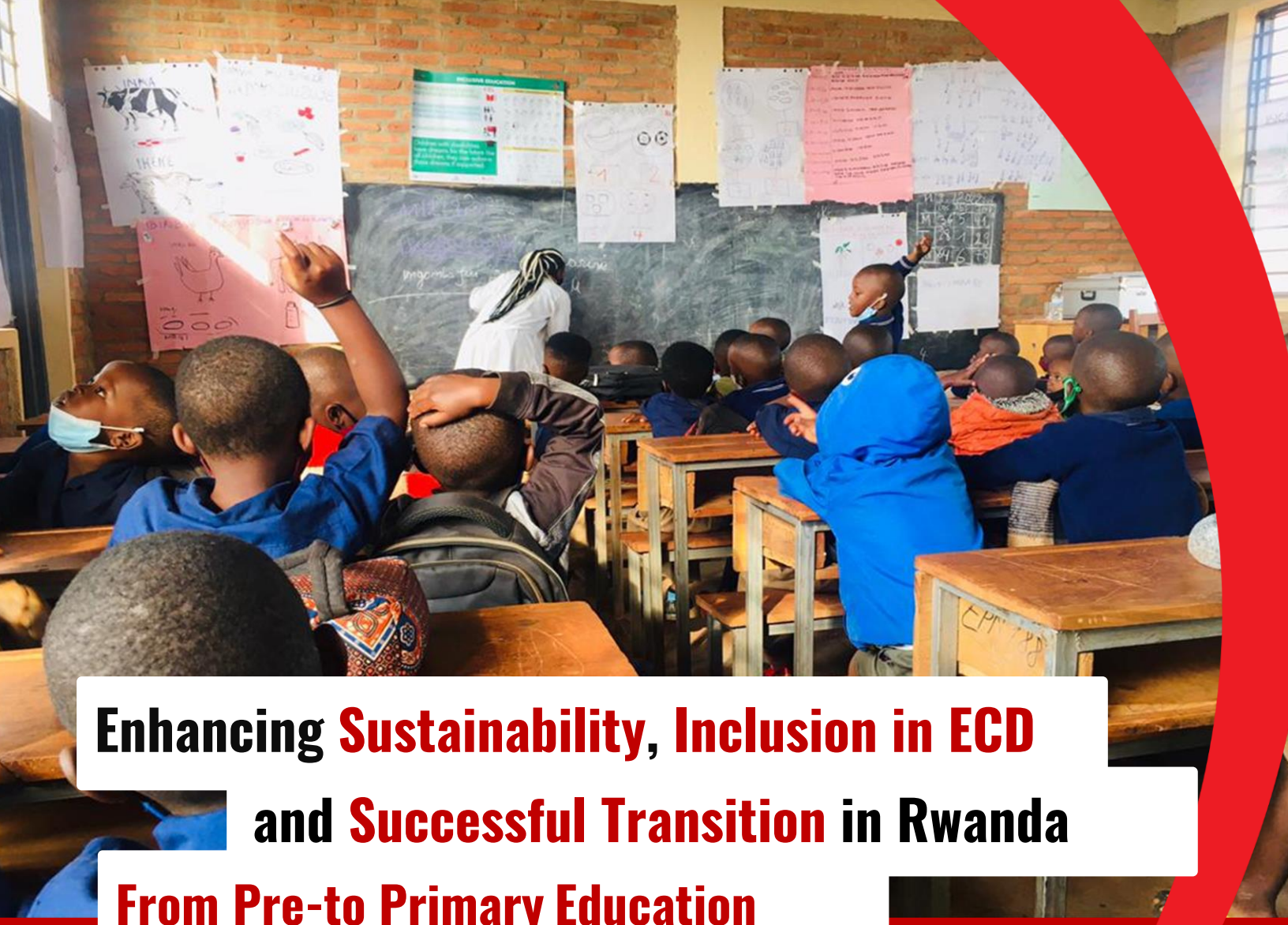

Enhancing Sustainability, Inclusion in ECD and Successful Transition in Rwanda From Pre-to Primary Education

