0 | 0.0 | 38.5 | 100.0 | 100.0 | 0.06 |
| Endline (n=824) Percentage scores | | | | | | | | | | | | | | | |
| Total | 92.3 | 93.2 | 10.5 | 8.3 | 92.3 | 92.3 | 92.3 | 92.3 | 100.0 | 100.0 | 23.1 | 53.8 | 100.0 | 100.0 | -0.10 |
| County | | | | | | | | | | | | | | | |
| Kisumu | 91.4 | 94.1 | 12.3 | 8.9 | 92.3 | 100.0 | 84.6 | 92.3 | 100.0 | 100.0 | 23.1 | 53.8 | 100.0 | 100.0 | -0.25 |
| Kisii | 93.1 | 92.6 | 8.5 | 7.9 | 92.3 | 92.3 | 92.3 | 92.3 | 100.0 | 100.0 | 53.8 | 53.8 | 100.0 | 100.0 | 0.07 |
| Gender | | | | | | | | | | | | | | | |
| Female | 90.1 | 92.1 | 12.8 | 9.8 | 92.3 | 92.3 | 84.6 | 92.3 | 100.0 | 100.0 | 23.1 | 53.8 | 100.0 | 100.0 | -0.18 |
| Male | 94.5 | 94.3 | 7.0 | 6.5 | 100.0 | 92.3 | 92.3 | 92.3 | 100.0 | 100.0 | 53.8 | 76.9 | 100.0 | 100.0 | 0.04 |

Except for drawing a human stick figure for MECP-K children, the average exercise scores by ECDE type increased from baseline to endline. At baseline, it was found that for each of the five exercises related to gross and fine motor skills those children that had received ECDE at a MECP-K center had higher scores, albeit very small, than children that had received ECDE at a non-MECP-K center. This trend continued at endline for gross motor skills; however, was reversed for fine motor skills. Once again, the differences between children that had received ECDE at a MECP-K center and those that had not were very small and non-significant (Tables 39 and 40).

Unlike at baseline where children from Kisumu consistently performed better than children from Kisii, Kisii children had higher average scores for two questions in the section. At endline boys performed better In all five exercises, which was a change from baseline where boys were found to perform better at gross motor skills and girls performed better at fine motor skills (Tables 39 and 40). Similar to baseline, children found copying two shapes to be the easiest activity in this section, while standing on one foot and following a four-step folding task were slightly more challenging (Table 40).

Table 40: Summary Average Scores of Gross and Fine Motor Skills, by County, Gender, MECP-K status

| (N=857)  Specific Questions | Questions and Scoring | ECDE | | County | | Gender | | Total |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| MECP-K | non-MECP-K | Kisumu | Kisii | Girls | Boys |
| Baseline (n=857) | | | | | | | | |
| Gross motor: | | | | | | | | |
| a) Child hops up to 10 steps on one foot | C2; max 2 points | 87.8 | 87.7 | 87.9 | 87.6 | 87.7 | 87.8 | 87.7 |
| b) Child stands on one foot | C3; max 2 points | 80.8 | 80.4 | 82.2 | 79.0 | 77.4 | 84.1 | 80.6 |
| Fine motor: | | | | | | | | |
| c) Child copies two shapes | C4; max 3 points | 95.7 | 95.7 | 97.2 | 94.1 | 98.2 | 93.0 | 95.7 |
| d) Child draws a human stick figure | C5; max 2 points | 95.5 | 94.9 | 95.5 | 94.9 | 95.5 | 94.9 | 95.2 |
| e) Child follows a 4-step folding task | C6; max 4 points | 79.1 | 76.9 | 83.0 | 73.1 | 79.3 | 76.8 | 78.1 |
| Total | max 13 points | 87.1 | 86.2 | 88.8 | 84.4 | 87.2 | 86.1 | 86.7 |
| Endline (n=824) | | | | | | | | |
| Gross motor: | | | | | | | | |
| a) Child hops up to 10 steps on one foot | C2; max 2 points | 97.6 | 97.2 | 98.0 | 97.0 | 97.3 | 97.6 | 97.5 |
| b) Child stands on one foot | C3; max 2 points | 89.9 | 89.1 | 90.0 | 89.2 | 88.0 | 91.1 | 89.6 |
| Fine motor: | | | | | | | | |
| c) Child copies two shapes | C4; max 3 points | 97.1 | 98.0 | 97.3 | 97.5 | 96.7 | 98.1 | 97.5 |
| d) Child draws a human stick figure | C5; max 2 points | 94.3 | 96.3 | 92.0 | 97.8 | 91.6 | 98.7 | 95.1 |
| e) Child follows a 4-step folding task | C6; max 4 points | 86.3 | 88.2 | 87.4 | 86.8 | 84.5 | 89.6 | 87.0 |
| Total | max 13 points | 92.3 | 93.2 | 92.4 | 92.9 | 90.9 | 94.4 | 92.7 |

## 5.3 Indicator #2 - Cognitive functions

Indicator 2 measures the proportion of boys and girls with improved cognitive functions after one year of intervention disaggregated by sex and county.[[56]](#footnote-57) Cognitive function refers to the processes or faculties by which knowledge is acquired and manipulated, including abilities such as memory, problem solving and analytical skills.

Children were found to have significantly higher average scores at endline (MECP-K: 47.2%, non-MECP-K: 49.8%), compared at baseline (MECP-K: 35.8%, non-MECP-K: 44.4%). Children attending MECP-K ECDE centers still had a lower average score than those children attending non-MECP-K ECDE centers at endline, but the effect size had decreased from medium (-0.50) to small (-0.14) showing that MECP-K school children have closed the gap. This is also illustrated in the median scores, which at endline are the same between MECP-K and non-MECP-K, except in Kisumu. This trend is also consistent across county and gender, end especially evident in girls where MECP-K girls had almost the same average score as non-MECP-K girls. To further illustrate this, the DID effects were significant for Indicator 2 suggesting that MECP-K has had a significant impact on improving children's cognitive skills. Additionally, for this section, across the time periods children from Kisumu and girls performed better than children from Kisii and boys (Table 41 and 42).

Table 41: Results of Difference-in-Difference Analyses for Indicator 2: Cognitive Function

| Variable | Estimate | SD | t-statistic | Significance |
| --- | --- | --- | --- | --- |
| Treated | -8.358 | 1.223 | -6.843 | <0.001\*\*\* |
| Time (baseline-endline) | 6.022 | 1.327 | 4.536 | <0.001\*\*\* |
| Interaction (DID) | 5.424 | 1.759 | 3.082 | <0.01\*\* |
| County | 4.574 | 0.872 | 5.244 | <0.001\*\*\* |
| Gender child | -2.347 | 0.868 | -2.698 | <0.01\*\* |
| Notes: Sample averages presented below for baseline and endline. DID Estimations refer to treatment effect measured by the interaction of treatment by time). \*\*\*Parameter is significant at p<=0.001 level; \*\*Parameter is significant at p<=0.01 level; \*Parameter is significant at p<=0.05 level. | | | | |

Table 42: Average, Median and Minimum/Maximum Percentage Scores and Effect Size of Cognitive Function, by County, Gender, and MECP-K status

| (N=837)  Variable | Average and Standard deviation | | | | | Median and Inter-quartile range | | | | | | Minimum and Maximum | | | | Effect Size (Cohen d) |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Average | | SD | | Median | | | IQR 1 | | IQR 3 | | Min | | Max | |
| MECP-K | non-MECP-K | MECP-K | non-MECP-K | MECP-K | | non-MECP-K | MECP-K | non-MECP-K | MECP-K | non-MECP-K | MECP-K | non-MECP-K | MECP-K | non-MECP-K |  |
| Baseline (n=857) Percentage scores | | | | | | | | | | | | | | | |  |
| Total | 35.8 | 44.4 | 16.8 | 17.6 | 35.3 | | 47.1 | 23.5 | 35.3 | 47.1 | 58.8 | 0.0 | 0.0 | 100.0 | 88.2 | -0.50 |
| County | | | | | | | | | | | | | | | |  |
| Kisumu | 37.8 | 45.4 | 16.8 | 18.3 | 35.3 | | 41.2 | 23.5 | 35.3 | 47.1 | 58.8 | 0.0 | 0.0 | 100.0 | 88.2 | -0.43 |
| Kisii | 33.9 | 43.3 | 16.7 | 16.8 | 35.3 | | 47.1 | 23.5 | 29.4 | 47.1 | 52.9 | 0.0 | 0.0 | 76.5 | 88.2 | -0.56 |
| Gender | | | | | | | | | | | | | | | |  |
| Female | 37.6 | 45.1 | 16.5 | 18.4 | 35.3 | | 47.1 | 29.4 | 35.3 | 47.1 | 58.8 | 0.0 | 0.0 | 76.5 | 88.2 | -0.43 |
| Male | 34.0 | 43.7 | 17.0 | 16.7 | 35.3 | | 47.1 | 23.5 | 35.3 | 47.1 | 55.9 | 0.0 | 0.0 | 100.0 | 88.2 | -0.58 |
| Endline (n=824) Percentage scores | | | | | | | | | | | | | | | | |
| Total | 47.2 | 49.8 | 18.7 | 18.9 | 47.1 | | 47.1 | 35.3 | 35.3 | 58.8 | 58.8 | 0.0 | 0.0 | 100.0 | 100.0 | -0.14 |
| County | | | | | | | | | | | | | | | | |
| Kisumu | 49.7 | 54.6 | 17.9 | 19.5 | 47.1 | | 52.9 | 41.2 | 41.2 | 58.8 | 64.7 | 0.0 | 0.0 | 100.0 | 100.0 | -0.26 |
| Kisii | 44.9 | 46.4 | 19.2 | 17.6 | 47.1 | | 47.1 | 35.3 | 35.3 | 58.8 | 58.8 | 0.0 | 0.0 | 88.2 | 94.1 | -0.08 |
| Gender | | | | | | | | | | | | | | | | |
| Female | 49.1 | 49.7 | 19.2 | 19.3 | 47.1 | | 47.1 | 35.3 | 41.2 | 58.8 | 58.8 | 0.0 | 0.0 | 100.0 | 100.0 | -0.03 |
| Male | 45.3 | 49.9 | 18.1 | 18.5 | 47.1 | | 47.1 | 35.3 | 35.3 | 58.8 | 64.7 | 0.0 | 0.0 | 94.1 | 100.0 | -0.25 |

The average scores for each of the four cognitive function questions (and for all disaggregation) increased from baseline to endline. At baseline, children that had received ECDE at a MECP-K center had lower scores than children that had received ECDE at a non-MECP-K center for all four of the questions related to cognitive function. At endline this was still the trend for three of the four questions, but the gap in scores had decreased, and MECP-K children were better able to respond to the question assessing their understanding of a temporal sequence (months of the year) (see Table 43).

Corresponding to the general findings at baseline, children from Kisumu continued to perform better than children from Kisii at endline. Girls were again found to perform better than boys for three of the cognitive function questions, with understanding of the temporal sequence of months in the year being most notable. At baseline, boys were found to be able to answer questions based on a short story slightly better than girls; however, at endline, boys performed better in the matching exercise (see Table 43).

Within the cognitive function section, the same trend for ease or difficulty of questions was found between baseline and endline. Children performed best on the questions asking them to match three sets of images and to name and point to six body parts, while children had more difficulty with the questions assessing their understanding of a temporal sequence of months of the year and especially with answering five questions based on a short story.

Table 43: Average Percentage Scores of Cognitive Function, by County, Gender, and MECP-K status

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Specific Questions | Questions and Scoring | ECDE | | County | | Gender | | Total |
| MECP-K | non-MECP-K | Kisumu | Kisii | Girls | Boys |
| Baseline (n=857) | | | | | | | | |
| a) Child can name six body parts | C7; max 6 points | 53.3 | 67.2 | 62.1 | 57.2 | 61.2 | 58.1 | 59.7 |
| b) Child can match/pair six images | C8; max 3 points | 62.9 | 71.4 | 70.0 | 63.5 | 67.2 | 66.3 | 66.8 |
| c) Understanding temporal sequence – months of the year | C9; max 3 points | 20.9 | 26.8 | 23.1 | 24.1 | 28.5 | 18.3 | 23.6 |
| d) Child answers 5 questions based on a short story read | C10; max 5 points | 7.5 | 11.5 | 10.5 | 8.1 | 8.8 | 9.8 | 9.3 |
| Total | max 17 points | 35.8 | 44.4 | 41.4 | 38.0 | 41.1 | 38.3 | 39.7 |
| Endline (n=824) | | | | | | | | |
| a) Child can name six body parts | C7; max 6 points | 62.1 | 69.7 | 68.6 | 62.4 | 66.2 | 64.2 | 65.2 |
| b) Child can match/pair six images | C8; max 3 points | 80.7 | 82.4 | 85.0 | 78.3 | 79.7 | 83.1 | 81.4 |
| c) Understanding temporal sequence – months of the year | C9; max 3 points | 35.5 | 32.0 | 37.7 | 31.0 | 39.1 | 29.0 | 34.0 |
| d) Child answers 5 questions based on a short story read | C10; max 5 points | 16.5 | 17.2 | 19.4 | 14.6 | 17.2 | 16.3 | 16.8 |
| Total | max 17 points | 47.2 | 49.8 | 51.6 | 45.6 | 49.4 | 47.2 | 48.3 |

## 5.3 Indicator #3 - Receptive and expressive language

Indicator 3 measures the proportion of boys and girls with improved receptive language and expressive language after one year of intervention disaggregated by sex and county. Specifically, receptive language refers to how children understand language, while expressive language refers to how children use words to express himself/herself. Seven criteria were used to measure receptive and expressive language competencies.

Once again, children had significantly higher average scores at endline (MECP-K: 48.3%, non-MECP-K: 52.6%), compared at baseline (MECP-K: 33.8%, non-MECP-K: 43.8%) for receptive language and expressive language. Children attending MECP-K ECDE centers still had a lower average score than those children attending non-MECP-K ECDE centers at endline, but the effect size had decreased from medium (-0.53) to small (-0.21), illustrating a closure in the gap.

Moreover, the DID effects were significant for Indicator 3 suggesting that MECP-K has had a significant impact on improving children's language skills. This closing the gap trend was consistent for both boys and girls. In terms of county, there was little change in the effect size between baseline and endline for Kisumu, but the effect size for Kisii decreased substantially. Overall, neither girls nor boys were found to perform significantly better across the time periods, but children from Kisumu performed better than children from Kisii (Table 44 and 45).

Table 44: Results of Difference-in-Difference Analyses for Receptive and Expressive Language

| Variable | Estimate | SD | t-statistic | Significance |
| --- | --- | --- | --- | --- |
| Treated | -9.837 | 1.336 | -7.363 | <0.001\*\*\* |
| Time (baseline-endline) | 9.250 | 1.450 | 6.378 | <0.001\*\*\* |
| Interaction (DID) | 5.310 | 1.922 | 2.762 | <0.01\*\* |
| County | 3.982 | 0.953 | 4.179 | <0.001\*\*\* |
| Gender child | -0.172 | 0.950 | -0.181 | 0.85 n.s. |
| Notes: Sample averages presented below for baseline and endline. DID Estimations refer to treatment effect measured by the interaction of treatment by time). \*\*\*Parameter is significant at p<=0.001 level; \*\*Parameter is significant at p<=0.01 level; \*Parameter is significant at p<=0.05 level. | | | | |

Table 45: Average, Median and Minimum/Maximum Percentage Scores and Effect Size of Receptive and Expressive Language, by County, Gender, and MECP-K status

| Variable | Average and Standard deviation | | | | Median and Inter-quartile range | | | | | | Minimum and Maximum | | | | Effect Size (Cohen d) |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Average | | SD | | Median | | IQR 1 | | IQR 3 | | Min | | Max | |
| MECP-K | non-MECP-K | MECP-K | non-MECP-K | MECP-K | non-MECP-K | MECP-K | non-MECP-K | MECP-K | non-MECP-K | MECP-K | non-MECP-K | MECP-K | non-MECP-K |
| Baseline (n=857) Percentage scores | | | | | | | | | | | | | | | |
| Total | 33.8 | 43.8 | 18.5 | 19.5 | 35.0 | 45.0 | 20.0 | 30.0 | 45.0 | 60.0 | 0.0 | 0.0 | 95.0 | 100.0 | -0.53 |
| County | | | | | | | | | | | | | | | |
| Kisumu | 38.3 | 44.5 | 18.7 | 20.1 | 35.0 | 40.0 | 25.0 | 30.0 | 50.0 | 60.0 | 0.0 | 0.0 | 95.0 | 90.0 | -0.32 |
| Kisii | 29.5 | 43.1 | 17.2 | 18.8 | 30.0 | 45.0 | 15.0 | 30.0 | 45.0 | 55.0 | 0.0 | 0.0 | 85.0 | 100.0 | -0.75 |
| Gender | | | | | | | | | | | | | | | |
| Female | 36.1 | 43.6 | 18.7 | 19.4 | 35.0 | 45.0 | 25.0 | 30.0 | 50.0 | 60.0 | 0.0 | 0.0 | 80.0 | 90.0 | -0.39 |
| Male | 31.5 | 44.0 | 18.0 | 19.6 | 30.0 | 45.0 | 15.0 | 30.0 | 42.5 | 60.0 | 0.0 | 0.0 | 95.0 | 100.0 | -0.67 |
| Endline (n=824) Percentage scores | | | | | | | | | | | | | | | |
| Total | 48.3 | 52.6 | 20.1 | 20.3 | 50.0 | 55.0 | 35.0 | 35.0 | 60.0 | 70.0 | 0.0 | 5.0 | 100.0 | 100.0 | -0.21 |
| County | | | | | | | | | | | | | | | |
| Kisumu | 48.5 | 56.0 | 21.1 | 19.4 | 50.0 | 60.0 | 35.0 | 40.0 | 60.0 | 70.0 | 0.0 | 10.0 | 100.0 | 95.0 | -0.37 |
| Kisii | 48.2 | 50.2 | 19.1 | 20.7 | 50.0 | 50.0 | 35.0 | 35.0 | 60.0 | 65.0 | 5.0 | 5.0 | 95.0 | 100.0 | -0.10 |
| Gender | | | | | | | | | | | | | | | |
| Female | 46.9 | 52.2 | 19.8 | 20.2 | 45.0 | 55.0 | 35.0 | 40.0 | 60.0 | 65.0 | 0.0 | 5.0 | 95.0 | 100.0 | -0.27 |
| Male | 49.8 | 52.9 | 20.4 | 20.5 | 50.0 | 55.0 | 35.0 | 35.0 | 65.0 | 70.0 | 5.0 | 10.0 | 100.0 | 95.0 | -0.15 |

As with the previous sections, the average scores for each of the seven receptive language and expressive language questions (and for all disaggregation) increased from baseline to endline. At baseline, children that had received ECDE at a MECP-K center consistently had lower scores than children that had received ECDE at a non-MECP-K center for all seven of the questions related to language. At endline, this was the trend for only five of the seven questions, and the gap between MECP-K and non- MECP-K scores had decreased. In fact, MECP-K children were better able to respond to the questions assessing their expressive vocabulary (child can list five dangerous objects in their house) and vocabulary related to position, while average scores for receptive language (child can listen and follow instructions for a 3-step command) and vocabulary related to size and length were separated by less than three percentage points.

Unlike at baseline where children from Kisumu generally performed better than children from Kisii, there were more similar results at endline. At baseline, girls performed better than boys for four of the language questions, but this decreased to only two at endline - writing their first name and correctly reading three-letter words. Boys at endline performed better on the five other language questions (see Table 46). Overall, there appears to be a trend that boys are doing better than girls, and that Kisii has closed the gap with Kisumu.

Similar to baseline, at endline, children performed best on the questions asking them to write their first name, correctly reading three letter words, and following instructions for a three-step command, while performance decreased on the questions related to understanding vocabulary related to size/length and correctly reading four letter words. Children had the most difficulty with the question assessing their understanding of vocabulary related to position and the question to name five dangerous objects in their home.

Table 46: Average Percentage Scores of Individual Questions related to Receptive and Expressive Language, by County, Gender, and MECP-K status

| Specific Questions | Questions and Scoring | ECDE | | County | | Gender | | Total |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| MECP-K | non-MECP-K | Kisumu | Kisii | Girls | Boys |
| Baseline (n=857) | | | | | | | | | |
| a) Child can write their first name | C11; max 3 points | 61.4 | 73.7 | 72.1 | 61.9 | 72.8 | 60.9 | 67.1 |
| b) Receptive language: Child can listen and follow instructions for (3 step command) | C12; max 3 points | 49.9 | 60.8 | 67.8 | 41.6 | 56.0 | 53.6 | 54.8 |
| c) Expressive vocabulary: Child can list five dangerous objects in their house | C13; max 5 points | 3.2 | 6.8 | 2.5 | 7.2 | 2.2 | 7.7 | 4.8 |
| d) The child understands vocabulary related to position | C14; max 1 point | 19.1 | 22.8 | 20.8 | 20.8 | 16.1 | 25.8 | 20.8 |
| e) The child understands vocabulary related to size and length | C15; max 2 points | 44.0 | 48.0 | 48.8 | 42.7 | 44.4 | 47.3 | 45.8 |
| f) Child can correctly read two 3 letter words | C16; max 3 points | 43.0 | 60.4 | 52.8 | 49.1 | 55.6 | 46.0 | 51.0 |
| g) Child can correctly read two 4 letter words | C17; max 3 points | 30.0 | 46.1 | 38.5 | 36.2 | 41.2 | 33.3 | 37.4 |
| Total | max 20 points | 33.8 | 43.8 | 41.2 | 35.4 | 39.6 | 37.0 | 38.4 |
| Endline (n=824) | | | | | | | | | |
| a) Child can write their first name | C11; max 3 points | 77.9 | 83.8 | 79.1 | 81.4 | 81.9 | 78.8 | 80.3 |
| b) Receptive language: Child can listen and follow instructions for (3 step command) | C12; max 3 points | 64.1 | 65.8 | 70.9 | 59.7 | 63.4 | 66.2 | 64.8 |
| c) Expressive vocabulary: Child can list five dangerous objects in their house | C13; max 5 points | 12.2 | 12.0 | 11.3 | 12.9 | 9.4 | 14.8 | 12.1 |
| d) The child understands vocabulary related to position | C14; max 1 point | 29.0 | 28.4 | 32.4 | 25.7 | 25.1 | 32.4 | 28.8 |
| e) The child understands vocabulary related to size and length | C15; max 2 points | 59.1 | 61.8 | 65.4 | 55.8 | 57.3 | 63.0 | 60.2 |
| f) Child can correctly read two 3 letter words | C16; max 3 points | 65.3 | 71.5 | 66.8 | 68.7 | 69.7 | 66.0 | 67.8 |
| g) Child can correctly read two 4 letter words | C17; max 3 points | 45.5 | 58.9 | 51.9 | 50.3 | 49.7 | 52.3 | 51.0 |
| Total | max 20 points | 48.3 | 52.6 | 51.3 | 49.1 | 49.0 | 51.1 | 50.1 |

## 5.4 Indicator #4 – Socio-emotional capacities

Indicator 4 measures the proportion of boys and girls with improved socio-emotional capacities after one year of intervention disaggregated by sex and county. Social-emotional capacities refer to the regulation of emotional responses and social interactions, which is a function of both temperament and self-regulation, including behavior problems, social competency, and emotional competency.

As found in the previous three sections, children had significantly higher average scores for socio-emotional capacity at endline (MECP-K: 53.8%, non-MECP-K: 54.7%), compared to baseline (MECP-K: 33.4%, non-MECP-K: 41.1%). Children attending MECP-K ECDE centers still had a very slightly lower average score than those children attending non-MECP-K ECDE centers at endline, but the effect size had decreased from medium (-0.35) to very small (-0.04), illustrating that there is now little difference between MECP-K and non-MECP-K children. In fact, when examining MECP-K and non-MECP-K children by gender and county, it was found that MECP-K boys end children from Kisii had actually performed better than their non-MECP-K counterparts. Further support comes from the DID effects that were significant for Indicator 4 illustrating that MECP-K has likely had a significant impact on improving children's social-emotional capacities. Overall, across the time periods neither gender nor county outperform the other (Tables 47 and 48).

Table 47: Results of Difference-in-Difference Analyses for Socio-emotional Capacities

| Variable | Estimate | SD | t-statistic | Significance |
| --- | --- | --- | --- | --- |
| Treated | -7.684 | 1.454 | -5.296 | <0.001\*\*\* |
| Time (baseline-endline) | 13.588 | 1.596 | 8.513 | <0.001\*\*\* |
| Interaction (DID) | 6.772 | 2.114 | 3.204 | <0.01\*\* |
| County | 0.597 | 1.047 | 0.570 | 0.57 n.s. |
| Gender child | 1.097 | 1.044 | 1.051 | 0.85 n.s. |
| Notes: Sample averages presented below for baseline and endline. DID Estimations refer to treatment effect measured by the interaction of treatment by time). \*\*\*Parameter is significant at p<=0.001 level; \*\*Parameter is significant at p<=0.01 level; \*Parameter is significant at p<=0.05 level. | | | | |

Table 48: Average, Median and Minimum/Maximum Percentage Scores and Effect Size of Questions related to Socio-Emotional Capacities, by County, Gender, and MECP-K status

| Variable | Average and Standard deviation | | | | Median and Inter-quartile range | | | | | | Minimum and Maximum | | | | Effect Size (Cohen d) |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Average | | SD | | Median | | IQR 1 | | IQR 3 | | Min | | Max | |
| MECP-K | non-MECP-K | MECP-K | non-MECP-K | MECP-K | non-MECP-K | MECP-K | non-MECP-K | MECP-K | non-MECP-K | MECP-K | non-MECP-K | MECP-K | non-MECP-K |
| Baseline (n=857) Percentage scores | | | | | | | | | | | | | | | |
| Total | 33.4 | 41.1 | 20.9 | 22.5 | 26.3 | 36.8 | 15.8 | 21.1 | 47.4 | 57.9 | 0.0 | 0.0 | 100.0 | 94.7 | -0.35 |
| County | | | | | | | | | | | | | | | |
| Kisumu | 34.3 | 39.6 | 20.8 | 23.2 | 26.3 | 31.6 | 15.8 | 21.1 | 52.6 | 57.9 | 0.0 | 0.0 | 100.0 | 94.7 | -0.24 |
| Kisii | 32.6 | 42.9 | 20.9 | 21.6 | 26.3 | 42.1 | 15.8 | 26.3 | 47.4 | 57.9 | 0.0 | 0.0 | 94.7 | 94.7 | -0.48 |
| Gender | | | | | | | | | | | | | | | |
| Female | 32.5 | 39.9 | 19.6 | 22.3 | 26.3 | 42.1 | 15.8 | 21.1 | 47.4 | 57.9 | 0.0 | 0.0 | 100.0 | 94.7 | -0.36 |
| Male | 34.4 | 42.5 | 22.1 | 22.7 | 26.3 | 36.8 | 15.8 | 21.1 | 47.4 | 57.9 | 0.0 | 0.0 | 94.7 | 94.7 | -0.36 |
| Endline (n=824) Percentage scores | | | | | | | | | | | | | | | |
| Total | 53.8 | 54.7 | 21.8 | 24.2 | 52.6 | 52.6 | 36.8 | 36.8 | 68.4 | 68.4 | 0.0 | 0.0 | 100.0 | 100.0 | -0.04 |
| County | | | | | | | | | | | | | | | |
| Kisumu | 53.3 | 58.2 | 23.0 | 24.8 | 52.6 | 57.9 | 36.8 | 36.8 | 68.4 | 73.7 | 0.0 | 0.0 | 100.0 | 100.0 | -0.20 |
| Kisii | 54.2 | 52.2 | 20.7 | 23.5 | 52.6 | 52.6 | 42.1 | 31.6 | 65.8 | 63.2 | 0.0 | 0.0 | 100.0 | 100.0 | 0.09 |
| Gender | | | | | | | | | | | | | | | |
| Female | 52.9 | 56.1 | 22.3 | 21.4 | 52.6 | 57.9 | 36.8 | 42.1 | 63.2 | 68.4 | 0.0 | 0.0 | 100.0 | 100.0 | -0.15 |
| Male | 54.7 | 53.3 | 21.3 | 26.4 | 52.6 | 52.6 | 42.1 | 31.6 | 68.4 | 68.4 | 0.0 | 0.0 | 100.0 | 100.0 | 0.06 |

In congruence with the three previous sections, the average scores for each of the eight social-emotional capacity questions (and for all disaggregation) increased from baseline to endline. At baseline, children that had received ECDE at a MECP-K center always had lower scores than children that had received ECDE at a non-MECP-K center for all eight of the socio-emotional capacity questions. However, at endline, non-MECP-K child averages were higher for only five of the eight questions. MECP-K children were better able to respond to the questions assessing self-awareness through stating their name and naming their primary school and naming friends he/she plays with. Additionally, scores were very similar (less than a two-percentage point difference) for the questions asking a child to state where they live and that on emotional awareness/regulation through identifying sad and happy vocabulary and feelings.

At baseline children from Kisii performed better than children from Kisumu for the majority (five of eight) of questions; however, this reversed at endline with Kisumu performing slightly better for five of the eight questions. Girls were found to perform better than boys for three of the eight social-emotional capacity questions, specifically naming five friends they play with, identifying sad and happy vocabulary and feelings, and identifying solutions to a social conflict situation. This was the opposite of baseline where boys performed much better on the questions identifying sad and happy vocabulary and feelings, identifying how someone else feels (empathy), and identifying solutions to a social conflict situation (Table 49).