Save the Children

Endline Evaluation Report
April 2022

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Abbreviation and Acronyms

ASR	Advancing School Readiness
CE	Classroom Environment
CSP	Rwanda Country Strategic Plan
DDE	District Director of Education
DEO	District Education Officer
ECCD	Early Childhood Care and Development
ECD	Early Childhood Development
IDELA	International Early Childhood Development & Learning Assessment
ELM	Early Literacy and Math
MEAL	Monitoring, Evaluation, Accountability and Learning
MINEDUC	Ministry of Education
NECDP	National Early Childhood Development Program
PDQ	Program Development and Quality
REB	Rwanda Basic Education Board
SEO	Sector Education Officer
UR-CE	University of Rwanda-College of Education
WASH	Water Sanitation Hygiene

EXECUTIVE SUMMARY

Background and context

The endline evaluation provides an overview of the **Enhancing sustainability and inclusion in ECD and successful transition from pre-primary to primary education project and consolidates the practices of ECD skills already acquired by the beneficiaries in the Gasabo and Ngororero Districts.** The project built upon the education goal for 2021 Save the Children Rwanda Country Strategic Plan which stipulates that children aged 0-6 have to achieve the appropriate developmental milestones. It was run into two phases of which the phase one "The Advancing School Readiness (ASR)" was foundation to deliver skills conducive to ensuring school readiness among early age children. The phase two concluded the project, which led to document lessons from the project through endline evaluation. This phase trained the alternative caregivers such as nannies, house helpers, grandparents, and relatives who take care of the children. The project also included all the children and ensured children with disabilities have to access ECD services.

School readiness is the foundation of equity and quality education. It is gaining global support as a viable means to help young children reach their full developmental potential and engage in lifelong learning. School readiness is linked to improved academic outcomes in primary and secondary school and positive social and behavioural competencies in adulthood.

The endline evaluation aims to assess pathways to sustain the legacy of the project inclusive of gender equality and inclusion of children with disability in the pre-primary learning stage in Rwanda under the project intervention. It informed the project's status against each indicator of the project outcomes and measured progress towards the project effectiveness, and changes recorded along the project implementation. Save the Children's International Development and Early Learning Assessment (IDELA) was used to measure children's skills and readiness transition from pre-primary to primary education.

Evaluation Methodology

The endline evaluation methodology employed a pre-post approach to analyse the views gathered from the respondents. The study targeted all schools with pre-primary classes in Gasabo, Ngororero, Nyabihu and Kicukiro districts. In the first section of the report, classroom observation only focused on evaluating the schools and presenting the IDELA CE following the standard tools. The second section targeted Children who were retrieved from the previous IDELA National Survey. Finally, the endline evaluation covered only caregivers from Gasabo and Ngororero Districts in section three.

Sampled **110 Schools** were observed in four districts, and **304 children and 353 caregivers/** parents surveyed in school readiness and parenting care section, respectively.

The children with disabilities have been purposively sampled and added to the respondents in each selected area. The evaluation assessed their inclusion in the project implementation. Note, the reports presented a descriptive statistic of items in IDELA classroom environment tools such as general classroom, health and sanitation, literacy and numeracy, etc. The presentation of descriptive statistical data was differentiated by intervention and non-intervention schools.

Findings

School and Classroom Observation

The school environment plays a key role in determining the children's positive and capacity development outcomes. A classroom environment observation helps identifying specific targeted interventions needed and improvement in early childhood care and development centres. The IDELA Classroom Environment assessment was conducted to track this environment; it is divided into five main components: General Classroom Setting, Health & Sanitation, Schedule, Literacy and Numeracy and Interaction. Each component is subdivided into several variables that are discussed in each part. Overall, IDELA CE asks different questions, with the final result being the weighting of a rating index on a scale of 1-5.