Findings related to the ease or difficulty of questions follow the same trends as baseline. Within the social-emotional capacity section, most children were able to provide their full name and provide the name of their primary school, while performance decreased on the questions for stating their age and naming five friends they play with. Children found the questions on stating where they live, identifying solutions to a social conflict situation, identifying how someone else feels, and identifying sad and happy vocabulary and feelings still much more difficult, although there have been improvements since baseline (Table 49).

Table 49: Average Percentage Scores of Questions related to Socio-Emotional Capacities,

by County, Gender, and MECP-K status

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Specific Questions | Questions and Scoring | ECDE | | County | | Gender | | Total |
| MECP-K | non-MECP-K | Kisumu | Kisii | Girls | Boys |
| Baseline (n=857) | | | | | | | | | |
| 1. Self-awareness: Child can state their name | C1a; max 2 points | 88.0 | 92.5 | 94.9 | 85.0 | 90.5 | 89.5 | 90.0 |
| 1. Self-awareness: Child can state their age | C1b; max 2 points | 38.8 | 50.5 | 43.8 | 44.6 | 43.1 | 45.3 | 44.2 |
| 1. Self-awareness: Child can name their primary school | C1c; max 2 points | 65.2 | 73.7 | 66.2 | 72.1 | 69.3 | 68.8 | 69.1 |
| 1. Self-awareness: Child can state where they live | C1d; max 2 points | 11.2 | 18.3 | 15.4 | 13.4 | 15.1 | 13.6 | 14.4 |
| 1. Friends: child names friends he/she plays with\* | C18; max 5 points | 36.1 | 47.6 | 42.6 | 40.1 | 43.4 | 39.2 | 41.4 |
| 1. Emotional awareness/regulation: child can identify sad and happy vocabulary and feelings\* | C19; max 3 points | 7.4 | 10.3 | 7.9 | 9.7 | 6.4 | 11.3 | 8.8 |
| 1. Empathy: child can identify how someone else feels\* | C20; max 2 points | 9.2 | 12.6 | 6.4 | 15.3 | 2.4 | 19.7 | 10.8 |
| 1. Solving Conflict: Child identifies solutions to a social conflict situation\* | C21; max 1 point | 7.1 | 16.9 | 9.2 | 14.0 | 6.1 | 17.4 | 11.6 |
| Total | max 19 points | 33.4 | 41.1 | 36.8 | 37.1 | 36.0 | 38.0 | 36.9 |
| Endline (n=824) | | | | | | | | | |
| 1. Self-awareness: Child can state their name | C1a; max 2 points | 95.6 | 95.4 | 98.9 | 92.6 | 93.8 | 97.2 | 95.5 |
| 1. Self-awareness: Child can state their age | C1b; max 2 points | 64.2 | 68.2 | 68.9 | 63.3 | 61.5 | 70.2 | 65.8 |
| 1. Self-awareness: Child can name their primary school | C1c; max 2 points | 87.2 | 83.7 | 82.2 | 88.8 | 85.7 | 85.9 | 85.8 |
| 1. Self-awareness: Child can state where they live | C1d; max 2 points | 24.3 | 25.0 | 27.7 | 22.0 | 23.4 | 25.7 | 24.6 |
| 1. Friends: child names friends he/she plays with\* | C18; max 5 points | 69.4 | 69.1 | 69.1 | 69.3 | 72.7 | 65.8 | 69.2 |
| 1. Emotional awareness/regulation: child can identify sad and happy vocabulary and feelings\* | C19; max 3 points | 14.1 | 15.8 | 14.6 | 14.9 | 15.4 | 14.1 | 14.8 |
| 1. Empathy: child can identify how someone else feels\* | C20; max 2 points | 30.3 | 33.9 | 34.2 | 29.8 | 30.6 | 33.0 | 31.8 |
| 1. Solving Conflict: Child identifies solutions to a social conflict situation\* | C21; max 1 point | 22.4 | 23.1 | 24.5 | 21.2 | 26.8 | 18.6 | 22.7 |
| Total | max 19 points | 53.8 | 54.6 | 55.1 | 53.3 | 54.2 | 54.1 | 50.0 |

\*International Development and Early Learning Assessment (IDELA)

## 5.5 Observations related to Child Assessment

Enumerators scored the child on several observations at the end of the child assessment on areas such as persistence with tasks, attention span during tasks, attention to directions, comprehension of questions and instructions, and body movement. Overall, there tended to be an increase in the average percentage of children with the more positive observation options at endline.

At endline, children who had attended MECP-K ECDE centers had lower average scores for the most positive observation options than those children who had attended non-MECP-K ECDE centers for all for all five observations, although the difference between MECP-K and non-MECP-K children decreased compared to baseline. County-wise, children from Kisumu typically had higher average scores for the most positive observation option, with the exception of attention span during tasks (exception was body movement at baseline). Unlike at baseline, where girls had higher average scores for all the most positive observation options than boys, except attention to directions and body movement, at endline, boys had higher average scores for the most positive observation for all five areas (Table 50).

At endline, it should be noted that 31.2% (MECP-K: 32.7%, non-MECP-K: 27.5%) of children only attempted the tasks after much encouragement from the enumerator and 0.2% (MECP-K: 0.4%, non-MECP-K: 0.0%) refused to engage in some or all of the tasks. Only, 4.7% (MECP-K: 5.1%, non-MECP-K: 4.1%) of children were easily distracted, an improvement over 19.7% at baseline, and fewer 0.7% (3.4% baseline) (MECP-K: 1.0%, non-MECP-K: 0.3%) started immediately without waiting for instructions.

18.4% of children comprehended all questions and instructions in English (MECP-K: 16.5%, non-MECP-K: 21.3%), however this was an improvement over baseline (9.7%, MECP-K: 6.0%, non-MECP-K: 14.1%), while there was also a decrease in the percentage of children that did not comprehend most questions/instructions (2.1%, MECP-K: 2.7%, non-MECP-K: 1.2% versus 21.1%, MECP-K: 27.3%, non-MECP-K: 13.8%). Lower levels of comprehension were in large part because of a lack of English comprehension, as the child assessment was conducted in English as per the official curriculum. Finally, only 2.7% (MECP-K: 1.9%, non-MECP-K: 3.8%) of children were in constant motion or squirming during the assessment, again an improvement over baseline 8.0% (MECP-K: 9.0%, non-MECP-K: 6.9%).

Table 50: Average Percentage Scores of Observations during the Child Assessment, by County, Gender, and MECP-K status

| Observation | Scoring | Baseline (n=857) | | | | | | | Endline (n=824) | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ECDE | | County | | Gender | | Total | ECDE | | County | | Gender | | Total |
| MECP-K | non-MECP-K | Kisumu | Kisii | Girls | Boys | MECP-K | non-MECP-K | Kisumu | Kisii | Girls | Boys |
| Persistent with tasks | Persists with each task | 41.4 | 57.0 | 49.2 | 47.9 | 54.0 | 42.8 | 48.5 | 52.5 | 60.4 | 56.1 | 55.4 | 48.8 | 62.6 | 55.7 |
| Attempts each task briefly, but gives up | 16.1 | 16.6 | 20.1 | 12.5 | 15.6 | 17.1 | 16.3 | 13.4 | 12.1 | 12.2 | 13.4 | 15.1 | 10.6 | 12.9 |
| Attempts tasks after much encouragement | 37.6 | 24.6 | 29.3 | 34.0 | 28.0 | 35.5 | 31.6 | 33.7 | 27.5 | 31.4 | 31.0 | 35.6 | 26.8 | 31.2 |
| Refuses to engage in some or all tasks | 4.5 | 1.5 | 1.4 | 5.0 | 2.0 | 4.3 | 3.2 | 0.4 | 0.0 | 0.3 | 0.2 | 0.5 | 0.0 | 0.2 |
| Do not know | 0.4 | 0.3 | 0.0 | 0.7 | 0.5 | 0.2 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Attention span during tasks | Focused on tasks voluntarily | 36.7 | 52.2 | 45.7 | 41.7 | 44.7 | 42.8 | 43.8 | 52.5 | 56.2 | 50.3 | 57.1 | 43.7 | 64.3 | 54.0 |
| Focused on tasks with encouragement of assessor | 38.8 | 33.0 | 43.4 | 28.8 | 32.3 | 40.3 | 36.2 | 42.4 | 39.6 | 42.8 | 40.0 | 49.3 | 33.3 | 41.3 |
| Easily distracted | 24.0 | 14.6 | 10.9 | 28.8 | 22.6 | 16.7 | 19.7 | 5.1 | 4.1 | 6.9 | 2.9 | 7.1 | 2.4 | 4.7 |
| Do not know | 0.4 | 0.3 | 0.0 | 0.7 | 0.5 | 0.2 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Attention to directions | Listens to complete direction before starting | 56.2 | 66.2 | 71.1 | 50.2 | 57.3 | 64.5 | 60.8 | 79.8 | 83.7 | 85.9 | 77.7 | 73.2 | 89.6 | 81.4 |
| Starts after hearing partial instructions | 37.1 | 30.7 | 26.3 | 42.2 | 36.1 | 32.1 | 34.2 | 19.1 | 16.0 | 13.0 | 21.9 | 26.1 | 9.7 | 17.8 |
| Starts immediately without waiting for instructions | 4.1 | 2.6 | 2.1 | 4.7 | 3.8 | 2.9 | 3.4 | 1.0 | 0.3 | 1.1 | 0.4 | 0.7 | 0.7 | 0.7 |
| Do not know | 2.6 | 0.5 | 0.5 | 2.8 | 2.7 | 0.5 | 1.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Comprehension of questions and instructions | Comprehends all questions and instructions | 6.0 | 14.1 | 12.9 | 6.4 | 9.9 | 9.4 | 9.7 | 16.5 | 21.3 | 26.3 | 11.8 | 14.9 | 22.0 | 18.4 |
| Comprehends only after multiple repeated instructions | 27.3 | 36.1 | 34.9 | 27.6 | 34.5 | 27.8 | 31.3 | 44.4 | 48.5 | 41.8 | 49.8 | 45.9 | 46.4 | 46.1 |
| Has difficulty comprehending most of the instructions | 39.5 | 36.1 | 41.6 | 34.2 | 41.3 | 34.3 | 37.9 | 36.4 | 29.0 | 28.2 | 37.7 | 36.3 | 30.4 | 33.4 |
| Does not comprehend most questions/instructions | 27.3 | 13.8 | 10.6 | 31.8 | 14.2 | 28.5 | 21.1 | 2.7 | 1.2 | 3.7 | 0.7 | 2.9 | 1.2 | 2.1 |
| Do not know | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Body movement | Sits quietly | 49.6 | 58.3 | 51.3 | 55.9 | 43.8 | 64.0 | 53.6 | 67.9 | 74.6 | 74.2 | 67.6 | 61.0 | 80.2 | 70.6 |
| Some squirming | 41.0 | 34.8 | 42.0 | 34.2 | 46.5 | 29.2 | 38.2 | 30.2 | 21.6 | 22.6 | 30.1 | 34.6 | 18.8 | 26.7 |
| Constant motion and squirming | 9.0 | 6.9 | 6.7 | 9.4 | 9.5 | 6.5 | 8.1 | 1.9 | 3.8 | 3.2 | 2.2 | 4.4 | 1.0 | 2.7 |
| Do not know | 0.4 | 0.0 | 0.0 | 0.5 | 0.2 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

## 5.6 Potential Explanations of Results

The baseline found that the lower results among MECP-K students may have been partially explained by private education, as it appears that children attending private Primary schools had higher indicator scores and may have perhaps attended private ECDE centers. This is partially explained by teachers in private schools who are highly motivated as they are well remunerated, the schools’ facility provides for adequate resources for learning, and appropriate teacher-child ratior, and thus cannot be compared with non-private education However, private education alone did not explain the full difference between MECP-K ECDE and non-MECP-K ECDE children at baseline.

Overall, endline improvement in both MECP-K and non-MECP-K students from baseline could be a result of students not having school holiday before entering primary 1. At the endline, there was no school holiday between pre-primary 2 and primary 1 as the government was trying to allow for children to regain their school year, after a rather a lengthy time at home due to COVID-19. In contrast, at baseline, there was an approximate 2-month school holiday . Previous studies[[57]](#footnote-58) have found that learning losses occur over longer school holidays . Another potential explanation is that children were observed to pay more attention to directions, better comprehend questions, as well as be more persistent and have a better attention span during tasks.

MECP-K ECDE teachers scored much higher during the classroom observations (non-MECP-K teachers were not observed as per the study design) at endline compared to baseline, indicating the teachers are understanding and following the MECP-K teacher practice guidelines. This is also attributed to the MECP-K model of ongoing mentorship and accompaniment. This improvement in teaching, very likely has promoted the improvements seen in MECP-K children, which were greater than non-MECP-K children at endline.

Generally, it was found that MECP-K teachers and school environments improved slightly more at endline in Kisii than Kisumu. Kisumu had started with higher scores at baseline. This trend was also found in children in Kisii. Kisumu, being a more urban environment, with ECD teachers at higher education entry levels, coupled with the fact that there are multiple education initiatives by development organizations supporting teacher professional development such as Plan International, Child Fund, UNICEF, and Catholic Relief Services. In Kisii, MECP-K is the first and only development partner supporting teacher professional development thus was more flexible to the initiatives of the MECP-K. Despite the lower rates comparative to Kisumu, key indicators have increases for this county since baseline.

In terms of the differentiation of results between boys and girls around child assessment scores, the findings are somewhat surprising considering in early years' there are no distinct differences on how boys and girls are participating in learning, and the study found that for the most part ECD teachers are applying interactive and child-centred approaches equally.

# Appendix 1: List of Sampled Linked Primary Schools

Location and Names of ECDE Centers, Linked Primary School 1s, and Linked Primary School 2s.

*Note all Linked Primary School 2s were sampled.*

| **S/No.** | **County** | **Name of ECDE Center** | **Linked Primary School 1** | **Linked Primary School 2** |
| --- | --- | --- | --- | --- |
| 5 | Kisii | Tambacha ECDE | Tambacha primary | Mwancha Destiny Academy |
| 7 | Kisii | Nyansakia ECDE | Nyansakia Primary | Itumbe DEB |
| 13 | Kisii | Eronge ECDE | Eronge Primary | Matongo Preparatory (w/Nyagonyi) |
| 24 | Kisii | Motonto ECDE | Motonto Primary | Gracious Hope Academy *(w/Ragogo)* |
| 28 | Kisii | Ragogo ECDE | Ragogo Primary | Gracious Hope Academy *(w/Motonto)* |
| 30 | Kisii | Kiareni ECDE | Kiareni Primary | Nyagisai |
| 35 | Kisii | Marani ECDE | Marani Primary | Raah Popular |
| 36 | Kisii | Gesansora ECDE | Gesangora Primary | *No linked School* |
| 43 | Kisii | Nyagonyi ECDE | Nyagonyi Primary | Matongo Preparatory (w/ Eronge) |
| 46 | Kisii | Kiamogore ECDE | Kiamogore Primary | Nyagisai |
| 50 | Kisii | Riakerongo ECDE | Riakerongo Primary | *Masakwe,Nyagesenda* |
| 57 | Kisii | Rioma ECDE | Rioma primary | Engoto |
| 62 | Kisii | Nyangoto ECDE | Nyagoto Primary | Kabiero |
| 262 | Kisii | Tendere ECDE | Tendere Primary | *No linked School* |
| 263 | Kisii | Nyamiobo Dok ECDE | Nyamiobo Dok Primary | Wisdom |
| 271 | Kisii | Getare ECDE | Getare Primary | Gitono |
| 276 | Kisii | Kineni ECDE | Kineni Primary | Nyarenda Primary |
| 281 | Kisii | Mochorwa ECDE | Mochorwa Primary | Mesabakwa DOK |
| 287 | Kisii | Nyabioto Dok ECDE | Nyabioto Dok Primary | Riamo CCF |
| 290 | Kisii | Kimai ECDE | Kimai Primary | *No linked School* |
| 300 | Kisii | Nyagesa ECDE | Nyagesa Primary | Misesi Junior |
| 302 | Kisii | Nyagenke ECDE | Nyagenke Primary | Nyantogo DOK |
| 306 | Kisii | Gakero Sda ECDE | Gakero Sda Primary | Gakero DEB Primary |
| 308 | Kisii | Nyataro 2 ECDE | Nyataro 2 Primary | Tunta Primary |
| 310 | Kisii | Egetuki Dok ECDE | Egetuki Dok Primary | Nyamonyo SDA |
| 1265 | Kisumu | Agai ECDE | Agai Primary | *No school identified* |
| 1266 | Kisumu | Bodi ECDE | Bodi Primary | *No linked School* |
| 1365 | Kisumu | Ndori BC ECDE | Ndori Bc Primary | *No Authorization* |
| 1268 | Kisumu | Kabete ECDE | Kabete Primary | Gamary Star |
| 1272 | Kisumu | Nyabondo Day ECDE | Nyabondo Day Primary | Joe Shiners |
| 1273 | Kisumu | Nyabondo Girls ECDE | Nyabondo Girls Primary | *No linked School* |
| 1359 | Kisumu | Guu ECDE | Guu Primary | Maurice Ojwanga Academy |
| 1368 | Kisumu | Pundo ECDE | Pundo Primary | St Benedette |
| 1371 | Kisumu | Soko ECDE | Soko Primary | Bethelehem |
| 730 | Kisumu | Lisuka ECDE | Lisuka Primary | *No linked school* |
| 734 | Kisumu | Obambo ECDE | Obambo Primary | *No linked school* |
| 1363 | Kisumu | Lwanda ECDE | Lwanda Primary | Mwangaza |
| 1600 | Kisumu | Dago Kanyagaya ECDE | Dago Kanyagaya Primary | Joy Yep Academy, Onyinyore, Korwenje, Got Agulu |
| 1610 | Kisumu | Ojola Kadero ECDE | Ojola Kadero Primary | Nyawanga |
| 1613 | Kisumu | St.Elizabeth ECDE | St.Elizabeth all girls Primary | BarKorwa |
| 1771 | Kisumu | Atoya ECDE | Atoya Primary | Junior Academy |
| 1780 | Kisumu | Nyamor ECDE | Nyamor Primary | St Michael |
| 1785 | Kisumu | Ratta ECDE | Ratta Primary | Mt Zion |
| 732 | Kisumu | Nyanginja ECDE | Nyanginja Primary | Star of Junior, Simero, Lake View, Kogada, Atilili |
| 738 | Kisumu | Oyiengo ECDE | Oyiengo Primary | Baby Shiners |
| 740 | Kisumu | Sabako ECDE | Sabako Primary | *No linked school* |
| 735 | Kisumu | Ogal ECDE | Ogal Primary | Point of Grace |
| 737 | Kisumu | Osiri ECDE | Osiri Primary | *Not required* |
| 743 | Kisumu | Uradi ECDE | Uradi Primary | Noels Academy |
| 727 | Kisumu | Bara ECDE | Bara Primary | Winam Academy |

# Appendix 2: Data Analysis Plan

| **Linked Indicators** | **Definition and/or Criteria** | **Calculation** |
| --- | --- | --- |
| **Tool 1: Child Assessment** | |  |
| Indicator #1: Proportion of boys and girls with improved gross and fine motor skills after 1 year of intervention disaggregated by sex and county | Gross (large) motor skills refers to the acquisition of movements that promote an individual’s mobility. For preschool aged  children, large motor skills include walking on a line, controlling movements in games, and jumping. Fine motor skills on the other hand refers to skills utilized for tasks such as drawing and writing letters, involve hand-eye coordination and muscle control. They include such abilities as picking up objects and holding eating utensils, etc. For preschool-aged children, fine motor skills include the ability to hold a pencil, write, and draw, etc. This indicator will test the following:  Gross motor:  a) Child hops up to 10 steps on one foot (C2; max 2 points)  b) Child stands on one foot (C3; max 2 points)  Fine motor:  c) Child copies two shapes (C4; max 3 points)  d) Child draws a human stick figure (C5; max 2 points)  e) Child follows a 4-step folding task (C6; max 4 points)  Tool based on International Development and Early Learning Assessment (IDELA) and existing AKF instruments. | Scores will range from 0 to 13  BASELINE: Calculate the score of each child based on the 5 questions (13 points). Subsequently, calculate the mean and standard deviation and the median and inter-quartile range (IQR). Disaggregation by sex and county. Comparison between zero ECDE or non-MECPK ECDE (control) and 3-month improved ECDE (treatment). Compute effect size - Cohen d ( d = (mean control / mean treatment) / Average standard deviation) . ANOVA or Kruskal-Wallace tests.  ENDLINE: Same as above for 6-month and 12-month improved ECDE. ANOVA or Kruskal-Wallace tests. Visual comparison across the 4 groups. Compute effect size - Cohen d – for 0 ECDE or non-MECPK ECDE (control) and 12-month ECDE (treatment).  Analysis using 50+ selected schools per cohort. |
| Indicator #2: Proportion of boys and girls with improved cognitive functions after 1 year of intervention disaggregated by sex and county | The processes or faculties by which knowledge is acquired and manipulated, including abilities such as memory, problem solving and analytical skills. This indicator will test the following:  a) Child can name six body parts (C7; max 6 points)  b) Child can match/pair six images (C8; max 3 points)  c) Understanding temporal sequence – months of the year (C9; max 3 points)  d) Child answers 5 questions based on a short story read  aloud to him/her (C10; max 5 points) | Scores will range from 0 to 17  BASELINE: Calculate the score of each child based on the 4 questions (17 points). Subsequently, calculate the mean and standard deviation and the median and inter-quartile range (IQR). Disaggregation by sex and county. Comparison between zero ECDE or non-MECPK ECDE (control) and 3-month improved ECDE (treatment). Compute effect size - Cohen d ( d = (mean control / mean treatment) / Average standard deviation) . ANOVA or Kruskal-Wallace tests.  ENDLINE: Same as above for 6-month and 12-month improved ECDE. ANOVA or Kruskal-Wallace tests. Visual comparison across the 4 groups. Compute effect size - Cohen d – for 0 ECDE or non-MECPK ECDE (control) and 12-month ECDE (treatment).  Analysis using 50+ selected schools per cohort. |
| Indicator #3: Proportion of boys and girls with improved receptive language and expressive language after 1 year of intervention disaggregated by sex and county | 1. Chile can write their first name (C11; max 3 points)   b) Receptive language: Child can listen and follow instructions/directions for (3 step command) (C12; max 3 points)  c) Expressive vocabulary: Child can list five dangerous objects in their house (C13; max 5 points)  d) The child understands vocabulary related to position C14; max 1 points)  e) The child understands vocabulary related to size and length (C15; max 2 points)  f) Child can correctly read two 3 letter words (C16; max 3 points)  g) Child can correctly read two 4 letter words (C17; max 3 points) | Scores will range from 0 to 20  BASELINE: Calculate the score of each child based on the 7 questions (20 points). Subsequently, calculate the mean and standard deviation and the median and inter-quartile range (IQR). Disaggregation by sex and county. Comparison between zero ECDE or non-MECPK ECDE (control) and 3-month improved ECDE (treatment). Compute effect size - Cohen d ( d = (mean control / mean treatment) / Average standard deviation) . ANOVA or Kruskal-Wallace tests.  ENDLINE: Same as above for 6-month and 12-month improved ECDE. ANOVA or Kruskal-Wallace tests. Visual comparison across the 4 groups. Compute effect size - Cohen d – for 0 ECDE or non-MECPK ECDE (control) and 12-month ECDE (treatment).  Analysis using 50+ selected schools per cohort |
| Indicator #4: Proportion of boys and girls with improved socio-emotional capacities after 1 year of intervention disaggregated by sex and county | Refers to the regulation of emotional responses and social interactions, which is a function of both temperament and self-regulation, including behavior problems, social competency, and  emotional competency. This indicator will test the following:   1. Self-awareness: Child is aware of her/himself and her/his community\* (C1a; max 2 points; C1b; max 2 points; C1c; max 2 points; C1d; max 2 points) 2. Friends: child names friends he/she plays with\* (C18; max 5 points) 3. Emotional awareness/regulation: child can identify sad and happy vocabulary and feelings\* (C19; max 3 points) 4. Empathy: child can identify how someone else feels\*(C20; max 2 points) 5. Solving Conflict: Child identifies solutions to a social conflict situation\*(C21; max 1 points)   \*International Development and Early Learning Assessment (IDELA) | Scores will range from 0 to 19  BASELINE: Calculate the score of each child based on the 8 questions (19 points). Subsequently, calculate the mean and standard deviation and the median and inter-quartile range (IQR). Disaggregation by sex and county. Comparison between zero ECDE or non-MECPK ECDE (control) and 3-month improved ECDE (treatment). Compute effect size - Cohen d ( d = (mean control / mean treatment) / Average standard deviation) . ANOVA or Kruskal-Wallace tests.  ENDLINE: Same as above for 6-month and 12-month improved ECDE. ANOVA or Kruskal-Wallace tests. Visual comparison across the 4 groups. Compute effect size - Cohen d – for 0 ECDE or non-MECPK ECDE (control) and 12-month ECDE (treatment).  Analysis using 50+ selected schools per cohort |
| **Tool 2: Classroom Observation** | |  |
| Indicator #8: Number and percentage of target male and female ECDE teachers with improved classroom practices (meeting minimum standards) disaggregated by sex and county | 1. Teaching and Learning Materials – 4 Questions  2. Daily Routine – 6 Questions  3. Adult and Child Interaction (Delivery) – 6 Questions  4. Teacher Attitude – 5 Questions (1 with NA option) | 21 Questions; with points ranging from 0 to 3 (minimum score: 0; maximum score 63).  BASELINE: Calculate the score of each teacher based on the 21 questions (20 questions if NA is chosen). Subsequently, calculate the mean and standard deviation and the median and inter-quartile range (IQR). Disaggregation by sex and county.  Individually assess each of the 4 sections to determine if any gaps exist.  To directly answer the indicator the number of teachers meeting the minimum standard (65% or 41 points – to be revised after baseline) will be calculated. % = number of teachers meeting the minimum standard / total number of teachers surveyed \*100.  ENDLINE: Same calculations as above.  Compute effect size - Cohen d (d = (mean baseline / mean endline) / Average standard deviation).  Compute effect size – Odds ratio  (+min st BL / + min st EL )  -c min st BL - min st EL  Analysis using 50 selected schools per cohort. |
| Indicator #9: Number and percentage of ECDE centres with improved quality learning environments disaggregated by county | 5. Classroom (Indoor) Teaching and Learning Environment - 10 Questions (1 with NA option)  6. Outdoor Environment - 4 Questions | 14 Questions; with points ranging from 0 to 3 (minimum score: 0; maximum score 42).  BASELINE: Calculate the average (depends on the number of classroom observations taken at an ECDE center: range 1-5 classrooms) score of each centre based on the 10 questions (90 questions if NA was chosen) and then include the value from the outdoor observation (1 per school) (calculate the average from the 4 questions; removing values depending on the number of NAs chosen). Subsequently, calculate the mean and standard deviation and the median and inter-quartile range (IQR). Disaggregation by county.  Individually assess each of the 2 sections to determine if any gaps exist.  To directly answer the indicator the number of ECDE centres with improved quality learning (minimum standard of 65% or 27 points – to be revised after baseline) will be calculated. % = number of ECDE centres meeting the minimum standard / 50 \*100.  ENDLINE: Same calculations as above.  Compute effect size - Cohen d (d = (mean baseline / mean endline) / Average standard deviation).  Compute effect size – Odds ratio  (+min st BL / + min st EL )  -c min st BL - min st EL  Analysis using 50 selected schools per cohort. |
| **Tool 3: Teacher Knowledge Assessment/Survey (Program Officers)** | |  |
| Indicator #14: Number and percentage of teachers with core knowledge of MECP curriculum concepts and approaches (by sex and county) | The basic ECD curriculum (CBC) includes the following components:  2.1 Components of CBC curriculum  2.2 Schemes of Work  2.3 Key enquiry questioning  Additional MECP-K components includes:  2.4 Stimulative learning environments  2.5 Child learning  2.6 Children’s learning environments  2.7 Early years learning assessments  2.8 Parent engagement (fathers)  2.9 Term of Sex  2.10 Term of gender  2.11 Equal opportunity  2.12 Sourcing learning resources | **Overall knowledge:** The total number of teachers that responded correctly to any of the 8 of 12 questions.  2.1-b) Talent  2.2-c) Objectives  2.3-c) Assist the teacher cover much content  2.4-d) Desks  2.5-b) By copying other’s work  2.6-a) Hanging; AND c) Softboards; AND d) Shelves  2.7-Any of the four responses of i) checklists; ii) rating scales; iii) project method; AND/OR iv) journaling (total 3 of 4)  2.8-True  2.9-b) biological differences  2.10-a) socially constructed roles  2.11-a),c),d) e), AND f)  2.12-a),c) AND d)  12 Questions (minimum score: 0; maximum score 12)  BASELINE: Calculate the score of each teacher based on the 12 questions. Subsequently, calculate the mean and standard deviation and the median and inter-quartile range (IQR). Disaggregation by sex and county.  To directly answer the indicator the number of teachers meeting the minimum standard (8 of 12 questions – to be revised after baseline) will be calculated. % = number of teachers meeting the minimum standard / total number of teachers surveyed \*100.  ENDLINE: Same calculations as above.  Compute effect size - Cohen d (d = (mean baseline / mean endline) / Average standard deviation).  Compute effect size – Odds ratio  (+min st BL / + min st EL )  -c min st BL - min st EL  Analysis using 50 selected schools per cohort.  **Additional Analysis**  MECP Curriculum concepts (indicator): Total number/percentage of teachers that respond correctly to 2.4, 2.5, 2.6, 2.7, 2.8, 2.9 AND 2.10.  Range: Total number/percentage of teachers that respond correctly to 8 of 12, 9 of 12 and 10 of 12, etc. questions |
| Indicator #10: Number and percentage of ECDE teachers receiving quality mentoring and support from county and zonal, disaggregated by sex and County | Mentoring is a system of guidance where one person shares their knowledge , skills and experience to assist another to improve and progress in their life or career. As per the roles and responsibilities of ECD officials (including County and Zonal officials). This indicator counts mentorship/support not only in terms of the number of visits, but the quality of the visit consisting of four additional criteria listed below (b-e). a) Mentoring takes place once a term; b) Official conducts a classroom observation during the visit to the ECDE Centre; c) Official provides feedback and reflection session with the teacher post classroom observation; d) Reviews professional records (lesson plans) or materials and e) Official provides a documented set of action points and/or recommendations to teacher. | Total number of existing teachers (3a = No) where a support visit was made meeting the minimum criteria of:  a) Each Term (4.1=yes AND 4.2=yes) AND  b) 4.5b= yes AND  d) 4.5c= yes AND  e) 4.5d= yes AND  e) 4.5e= yes AND  / (Divided by)  Total number of teachers surveyed (3a = No) \* 100, disaggregated by teacher sex (1.6=male or female), county official sex (4.4= male or female) and county (1.1).  BASELINE (BL): Calculate the percentage. Disaggregation by sex (teacher and official) and county.  ENDLINE (EL): Same calculations as above.  Compute effect size – Odds ratio  (+criteria BL / +criteria EL )  -criteria BL -criteria EL  Analysis using 50 selected schools per cohort.  Final target is 80%. |
| Frequency of visits by ECDE County and Zonal Officials to teachers for support (by county) | An ECD County/Zonal official, should be visiting an ECD centre at least once a term to carry out support and mentoring functions. | Total number of teachers (3a = No) who have received a support/mentoring visit from either a county or zonal official in the last term (4.1=yes AND 4.2 = Yes) / Total number of teachers surveyed (3a = No )\*100, disaggregated by county (1.1).  BASELINE: Calculate the percentage of teachers receiving a visit.  ENDLINE: Compare to baseline.  Compute effect size – Odds ratio  (+visit BL / +visit EL )  -visit BL -visit EL  Analysis using 50 selected schools per cohort.  Final target is 80%. |
| Level (quality) of mentorship and support received by ECDE teachers (by county) | The mentorship/support activities received by a teacher must include three basic components (B,C,E), but can equally include the following actions on the part of the official:   1. Talk/interact with children 2. Observed a full classroom lesson 3. Hold a meeting with teacher to provide feedback on the observation 4. Review professional records (lesson plans) or materials in classroom 5. Provide a set of written action points or recommendations to follow 6. Provided a follow up visit date | Beyond Standard- 4.5= A,B,C,D,E,F = 1 (all 6)  Slightly Above Standard- B, C, D, E and/or A,F=1 (5 of 6 criteria)  At Standard- B,C,E and/or A,D,F =1 (4 criteria of 6)  Below Standard-0-3 criteria only  BASELINE: Calculate the number / percentage of teachers stating the visit was of at standard (or above). Disaggregation county.  ENDLINE: Compare to baseline.  Compute effect size – Odds ratio  (+quality BL / + quality EL )  - quality BL - quality EL  Analysis using 50 selected schools per cohort.  **Additional Analysis**  Top Priorities for Mentoring (4.7)  Usefulness of Visit (4.6)  Total number of teachers (4.2 = Yes) that rate the visit as either 4 (very useful) OR 5 (extremely useful) to help improve their teacher practice.  Suggested Final target is 80%. |
| Indicator #12b: Level of frequency that parents/or caregivers support the provision of high quality and contextually relevant ECDE services (by county) | Parental engagement refers the variety of opportunities that parents have to participate in supporting their child’s education and that of the ECD centre. The criteria include:   1. Teacher –Parent meetings 2. Participate in developing/making classroom materials 3. Contribute financially or materially to development of classroom materials 4. Storytelling to children 5. Attending information session at ECDE Centre 6. Attending capacity building opportunities at ECDE centre 7. Overall participation by fathers | Seven Questions (Section 3), evaluated using a five-point frequency scale, where 1 never and five is always, in the last year (minimum score: 7; maximum score 35). Adjust denominator based on the number of questions answered – remove for “DNK”. And adjust both the denominator and numerator using the minimum score of ‘7’. Minimum score: 0; maximum score 28.  Indicator met if: 75%  BASELINE: Calculate the percentage of provided by each teacher based on the 7 questions. Subsequently, calculate the mean and standard deviation and the median and inter-quartile range (IQR). Disaggregation by county.  ENDLINE: Same calculations as above.  Compute effect size - Cohen d (d = (mean baseline / mean endline) / Average standard deviation).  Analysis using 50 selected schools per cohort. |
| **Tool 4: BOM Assessment[[58]](#footnote-59)** | |  |
| Indicator #11: % of School Boards of Management (BOM) that are effective (disaggregated by county and type\*)  \*ECD BOM or Shared ECD/Primary BOM | A school board of management which are effective or function, as outlined in the Kenya Gazette Supplement No. 115 of September 4, 2018, Part IV, must meet the following criteria:   1. Election in the last 2 years 2. Meets at least once a term 3. Documents meeting minutes 4. Has an action plan focused on ECD activities for the year (Inc. a) promote school enrolment, b) parent mobilization, c) ensure availability and use of teaching/learning materials, d) financial mobilization) 5. Action plan is in progress or being implemented 6. 2/3 gender representation of membership 7. Mobilizes parents/community members to engage in school activities 8. Members regularly attend school management committee meetings 9. The school management committee approves school expenditure which is based on the budget approved by the committee | Total number of established BOMs (Q 1=1 or 2) that meet 7 of 9 criteria / Total number of ECDE centres assessed (50 centres per cohort) \*100, disaggregated by county.  a) Election (4=in the last 2 years or less (2017)  b) Meets at least once a term (6=3, 2, 1), Verify with 7.  c) Last meeting minutes were documented (9=YES)  d) Has action plan (11=1) AND action plan includes four key action items related to ECDE (13a=1 AND 13b=1 AND 13c=1 AND 13d=1)  e) Action plan is in progress (14=4 or 5) (NA if 1)  f) 2/3 (or 67%) gender representation in membership (3=67% female) (Assess with Q3)  g) Mobilizes parents (15=2, 3, 4, or 5)  h) Members regularly attend (10=1 or 2)  i) School expenditure approved (19=1)  BASELINE: Calculate the percentage of effective BOMs. Disaggregation county and BOM type.  ENDLINE: Compare to baseline.  Compute effect size – Odds ratio  (+criteria BL / +criteria EL )  -critera BL -critera EL  Supplementary analysis includes the various levels:  Total number of BOM’s with 8 of 9 criteria  Total number of BOM’s with 6 of 9 criteria  Total number of BOM’s with 5 of 9 criteria |

# Appendix 3: Listing and Consent Form

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Question** | **Response** | |  |  |  |  |
| Primary School Name: |  | |  |  |  | |
| Country: |  | |  |  |  | |
| Sub-Country: |  | |  |  |  | |
| Zone/Ward: |  | |  |  |  | |
| Head Teacher Name: |  | |  |  |  |  |
| Head Teacher Contact Information: |  | |  |  |  |  |
| Associated MECPK ECDE Center Name: |  | |  |  |  |  |
| Other MECPK ECDE Centers in Area: |  | |  |  |  |  |
| Other non-MECPK ECDE Centres in the Area |  | |  |  |  |  |
|  |  |  |  |  |  |  |
| Student Name | Gender (1. Male / 2. Female) | Attended an ECDE Centre (MEC-K or Non MECP-K ) | Phone Number of Parent | Parent Consent (Yes, No, Unknown) | Parent Name for Consent | Random (Completed After) |
|  |  |  |  |  |  |  |
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# Appendix 4: Tool 1- Child Assessment

**Child Assent Form**

Hello my name is \_\_\_\_\_\_\_\_\_\_\_\_\_\_. I am here to ask some questions and do some activities with you.

Please listen carefully and do the best that you can. Some of the things I might ask are difficult even for older children, but do not worry if you cant do them. Just try your best.

If you do not feel comfortable, we can stop at any time. It is your choice.

Do you have any questions for me before we begin? Is it okay to start?

Yes 🞎 No 🞎 🡪 End Assessment"

|  |  |  |
| --- | --- | --- |
| **PART A: IDENTIFICATION** | |  |
| **No.** | **Question** | **Response** |
| A1 | Date of Assessment | DD/MM/YYYY |
| A2 | Assessor | [drop down] |
| A3 | County | 1. Kisii 2. Kisumu |
| A4 | Sub-County | [drop down] |
| A5 | County/Ward | [drop down] |
| A6 | Primary School name | [drop down] |
| A7 | Linked ECDE Centre | [drop down] |
| A8 | Teacher Name | [enter full name] |
|  |  |  |
| **PART B: CHILD IDENTIFICATION (TEACHER)** | |  |
| **No.** | **Question** | **Response** |
| B1 | Child Number | [enter number] |
| B2 | Name of Child | [enter name] |
| B3 | Child’s sex | 1. Female 2. Male |
| B4 | Did the child attend an ECDE Centre? | 1. Yes – MECP-K ECDE Centre |
| 2. Yes – Another ECDE Centre |
| B5 | Does this child have any disabilities that you are aware about? | 1. Physical |
| 2. Visual |
| 3. Verbal |
| 4. Intellectual |
| 99. Unknown |

**Part C (Scoring Sheet)**

*\*Please refer to enumerator manual for complete instructions and question formulation*

| **No.** | **Domain** | **Assessment Area** | **Scoring** | **Max** |
| --- | --- | --- | --- | --- |
| C1 | S | Child is aware of her/himself and her/his community | |  |
| C1a | S | Name | 0 – If child used only a nickname, or did not provide both first and last names | 2 |
| 1 – if child only provided either first or last name, but not both |
| 2 – if child provided both first and last name |
| 99 - Select Refused/Skipped if child did not want to answer the question |
| C1b | S | Age | 0 – If child cannot say or indicate with their fingers how old they are | 2 |
| 1 – if child can show with their fingers how old they or verbally say their age, with some prompting |
| 2 – if child provided age verbally without prompting or time lapse (age should be between 5 and 7 years, although up to 10 years is allowed) |
| 99 - Select Refused/Skipped if child did not want to answer the question |
| C1c | S | School | 0 – Child cannot name their school or provides the wrong school name | 2 |
| 1 – Child can name the school, but partially incorrect (full name not used or words missing) |
| 2 – Child correctly provides the name of the school as it appears on the list |
| 99-Select Refused/Skipped if child did not want to answer the question |
| C1d | S | Where they live | 0 – Child cannot indicate or say anything about where they live | 2 |
| 1 – Child can name the locality or village where they live |
| 2 – Child provides full details of where they live including village, county and country |
| 99-Select Refused/Skipped if child did not want to answer the question |
| C2 | G | Can hop 5 times on one foot | 0 – Child cannot complete any of the task | 2 |
| 1 – Child can complete some of the task (1, 2, 3, 4 hops, but not 5) |
| 2 – Child hops five times on one foot without assistance or falling |
| 99 – Select Refused/Skipped if child did not want to complete the exercise |
| C3 | G | Can stand on one foot for 10 seconds with eyes closed | 0 – Child cannot complete the task | 2 |
| 1 – Child can complete task partially |
| 2 – Child stands on one foot for 10 seconds and keeps eyes closed without assistance or falling |
| 99 - Refused/Skipped if child did not want to complete the exercise |
| C4 | F | Child can reproduce the shape of a triangle and oval without assistance | 0 – Child cannot complete the task fully (can’t trace either shape) | 3 |
| 1 – Child can trace one of two shapes and requires assistance |
| 2 – Child traces both shapes, but struggles with tracing action |
| 3 – Child traces both shapes well within the allocated time. |
| 99 - Select Refused/Skipped if child did not want to complete the exercise |
| C5 | F | Child can draw a human stick figure | 0 – Child cannot complete the task fully (cannot make a figure or figure is distorted) | 2 |
| 1 – Child make stick figure which resembles your own with some assistance |
| 2 – Child able to make the stick figure closely resembling your own without assistance (within 2 minutes) |
| 99- Select Refused/Skipped if child did not want to complete the exercise |
| C6 | F | Child follows a 4-step folding task | 0 – Child cannot complete any of the task | 4 |
| 1 – Child able to complete one step within 1 cm, and without assistance |
| 2 – Child able to complete two steps within 1 cm, and without assistance |
| 3 – Child able to complete three steps within 1 cm, and without assistance |
| 4 – Child able to complete all four steps within 1 cm, and without assistance |
| 99 - Select Refused/Skipped if child did not want to complete the exercise |
| C7 | C | Child can identify eight body parts | 0 – Child cannot complete the task | 6 |
| 1 – 6 One point for each body part correctly identified |
| 99- Refused/Skipped if child did not want to complete the exercise |
| C8 | C | Child can match/pair six images | 0 - Could not do or did not attempt the task | 3 |
| 1= Child correctly identifies one pair |
| 2= Child correctly identifies two pairs |
| 3= Child correctly identifies all three pairs |
| 99- Refused/Skipped if child did not want to complete the exercise |
| C9 | C | Child can name the months of the year in the correct order | 0 – Child cannot complete any of the task | 3 |
| 1 – Child partially completed some of the months in order |
| 2 – Child able to complete all the months in order, with one prompt |
| 3 – Child able to complete all the months in order with no prompts |
| 99 - Refused/Skipped if child did not want to complete the exercise |
| C10 | C | Child understands five questions based on story | 0 – Child cannot answer any of the questions | 5 |
| 1 – Child able to answer one question |
| 2 – Child able to answer two questions |
| 3 – Child able to answer three questions |
| 4 – Child able to answer four questions |
| 5 – Child able to answer all five questions |
| 99 - Select Refused/Skipped if child did not want to complete the exercise |
| C11 | L | Child can write their name | 0 – Child could not (scribbles) or attempt to write any letters | 3 |
| 1 – Child writes some of the letters of their name |
| 2 – Child write all the letters in the correct order |
| 3 – Child writes all the letters in the correct order and right orientation within 2 minutes |
| 99- Refused/Skipped if child did not want to complete the exercise |
| C12 | L | Child can listen and follow instructions/directions for (3 steps) | 0 – Child cannot complete any of the task | 3 |
| 1 – Child able to complete one step without assistance |
| 2 – Child able to complete two steps without assistance |
| 3 – Child able to complete three steps without assistance |
| 99 - Refused/Skipped if child did not want to complete the exercise |
| C13 | L | Child can name at least 5 dangerous objects in a house | 0 – Child cannot complete any of the task or answer any correctly | 5 |
| 1 – Child able to provide 1 example |
| 2 – Child able to provide 2 examples |
| 3 – Child able to provide 3 examples |
| 4 – Child able to provide 4 examples |
| 5 – Child able to provide 5 examples |
| 99 - Select Refused/Skipped if child did not want to complete the exercise |
| C14 | L | Child understands vocabulary related to position | 0 – Child cannot complete the task or answer any correctly | 1 |
| 1 – Child able to correctly identify the bottom block and only points to one |
| 99 - Select Refused/Skipped if child did not want to complete the exercise |
| 66 - Blocks/materials not available |
| C15 | L | Child understands vocabulary related to size | 0 – Child cannot complete any of the task or answer any correctly | 2 |
| 1 – Child able to answer one of the questions (either size or length) |
| 2 – Child able to answer both size and length questions correctly |
| 99 - Select Refused/Skipped if child did not want to complete the exercise |
| C16 | L | Child can correctly read two 3 letter words in English and Kiswahili | 0 – Child cannot complete any of the task or answer any correctly | 2 |
| 1 – Child able to read one word correctly |
| 2 – Child able to read both words correctly |
| 99 - Refused/Skipped if child did not want to complete the exercise |
| C17 | L | Child can correctly read two 4 letter words in English and Kiswahili | 0 – Child cannot complete any of the task or answer any correctly | 2 |
| 1 – Child able to read one word correctly |
| 2 – Child able to read both words correctly |
| 99 - Refused/Skipped if child did not want to complete the exercise |
| C18 | S | Child names friends he/she plays with | 0 – Cannot name any friend’s name | 5 |
| 1 – 5 - One point for each friend named |
| 99 - Refused/Skipped if child did not want to complete the exercise |
| C19 | S | Child can identify sad and happy vocabulary and feelings | a) 0 = Incorrect/Don’t Know 1=Correct 99 Refused/Skipped | 3 |
| b) 0 = Incorrect/Don’t Know 1=Correct 99 Refused/Skipped |
| c) 0 = Incorrect/Don’t Know 1=Correct 99 Refused/Skipped |
| C20 | S | Child can identify how someone else feels (empathy) | a) 0 = Incorrect/Don’t Know 1=Correct 99 Refused/Skipped | 2 |
| b) 0 = Incorrect/Don’t Know 1=Correct 99 Refused/Skipped If A was skipped, this will be 0 |
| C21 | S | Child identifies solutions to a social conflict situation | a) 0 = Incorrect/Don’t Know 1=Correct 99 Refused/Skipped | 1 |

|  |  |  |
| --- | --- | --- |
| **Part D: COVID-19 IMPACT** | |  |
| After the assessment, please ask the child the following questions. | | |
| **No** | **Question** | **Categories** |
| D1 | How did you feel when school closed because of Coronavirus (COVID-19)? (reference to the prolonged school closure and not school holidays) (multiple response) | Sad |
| Happy |
| Angry |
| Okay |
| No emotion |
| I don’t know/remember |
| Other, please specify |
| D2 | Why did you feel this way? (multiple response) | Missed my friends |
| Missed my teacher |
| Missed learning (e.g. reading, writing, playing, modelling) |
| I don’t like school |
| I like being at home with my family |
| I don’t know |
| Other, please specify |
| D3 | When schools closed, what were you doing at home? (multiple response) | Played with siblings or myself |
| Helped out at home |
| Nothing, was bored |
| Watched TV |
| Learning (reading, writing) |
| Visited relatives |
| I don’t remember |
| Other, please specify |
| D4 | Did anyone help you learn at home? | Yes |
| No |
| No response / Don't know or remember |
| D5 | Who helped you learn? (multiple response) (if Yes to D4) | My mom |
| My dad |
| My brother(s) |
| My sisters(s) |
| Other relative |
| No response / Don't know or remember |
| Other, please specify |
| D6 | How did they help you learn? (multiple response) (if Yes to D4) | Read to me |
| Taught me numbers |
| Taught me letters |
| Painted/drew/colour with me |
| Played with me |
| Played games (electronic) with me |
| Provided exercises/work for me to do |
| Other, please specify |
| D7 | These days we are talking a lot about Coronavirus, when you hear this word Coronavirus, what does this mean to you? (open response) | \_\_\_\_\_\_\_\_\_\_\_\_ |
| D8 | At school, what worries you about Coronavirus? (multiple response) | Nothing |
| Getting sick |
| Getting others sick |
| Wearing masks |
| Dying |
| No response / Don't know or remember |
| Other, please specify |

**Part E: Observations**

At the end of the assessment, complete the following based on observation during the assessment

| **No.** | **Area** | **Scoring** |
| --- | --- | --- |
| E1 | Persistent with tasks | 3 - Persists with each task |
| 2 - Attempts each task briefly, but gives up |
| 1 - Attempts tasks after much encouragement |
| 0 - Refuses to engage in some or all tasks |
| E2 | Attention span during tasks | 2 - Focused on tasks voluntarily |
| 1 - Focused on tasks with encouragement of assessor |
| 0 - Easily distracted |
| E3 | Attention to Directions | 2 - Listens to complete direction before starting |
| 1 - Starts after hearing partial instructions |
| 0 - Starts immediately without waiting for instructions |
| E4 | Comprehension of Questions and Instructions | 3 - Comprehends all questions and instructions |
| 2 - Comprehends only after multiple repeated instructions |
| 1 - Has difficulty comprehending most of the instructions |
| 0 - Does not comprehend most questions/instructions |
| E5 | Body movement | 2 - Sits quietly |
| 1 - Some squirming |
| 0 - Constant motion |

# Appendix 5: Tool 2- Classroom Observation

*Paper-version*

**INSTRUCTIONS FOR CLASSROOM OBSERVATION TOOL**

In Each term, you are to visit an ECDE classroom to carry out an observation on the teacher practice and learning environments. This visit is made on behalf of MECP-K and the County Government as part of the professional development course to support and enable the teacher to apply their learning and improve their teaching practices. Thus, this is a mentorship visit, not a supervision visit.

Remember you are there to learn, it is a visit not an inspection. Dress so as not to be intimidating.

Let the teacher understand that their names will not be shared with anyone other than the MECP-K team and only used for follow up purposes.

You MUST obtain informed consent from the teacher. This means reading the informed consent statement and having them sign it.

It is important that you arrange in advance with the head teacher and teacher your visit and that the team is punctual to the agreed timetable with the head teacher, but still remain flexible.

Decide with the head teacher and teacher how you will be introduced and where in the classroom you will be.

Observe discretely and to the side or back of classroom as not to disrupt the lesson. Remember that note taking can be disconcerting and may make your visit look like an inspection. Please tell the teacher that this is a support visit and that the visit includes a classroom observation, followed by a one on one discussion to discuss progress and challenges and what teachers can do to address the challenges.

Don’t distract the teacher during the lesson from his/her work but be prepared to talk and show interest.

Listen to staff and pupils, be courteous, friendly and never critical. You can interact with the teacher and children if you are invited to do so, otherwise do not interrupt the lesson.

Remember why you are there. Don’t lose sight of the purpose of your visit.

·       At the conclusion of the classroom observation thank the teacher and the students for their cooperation.

·       If the teacher asks you for your feedback, leave him or her with positive comments. Carry out a follow up with them after the children have left

·       Make a positive comment to the students before leaving. “You have a very nice class.” , “I am sure your parents are very proud of you.” etc. "

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  | |  |  |
|  | **Date of assessment** |  | **DD/MM/YYYY** | |  | **County** |  | | [drop down on tablet] |  |
|  |  |  |  |  |  |  |  | |  |  |
|  | **Ward/Zone** |  | [drop down on tablet] | |  | **Teacher Name** |  | | [enter first and last name] |  |
|  |  |  |  |  |  |  |  | |  |  |
|  | **Sex of ECDE Teacher** |  | 1. Female 2. Male [drop down on tablet] | |  | **ECDE Centre** |  | | [drop down on tablet] |  |
|  |  |  |  |  |  |  |  | |  |  |
|  | **Level** |  | 1. PP1 2. PP2 3. Both [ drop down on tablet] | |  | **Highest Level of Education** |  | | [drop down on tablet] |  |
|  |  |  |  |  |  |  |  | |  |  |
|  | **Class Enrollment** |  | BOYS:\_\_\_\_\_\_\_\_\_\_\_ GIRLS:\_\_\_\_\_\_\_\_\_\_\_ | |  | **Enrollment of Day** |  | | BOYS:\_\_\_\_\_\_\_\_\_\_\_ GIRLS:\_\_\_\_\_\_\_\_\_\_\_ |  |
|  |  |  |  |  |  |  |  | |  |  |
|  | **Start Time** |  |  | |  | **End Time** |  | |  |  |
|  |  |  |  |  |  |  |  | |  |  |
|  | **Name of Assessor** |  | [text] | |  | **Sampled School** |  | | 1. Yes 2. No (verify against school list) |  |
|  |  |  |  |  |  |  |  | |  |  |
|  | **PART A: CLASSROOM PRACTICES [9]** | | | |  | **Score (0-3)** |  | |  |  |
|  |  |  |  |  |  |  |  | |  |  |
|  | **1. Teaching and Learning Materials** | 1.1 | Use of teaching and learning materials during lesson delivery | |  |  |  | | Observations/Evidence: |  |
|  | 1.2 | Use of developmentally and age-appropriate teaching and learning activities | |  |  |  | |  |
|  | 1.3 | Teacher provides materials and activities for children to cooperate and interact with each other | |  |  |  | |  |
|  | 1.4 | Use of gender sensitive materials (e.g. using a book with a male driver - teacher goes beyond the stereotype in the material to explore issues of equality) | |  |  |  | |  |
|  |  |  |  |  |  |  |  | |  |  |
|  | **2. Daily Routine** | 2.1 | Availability of all updated documents (e.g. schemes of work, lesson plan, record of work, health record, assessment record, attendance register) | |  |  |  | | Observations/Evidence: |  |
|  | 2.2 | Daily schedule is written, posted, followed consistently and shared with learners. | |  |  |  | |  |
|  | 2.3 | Logical lesson presentation | |  |  |  | |  |
|  | 2.4 | Teacher is following lesson plan | |  |  |  | |  |
|  | 2.5 | Children activities are based on their individual needs | |  |  |  | |  |
|  |  | 2.6 | Teacher provides opportunities for both structured and unstructured play | |  |  |  | |  |
|  |  |  |  |  |  |  |  | |  |  |
|  | **3. Adult and Child Interaction (Delivery)** | 3.1 | Caregivers/ teachers interact freely with all children | |  |  |  | | Observations/Evidence: |  |
|  | 3.2 | Caregivers/teachers provide a balance of teacher- and child-initiated activities in large and small groups (grouping techniques). | |  |  |  | |  |
|  | 3.3 | Use of different teaching strategies (e.g. songs, rhymes, stories) | |  |  |  | |  |
|  | 3.4 | Use of positive and natural language (gentle tone, natural voice, polite language, appropriate language to child's age and context, use of child's name) | |  |  |  | |  |
|  |  | 3.5 | Teacher actively listens and supports children during activities | |  |  |  | |  |
|  |  | 3.6 | Teacher providing equal opportunities for boys and girls to participate in class activities (asking both girls and boys, non-traditional play, etc.) | |  |  |  | |  |
|  |  |  |  |  |  |  |  | |  |  |
|  | **4. Teacher Attitude** | 4.1 | Teachers displays energy and enthusiasm | |  |  |  | Observations/Evidence: | |  |
|  | 4.2 | The teacher shows positive attention in his/her interaction with children (smile, nod, use a calm voice, gets down to the child’s level etc.) | |  |  |  |
|  | 4.3 | The teacher expresses using variations for emphasis, humor, surprise and delight. | |  |  |  |
|  | 4.4 | The children call the teacher by name. | |  |  |  |
|  | 4.5 | The teacher attends to a child if he or she is upset. [Enter N/A if not applicable) | |  |  |  |
|  |  |  |  |  |  |  |  | |  |  |
|  | **PART B: CLASSROOM AND EXTERNAL ENVIRONMENT [10]** | | | |  | **Score (0-3)** |  | |  |  |
|  |  |  |  |  |  |  |  | |  |  |
|  | **5. Classroom (Indoor) teaching and Learning Environment** | 5.1 | Safety of the indoor teaching and learning environment | |  |  |  | | Observations/Evidence: |  |
|  | 5.2 | Cleanliness of the classroom environment including the care givers/teachers, materials and toys | |  |  |  | |  |
|  | 5.3 | Classroom arrangement provides adequate space for activities and learning (refer to guide) | |  |  |  | |  |
|  | 5.4 | Learning areas are systematically arranged and labeled | |  |  |  | |  |
|  | 5.5 | The indoor teaching and learning environment is designed to engage and integrate both boys and girls | |  |  |  | |  |
|  |  | 5.6 | Availability of locally and appropriate number of materials for the number of children, variety, durable, safe, appropriate for age (larger for younger children) | |  |  |  | |  |
|  |  | 5.7 | Materials are arranged systematically and labelled clearly | |  |  |  | |  |
|  |  | 5.8 | Materials can be reached (accessible) by children | |  |  |  | |  |
|  |  | 5.9 | Five designated learning areas (language, math, environmental, psychomotor, religious) | |  |  |  | |  |
|  |  | 5.10 | Indoor sand and water learning areas | |  |  |  | |  |
|  |  |  |  |  |  |  |  | |  |  |
|  | **6. Outdoor Environment** | 6.1 | Availability of a designated outdoor space | |  |  |  | | Observations/Evidence: |  |
|  | 6.2 | Availability of outdoor equipment and materials (sand and water play areas) | |  |  |  | |  |
|  | 6.3 | Safety of outdoor equipment | |  |  |  | |  |
|  | 6.4 | Play equipment and/or locally made materials which are developmentally appropriate and respond to three or more senses | |  |  |  | |  |
|  |  |  |  |  |  |  |  | |  |  |
|  | **Has this teacher received any training from MECP-K in the past?** | | | |  | 1. Yes 2. No |  | |  |  |
|  | **Action Points with Teacher:** | | | |  |  |  | |  |  |
|  |  | | | |  |  |  | |  |  |
|  | This section should document the discussion held with the teacher, areas of improvement agreed upon and when they will take place | | | | | | | | |  |
|  |  |  |  |  |  |  |  | |  |  |

# Appendix 6: Tool 3- Teacher Survey

**INSTRUCTIONS FOR TEACHERS**

Prior to receiving training, we would like to carry out a short survey with you. The objective is to understand more about your knowledge on the ECDE curriculum in order to help us tailor the training program to the needs and priorities that you have. In addition, it will help us get a better understanding of the support you do or do not receive, and how our programming can serve you better. Finally, it will explore your experience in how parents have been engaged in the education of their children.

The survey should take approximately 20 minutes to complete. We ask you to please answer each question to the best of your ability. Your names will not be used, and the survey is both confidential and anonymous. Your responses will not be shared with head teachers or anyone outside of MECP-K and individual responses will not be known.

This is a voluntary survey, and it is your choice whether to participate or not. There will be no consequences to you if you choose not to participate, but we do hope that you do, as the information will help us improve our programming and training.

If you have any questions during the completion of this survey, please do ask the training facilitator here today for clarifications. Once you have completed the survey, please hand it back to the training facilitator, who will place this in a sealed envelope.

Do we have your consent for participation in this survey? (check one)

⬜ YES

⬜ NO (If NO, please give the survey form to the training facilitator and wait for the training to begin)

Thank you for your participation.

**Part A: Background**

Please answer the following questions related to the ECDE centre you are affiliated with, where it is located and some basic background information.

| **#** | **Question** | **Response Code** |
| --- | --- | --- |
| 1.1 | In which County do you work? (circle one) | 1. Kisii 2. Kisumu |
| 1.2 | What is the Sub-County? (enter text) |  |
| 1.3 | What is the Zone (Kisumu) or Ward (Kisii)? (enter text) |  |
| 1.4 | What is the name of the ECDE Centre of where you work? (write out in full) |  |
| 1.5 | Which Class do you teach? (circle one only) | 1. Pre-Primary 1 2. Pre-Primary 2 3. Both |
| 1.6 | What is your sex? (circle one) | 1. Female 2. Male |
| 1.7 | How long have you been an ECDE teacher?  (circle one) | 1. First year (new teacher) 2. 1 year 3. 2-3 years 4. 4-5 years 5. More than 5 years |
| 1.8 | What is your highest level of education completed? | 1. Primary  2. Secondary  3. College  4. University  5. No education |
| 1.9 | Have you received any previous training from MECPK in the past 12 months, other than this training? | 1. Yes 2. No |
| 1.10 | In which County do you work? (circle one) | Kisii 2. Kisumu |

**Part B: ECDE Curriculum**

The following questions ask about your knowledge areas on the official early childhood development curriculum. Please do your best to answer each of the questions. For some questions, if you do not know a response, you can tick the box labelled ‘don’t know’. This information will only be used to help improve our training and programming. Please remember that no one will know your individual responses.

| **#** | **Question** |
| --- | --- |
| 2.1 | **Which of the following is NOT a component of the Basic Education Curriculum? (Tick One only)**  a) ⬜ National Goals of Education  b) ⬜ Talents  c) ⬜ Learning Outcomes  d) ⬜ Values  e) ⬜ Don’t Know |
| 2.2 | **All the following are elements of schemes of work in the curriculum design EXCEPT:**  **(Tick One only)**  a) ⬜ Strand  b) ⬜ Reflection  c) ⬜ Objectives  d) ⬜ Learning Outcomes  e) ⬜ Assessment  f) ⬜ Don’t Know |
| 2.3 | **Which of the following are the result of ‘Key Inquiry Questioning’ during lesson delivery?**  **(Tick all that apply)**   1. ⬜ Assists to help focus learning 2. ⬜ Allow learners to explore ideas 3. ⬜ Assist the teacher cover much content 4. ⬜ Encourage collaboration amongst learners and teachers 5. ⬜ Foster development of critical thinking and problem-solving skills 6. ⬜ All of the above 7. ⬜ Don’t Know |
| 2.4 | **Which of following is NOT an element of a stimulative learning environment?**  **(Tick One only)**   1. ⬜ Well labeled learning corners 2. ⬜ Adequate space 3. ⬜ Age appropriate materials 4. ⬜ Desks 5. ⬜ Don’t Know |
| 2.5 | **All of the following are ways in which children learn, EXCEPT one. (Tick One only)**  a) Visual ⬜ b) By copying other’s work ⬜ c) Auditory ⬜ d) Kinesthetic ⬜ e) ⬜ Don’t Know |
| 2.6 | **Children’s learning environment should be well labelled. Which of the following are strategies that you can use in a classroom setting. (Tick all that apply)**  a) Hanging ⬜ b) Hardboards ⬜ c) Softboards ⬜ d) Shelves ⬜ e) All of these ⬜  f) Don’t Know ⬜ |
| 2.7 | **Name three types or forms of assessment used in Early Years Learning.**  1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 2.8 | **Both the father and the mother have equal responsibilities for participation in their child’s preschool learning. TRUE or FALSE?**  True ⬜ False ⬜ |
| 2.9 | **What does the term ‘sex’ refer to? (Tick One only)**   1. ⬜ Sex refers to the social differences between males and females 2. ⬜ Sex refers to the biological differences between males and females 3. ⬜ Sex is determined by social factors like history, culture, societal norms or religion 4. ⬜ All of the above 5. ⬜ Don’t Know |
| 2.10 | **What does the term ‘gender’ refer to? (Tick One only)**   1. ⬜ Gender is the socially constructed roles and identifies of women/girls and men/boys 2. ⬜ Gender is determined by biology 3. ⬜ Gender does not change without surgical intervention 4. ⬜ All of the above 5. ⬜ Don’t Know |
| 2.11 | **How do you ensure that girls and boys are given equal opportunities in classrooms?**  **(Tick all that apply)**   1. ⬜ Using materials that respond to the needs of boys and girls 2. ⬜ Encourage boys to allow girls to play and learn like them 3. ⬜ Using appropriate language at all times 4. ⬜ Allowing both boys and girls equal chances to participate in class activities 5. ⬜ Being consistent in how you respond to both boys and girls 6. ⬜ Using grouping during classroom learning that allows boys and girls to interact |
| 2.12 | **What are the factors that you should consider when sourcing for learning resources for your school? (Tick all that apply)**   1. ⬜ Versatility 2. ⬜ The teacher 3. ⬜ Age appropriateness 4. ⬜ Availability 5. ⬜ Time of the year 6. ⬜ All of the above |

**Part B.2: COVID-19 Content**

The following questions ask about your knowledge areas on COVID-19 (coronavirus) information you received during the training. Please do your best to answer each of the questions. For some questions, if you do not know a response, you can tick the box labelled ‘don’t know’. This information will only be used to help improve our training and programming. Please remember that no one will know your individual responses.

| **#** | **Question** |
| --- | --- |
| 2.2a | **Which of the following is NOT a measure to ensure a clean classroom? (Tick One only)**  a) ⬜ Practice with children how to wash their hands  b) ⬜ Washing of hands with soap and water every time before you go home  c) ⬜ Avoid eating raw food or fruits without washing them  d) ⬜ Place learning and play materials in a box to rid of any bacteria  e) ⬜ Don’t Know |
| 2.2b | **Where should you get reliable information on COVID-19 (coronavirus)? (Tick all that apply)**   1. ⬜ Kenyan Ministry of Health 2. ⬜ ECD County officials 3. ⬜ World Health Organization (WHO) 4. ⬜ Trusted media/newspaper sources 5. ⬜ All of the above 6. ⬜ Don’t Know |
| 2.2c | **When should children be encouraged to wash their hands? (Tick all that apply)**   1. ⬜ Before engaging in a new activity 2. ⬜ After toileting 3. ⬜ Before and after eating 4. ⬜ When touching any surface in the classroom 5. ⬜ All of the above |
| 2.2d | **What are some of the things you can do when feeling stressed? (Tick all that apply)**   1. ⬜ Spend some time alone each day, if possible 2. ⬜ Maintain a healthy lifestyle, including proper diet, sleep and exercise 3. ⬜ Take a break when children are asleep 4. ⬜ All of the above   e) ⬜ Don’t Know |
| 2.2e | **What role can parents play when schools are closed due to COVID-19 (coronavirus)? (Tick all that apply)**  a) ⬜ Provision of health foods both at home and at school  b) ⬜ Supervise children when doing extended learning at home  c) ⬜ Act as role models as children learn through observation and imitation  d) ⬜ Call the teacher to find out what they should do |

**Part C: Parent Engagement**

The following set of questions ask about your experience of how parents have been involved in the ECDE Centre and in their child’s education. Please respond based on the **last school year** only, thinking about all the parents of children in your class.

For each question and row, based on a scale from 1 to 5, where 1 is no participation (Never) and 5 is frequent/high participation (Always), select the response that reflects your experience.

|  |  |  |  |
| --- | --- | --- | --- |
| 3a. | **Are you a new ECDE teacher (just graduated and have never taught a class yet)?** | 1. Yes 2. No | **🡪 If YES, End. Give Survey back to Facilitator** |

| **#** | **Question** | **1**  **Never** | **2**  **Rarely** | **3**  **Some-times** | **4**  **Often** | **5**  **Always** |
| --- | --- | --- | --- | --- | --- | --- |
| **3** | **In the last 12 months, how frequently have parents been involved in each of the following activities? (circle one response per row)** | | | | | | |
| 3.1 | Teacher-Parent Meetings | 1 | 2 | 3 | 4 | 5 |
| 3.2 | Developing/making classroom materials | 1 | 2 | 3 | 4 | 5 |
| 3.3 | Contributing (materials or financial) to the development of classroom materials | 1 | 2 | 3 | 4 | 5 |
| 3.4 | Storytelling to children | 1 | 2 | 3 | 4 | 5 |
| 3.5 | Attend information sessions at ECDE Centre | 1 | 2 | 3 | 4 | 5 |
| 3.6 | Attend capacity building opportunities at ECDE Centre | 1 | 2 | 3 | 4 | 5 |
| 3.7 | Overall participation by fathers | 1 | 2 | 3 | 4 | 5 |
| 3.8 | During the closure of schools during the COVID-19 pandemic, did you contact any parents? | 1. Yes 2. No (If No, Go to Part D) | | | | |
| 3.9 | What was the reason why you contacted parents? List all that apply | 1. Provide information about COVID-19 preventative measures  2. Provide information about closure or opening of schools  3. To provide suggestions on how to continue learning at home with their children  4. Other (Specify): | | | | |

**Part D: Support and Mentoring**

The following set of questions pertain only to the **last school term** and are related to any support or mentorship you receive from county government or zonal ECDE officers. Circle one response, unless otherwise noted.

| **#** | **Question** | **Response Code** | |
| --- | --- | --- | --- |
| 4.1 | In the last term, did the ECDE County or Zonal Officer visit the ECDE Centre where you work? | 1. Yes 2. No 🡪 **If No go to Q# 4.7**   3. Don’t Know **🡪 Go to Q# 4.7** | |
| 4.2 | In the last term, did a County or Zonal ECDE County Officer visit your classroom? | 1. Yes  2. No **🡪 If No go to Q# 4.7** | |
| 4.3 | Who visited your classroom? | 1. County Officer 2. Zonal Officer 3. Both 4. Don’t Know | |
| 4.4 | Was the ECDE County or Zonal Officer female or male? | 1. Female 2. Male | |
| 4.5 | **During this visit last term, what did the officer do?** (circle yes or no for each of the following areas) | | |
| 4.5a | Interacted/talked with the children to make them comfortable about the visit | 1. Yes | 2. No |
| 4.5b | Observed a full lesson | 1. Yes | 1. No |
| 4.5c | Held a meeting with me to provide feedback on their observation | 1. Yes | 2. No |
| 4.5d | Reviewed professional records (lesson plans) or materials | 1. Yes | 2. No |
| 4.5e | Provided a set of written action points or recommendations for me to follow | 1. Yes | 2. No |
| 4.5f | Provided an exact date for his/her next visit to your class? | 1. Yes | 2. No |
| 4.5g | Visited my classroom only (no observation of lesson) | 1. Yes | 2. No |
| 4.5h | Provide information on COVID-19 protocols for schools | 1. Yes | 2. No |
| 4.6 | On a scale from 1 to 5, where 1 is very low and 5 is very high, how useful was the visit by the ECDE official in terms of improving your classroom practice? (circle one) | 1. Not useful at all  2. Slightly useful  3. No opinion (neutral)  4. Very useful  5. Extremely useful | |
| 4.7 | What are your **top three priorities** for which you need support from an ECD official to improve your teaching or classroom environment?  1.  2.  3. | | |

**Thank You for completing this survey. Please hand this form back to the training facilitator.**

# Appendix 7: Qualitative Data Collection Tools

**Tool A: FGD Guide with Students**

|  |  |  |  |
| --- | --- | --- | --- |
| Date of FGD |  | Facilitator Name |  |
| School Name |  | County |  |
| Sub-County |  |  |  |
| Type of FGD | 1. Girls MECP-K  2. Boys MECP-K  3. Girls Non-MECP-K  4. Boys Non-MECP-K | Number of Participants  (use participant form as well) |  |

|  |
| --- |
| Hello, my name is \_\_\_\_\_\_\_\_ . I am very happy to be here with you today to have a short conversation with you about your school. This is not a test, and everyone’s answers are correct. We are here to learn from you, and we hope we also have some fun. Does everyone understand?  What you say won’t be shared with your teachers, parents or friends. It will remain private. We hope that you will feel comfortable to speak freely and honestly about your experiences. Since everyone’s opinion is important, we need to make sure that everyone gets the chance to speak. You do not need to raise your hand, but we can all take turns. Is this, okay?  You are not forced to participate. It is your choice. Also, if you do not want to answer a question, you do not need to. But we do hope that you will because your opinions are very important.  [Ask if anyone has any questions before beginning]. Is everyone ready to begin? |

Materials Required: Happy Face and Sad Face on piece of paper.

|  |  |
| --- | --- |
| Introduction | Welcome everyone and thank you for joining. Go around a circle and ask the child their name, how old they are and ask them a simple question like “what is your favourite colour/sport/fruit (as appropriate)”.  *Facilitator: use the participation form to record child initials, gender and age* |
| About Schooling | 1. Who here likes coming to school? Can you tell me why? 2. Can you tell me what your liked best about PP2, before coming to this school? 3. Who here does not like coming to school? Can you tell me why? |
| The “H” – To explore closure of schools  (Place happy face sign on one side of classroom and sad face sign on the other side of the classroom) Ensure there is room for children to run/walk to each side | 4. We are going to do a small game. Let’s all stand up!  *Using the H Methodology (A line where one end of the classroom is “Like/Happy” and the other end is “Dislike/Sad”), ask the children to stand up and explain that you will ask a question and that if they feel a certain way, they will go to one side of the classroom and if the opposite they will go to the other end. Ensure you indicate what each side of the classroom means, based on the question. After placement, have children explain why they that spot on the line:*   1. Adults are talking a lot about “coronavirus”. When you hear about this, how does that make you feel? (if sad/scared go to one end, if not scared go to the other end. If you don’t know the word, its okay, stay in the middle). 2. How do you feel when teachers ask you to wash your hands? (like/happy on when end and sad/dislike on the other end)   PROBE: Why do you think it is important to wash your hands? What other things do teachers tell you should do to stay clean and protect yourself?   1. How did you feel when you do not see your friends from school?   PROBE: Was there a time when you did not go to school (because of coronavirus) What did you miss most? Did you feel lonely?  Ask children to sit down again in the circle. |
| Parent Engagement | 4. How did you feel when school closed because of Coronavirus (COVID-19)?  5. Was there anything you worried about?  6. What was your favourite thing to do at home?  7. Did any one help you do learning at home? What kind of things did you learn with them? (probe around reading, play, drawing/colouring, counting, etc.)  8. Who helped you do these things? (probe around frequency as well)  9. Now that you have started grade 1, . What are you are excited to learn in class? |
| Closing | This has been a great conversation. Did everyone have a chance to say what they wanted? Is there anything you would like to add? |

**Tool B: FGD Guide with Parents**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Date of FGD |  | Facilitator Name |  | |
| School Name |  | County |  | |
| Sub-County |  |  |  | |
| Type of FGD | 1. Parent FGD | Number of Participants  (use participant form as well) | *F* | *M* |

|  |
| --- |
| Hello, my name is \_\_\_\_\_\_\_\_ . I am here today on behalf of MECP-K and we wanted to talk to parents about their experience during the recent school closures and how that may (or may have not) affected your children. We are here to learn from you and hope our conversation today will help us understand how to better support parents and children.  What we discuss will stay confidential and will not be shared with the school, teachers or anybody in this community. It will remain private. We hope that you will feel comfortable to speak freely and honestly about your experiences. We would like to record the discussion so we can better remember the conversation. Is everyone comfortable with this? If not, we will only take notes.  You are also not obligated to respond to any question. It is your choice. Also if you do not want to answer a question, you do not need to. But we do hope that you will because your opinions are very important.  [Ask if anyone has any questions before beginning]. Is everyone ready to begin? |

|  |  |
| --- | --- |
| Introduction | Welcome everyone and thank you for joining. Go around a circle and ask the parent their first name, who lives in their family, how old their child is and the gender of their child.  *Facilitator: use the participation form to record the parents’ initials, gender and marital status* |
| Closures of Schools | 1. As you know the schools were recently closed because of the coronavirus pandemic. Who here has heard about this pandemic? 2. What kind of information did you receive concerning the pandemic from schools? (probe if this was from the ECD centre or the primary school) |
| Impact on children | 1. How do you think the closing of schools affected your children? (probe around children’s emotions/feelings, social, physical) 2. What do you believe was the most difficult aspect for them? |
| Parent Engagement | 1. Did the ECDE teachers/schools provide you any guidance in terms of what you could do at home with them? If yes, what were they? (probe around reading, play, counting, etc.) 2. Who in your household was most involved in this? 3. How often were you able to do this considering your other responsibilities at home? 4. What kind of challenges did you encounter in doing the things that they suggested? 5. If no, were you able to undertake any learning activities with your child? (probe around reading, play, counting, etc.) |
| Return to School | 1. Now that your children are back in school, how do you think they are doing? Has going back to school been difficult for them after a long closure? 2. How well do you think pre-primary prepared them for entry into primary 1? Please explain. 3. Are you aware of anything that the schools are doing to ensure the children are safe? 4. Do your children talk about these things when they come home? What do they say? |
| Closing | This has been a great conversation. Did everyone have a chance to say what that they wanted? Is there anything you would like to add? |

**Tool C: Interview with ECD County Officials**

|  |  |  |  |
| --- | --- | --- | --- |
| Date of Interview |  | Facilitator Name |  |
| County |  | Gender |  |

|  |
| --- |
| Hello, my name is \_\_\_\_\_\_\_\_ . I am here today on behalf of MECP-K and we wanted to talk to you about the recent school closures and how that may (or may have not) affected children. We are here to learn from you and hope our conversation today will help us understand how to better support parents and children.  What we discuss will stay confidential and will not be shared with the school, teachers or anybody in this community. It will remain private. We hope that you will feel comfortable to speak freely and honestly about your experiences. We would like to record the discussion so we can better remember the conversation. Are you comfortable with this? If not, we will only take notes.  You are also not obligated to respond to any question. It is your choice. Also if you do not want to answer a question, you do not need to. But we do hope that you will because your opinions are very important.  [Ask if the individual has any questions before beginning]. Are you ready to begin? |

|  |  |
| --- | --- |
| Introduction | Thank you for joining me today. To get started, can you tell me your name and how long you have been an ECD County Officer. |
| Role with MECP-K | 1. Can you please tell me how you have been involved with the ECD centres supported by MECP-K? How often do you get to visit these centers? (probe around how often during a month) 2. What kind of improvements have you seen in teacher practice, if any? Please explain. 3. What about in classrooms and how children are learning? Please explain |
| Closures of Schools | I would like to now ask you a couple of questions on schooling in the past year and how the pandemic has impacted this.   1. What kind of directives did the Ministry of Education provide during the closing of schools as a result of the coronavirus pandemic? 2. Was there any training/information that as an ECD officer you were provided around prevention of coronavirus? By whom? On what topics? 3. What are some of the things you remember most about these trainings/information? |
| Impact on children | 1. How do you think the closing of schools affected young children? (probe around children’s emotions/feelings, social, physical) 2. How do you think the disruption affected children’s learning ? 3. What kind of ‘catch-up’ do you think children will require considering these disruptions? 4. How do you think teachers coped with these closures? 5. Are you aware of information that ECD centers were providing to parents in terms of how they could support their children’s learning at home? If yes, what were some of these things? 6. How well do you think parents were able to manage this? Please provide some examples. 7. Are there things that MECP-K put in place that you did not see in other ECD centres? (E.g. private or public ECD centres not supported by MECP-K) Please explain. |
| Reopening of Schools | 1. Now that schools are open again, what kind of measures are schools putting in place for the protection of children and teachers? 2. In your opinion, how well are the schools implementing some of the measures that have been introduced? 3. Are there things you feel that could be improved? What are they? 4. If schools would shut down again are there learnings that could be applied? How can schools adapt if that would ever happen again? 5. Finally, are there are any areas of improvement that MECP-K could make, or any recommendations you may have? |
| Closing | Thank you once again for sharing your experiences. Is there anything that we did not discuss that you would like to add? |

1. This survey was not undertaken at endline as activities with the BOM were removed from the implementation plan as this structure was initially based on co-financing commitments with county governments. [↑](#footnote-ref-2)
2. Please note that for indicators 1-4, the baseline measures the existing status, not those that are ‘improved’. [↑](#footnote-ref-3)
3. Ibid. [↑](#footnote-ref-4)
4. Please note results are based on 11 male teachers [↑](#footnote-ref-5)
5. The emotion of ‘sad’ and ‘bad’ are sometimes used interchangeably by children to mean the same thing. If taken together, 74.8% of children noted these two emotions. [↑](#footnote-ref-6)
6. Generated through ANOVA test to determine whether the test is statistically significant. Is the ratio of explained variance to unexplained variance. [↑](#footnote-ref-7)
7. Although no significant interaction was found between survey period and county. [↑](#footnote-ref-8)
8. While the data is also presented by sex of the teacher, this should be read with some caution due to the very small sample size of male ECDE instructors. The indicator’s original disaggregation is only by county as the majority of ECDE instructors are typically female. [↑](#footnote-ref-9)
9. Not an official indicator of the RMAF, but the team collected data on county/zonal mentorship in their teacher survey. Data is presented for internal learning purposes. [↑](#footnote-ref-10)
10. Ibid. [↑](#footnote-ref-11)
11. The BOM Assessment was not carried out at the endline phase as activities with the BOM were removed from the implementation plan as this structure was initially based on co-financing commitments with county governments. At baseline, 48 of 50 ECDE centres had established a BOM. [↑](#footnote-ref-12)
12. Previously MECP-K was to work with 100 cohort 1 schools (teachers trained in the second half of 2019) and 100 cohort 2 schools (teachers trained in the second half of 2020); however, MECP-K only worked with the 113 cohort 1 schools as a result of the changes made in the RMAF. [↑](#footnote-ref-13)
13. This approach would have allowed for the assessment of student improvement with different levels of ‘ECDE exposure’ (0, 3, 6 and 12 months) overtime. Please see Section on Limitations for more on this topic. [↑](#footnote-ref-14)
14. As treatment children only had 3 weeks or less of improved MECP-K schooling at baseline they can effectively be considered as ‘baseline’ measurements. [↑](#footnote-ref-15)
15. This is because P1 populations are not known, so PP2 must act as a surrogate. Sample sizes will likely be greater for P1. [↑](#footnote-ref-16)
16. http://www.raosoft.com/samplesize.html. [↑](#footnote-ref-17)
17. This helps to account for the potentially increased correlation between individuals sampled within each school. Cluster sampling, rather than simple random sampling, is being utilized to decrease the cost of fieldwork. Simple random sampling would mean that probably all 100 schools would need to be visited. [↑](#footnote-ref-18)
18. The app Random Number Generator (RNG) was utilized. [↑](#footnote-ref-19)
19. Primary 1 refers to the first set of 50 sampled schools. Please refer to Methodology Section (6.1) [↑](#footnote-ref-20)
20. 2 linked schools did not provide authorization to carry out the listing exercise, and 1 was closed due to COVID-19. [↑](#footnote-ref-21)
21. Urban schools are defined as those which geographically are within 5km of an urban/market centre and close to amenities. [↑](#footnote-ref-22)
22. The emotion of ‘sad’ and ‘bad’ are sometimes used interchangeably by children to mean the same thing. If taken together, 74.8% of children noted these two emotions. [↑](#footnote-ref-23)
23. Ibid. [↑](#footnote-ref-24)
24. FGD with Girls, MECP-K, Kisumu. [↑](#footnote-ref-25)
25. 106 classrooms were observed at baseline. At endline, in some schools 2 teachers were teaching one class therefore the number of observations done is higher the number of classrooms in the ECDE. Also, by comparing teacher names, it was found that more than half of teachers observed at baseline, were also observed at endline. [↑](#footnote-ref-26)
26. Classroom practices include the domains of i) teaching and learning materials (4 questions); ii) daily routine (6 questions); iii) adult and child interaction (6 questions); and teacher attitudes (5 questions with 1 N/A option). [↑](#footnote-ref-27)
27. A crude odds ratio is just an odds ratio of one IV for predicting the DV. The adjusted odds ratio holds other relevant variables constant and provides the odds ratio for the potential variable of interest which is adjusted for the other IVs included in the model. Hosmer DW, and Lemeshow S. (2000). *Applied Logistic Regression, 2nd Edition.*Wohn Wiley & Sons, Inc. Hoboken, New Jersey [↑](#footnote-ref-28)
28. Odds ratio. If an odds ratio (OR) is 1, it means there is no association between the exposure and outcome. If the 95% confidence interval for an OR includes 1, it means the results are not statistically significant. An odd ratios of four or greater is considered to be quite large. http://www.utstat.utoronto.ca/reid/odds.pdf [↑](#footnote-ref-29)
29. Confidence interval. [↑](#footnote-ref-30)
30. Difficult to interpret as a baseline value was zero. Non-significant. [↑](#footnote-ref-31)
31. Although no significant interaction was found between survey period and county. [↑](#footnote-ref-32)
32. Regression analysis using the total enrollment number was significant (F=4.85, df=1, p=0.03). Regression analysis shows the relationship between the size of the classroom and the number of points that a teacher received. It was assumed that larger classroom sizes may affect the domain area, however regression analysis indicates that there is no correlation. [↑](#footnote-ref-33)
33. Difficult to interpret as a baseline value was zero. [↑](#footnote-ref-34)
34. A training approach that assists teachers with a more holistic view to teaching and learning by incorporating critical elements to lesson delivery [↑](#footnote-ref-35)
35. Illustrated by a significant interaction term (p=0.02) between study period and county. [↑](#footnote-ref-36)
36. All male disaggregated results must be regarded with extreme caution due to the very small sample size. [↑](#footnote-ref-37)
37. All male disaggregated results must be regarded with extreme caution due to the very small sample size. The indicator’s unit of analysis is classrooms, not by ECDE instructor. [↑](#footnote-ref-38)
38. Ibid. [↑](#footnote-ref-39)
39. Other teachers sampled are from the remaining MECP-K intervention schools. [↑](#footnote-ref-40)
40. One individual provided ‘no response’. [↑](#footnote-ref-41)
41. Two teachers gave no response. [↑](#footnote-ref-42)
42. Please refer to Section 5.6 for more on this topic and recommendations for future surveys. [↑](#footnote-ref-43)
43. More detailed analyses of the components of this indicator are included in the sections on the following two indicators. [↑](#footnote-ref-44)
44. In three cases no sex was provided. [↑](#footnote-ref-45)
45. New teachers – defined as having less than one year of teaching experience – are not included in the population to calculate this indicator. This explains why the denominator is less than 146 at baseline. [↑](#footnote-ref-46)
46. The difference in the total line (29) and the total of male and female teachers (27) is due to two teachers not recording their sex in the self-administered tool. [↑](#footnote-ref-47)
47. New teachers – defined as having less than one year of teaching experience – are not included in the population to calculate this indicator. This explains why the denominator is less than 146 at baseline. [↑](#footnote-ref-48)
48. Six were reported at baseline. [↑](#footnote-ref-49)
49. New teachers – defined as having less than one year of teaching experience – are not included in the population to calculate this indicator. This explains why the denominator is less than 146. [↑](#footnote-ref-50)
50. Parent engagement activities were removed from the design in November 2021 and this indicator no longer appears in the RMAF, although part of the initial M&E Plan. Analysis included as data was collected and can be used for internal learning purposes. [↑](#footnote-ref-51)
51. Scale from 1=never to 5=always in the survey; however, this was changed to 0=never and 4=always for analysis. [↑](#footnote-ref-52)
52. Original target was a teacher providing a score of 75% (responses of ‘Often’ or ‘Always’) or greater. [↑](#footnote-ref-53)
53. Three teachers provided DNK/NR for all questions and were removed from the analyses. [↑](#footnote-ref-54)
54. (Sample sizes: Total = 857, MECP-K Kisumu Female = 113, MECP-K Kisumu Male = 114, MECP-K Kisii Female = 122, MECP-K Kisii Male = 117, non-MECP-K Kisumu Female = 113, non-MECP-K Kisumu Male = 93, non-MECP-K Kisii Female = 95, non-MECP-K Kisii Male = 90) [↑](#footnote-ref-55)
55. (Sample sizes: Total = 824, MECP-K Kisumu Female = 119, MECP-K Kisumu Male = 116, MECP-K Kisii Female = 126, MECP-K Kisii Male = 125, non-MECP-K Kisumu Female = 68, non-MECP-K Kisumu Male = 73, non-MECP-K Kisii Female = 97, non-MECP-K Kisii Male = 100) [↑](#footnote-ref-56)
56. Noting that this assessment will be performed again at endline. [↑](#footnote-ref-57)
57. # Slade et al. Is ‘summer’ reading loss universal? Using ongoing literacy assessment in Malawi to estimate the loss from grade-transition breaks. December 2017. [Research in Comparative and International Education](https://www.researchgate.net/journal/Research-in-Comparative-and-International-Education-1745-4999) 12(4):461-485.

    [↑](#footnote-ref-58)
58. Baseline only [↑](#footnote-ref-59)