The evaluation team observed 110 schools (one observation per school in four districts). Of the teachers observed, 26.36% were male, 73.63% were female, and more than 50% of the respondents reported having more than three years of teaching experience in treatment. In contrast, 41.3%, comparison districts reported having more than three years of teaching experience. The average age in the sampled school children's age varied between 4 years to 6 years, but children of three years of age attend the schools mostly in Ngororero District.

The overall classroom learning environment score was found equally conducive between treatment and control classrooms observed 64.06% and 67.39%, respectively. While the observation score showed that treated districts had improved scores to control, 34.38% compared to the controlled districts (13.04%), and control districts reported poor scores compared to the treated districts (1.56%) 19.57% in control districts. During the classroom observation, the team reported that 28.18% (34.78%, control and 23.44% in treatment) schools have accessible, inclusive and disability-friendly WASH facilities. Both children's early skills and classroom environment observation tools were used and facilitated the analysis of the relationships between children's development and their classroom environment: Both children in the treatment and comparison group scored the IDELA CE item. Still, schools under treatment have more advantages to score higher by 68.7% against 59% of controlled schools even if inclusion and gender equity parameters are not considered.

School Readiness Assessment and Transition

We used the International Development and Early Learning Assessment (IDELA), and assessed the school readiness among children observed. The IDELA measures emergent language and literacy, emergent numeracy, socio-emotional development, motor development, executive function, and approach to learning. This metric is a holistic, rigorous, open-source, direct child assessment easily adapted and used in different national and cultural contexts. In addition, IDELA measures children's development and learning, and the IDELA Caregiver questionnaire was used to interview

parents/caregivers. Next, the total IDELA score was calculated by adding the weighted score of each item and dividing by the total number of items to infer the score of the item being observed.

Schools in the treatment were selected based on the available pre-primary program within the school and the same in the comparison schools. Out of total children in treatment, 55.95% and 43.24% were girls in Gasabo and Ngororero Districts, respectively. A significant difference has occurred in the availability of materials among the households in the treatment group. The proportion of children engaged in various activities with parents, which was higher in control for some activities in the baseline (44.5%, treatment and 52.5%, control) has reversed in the endline study (71%, treatment and 62%, control). Unlike the expectation, the prevalence of yelling and hitting among has slightly decreased by -3.06%, in the endline with no significant difference in treatment and control areas.

To understand the factors behind students' current school readiness level, we performed a multivariate regression of student characteristics on total school readiness score. Holding other factors constant, the analysis revealed that a child is predicted to have a school readiness score 29.5 points higher for each year of age, on total school readiness score, there was no predicted difference between boys and girls. Moreover, by evaluating the effect of home learning environment, only learning materials predicted to have a positive effect by 5.9 points of increase on school readiness score and inclusion. While, by considering children living with disability, the social-emotional learning score on average increased by 45.7 points compared to a child without disability.

Radio Program and Parenting care

At the end of March 2020, the Government of Rwanda announced the nationwide closure of all educational institutions in response to the COVID-19 pandemic. We adapted the ASR project to become a home-focused Interactive Radio Programme designed which facilitated the delivery of the project by engaging parents, caregivers, older siblings and Friends of Family via weekly phone calls. This programme employs radio-based lesson formats to aid local-level teaching facilitators to transfer skills within community-led child care centres.

The reported mean on the topics covered through the radio program revealed that there is an increase of more than 30% scores of learning at endline compared to the baseline: for example, 45% of learners at endline reported they acquired counting skills through radio programme against 15% of them at baseline. The take-up message varied from parents/caregivers to another, and there is a strong significant increase which is evidenced by 28.76% at baseline and 67.2% at endline in average. Parents were asked how much time they spared to support their children's learning at home and 62.3% of them reported to devote an hour per day in supporting their children.

The government responses and the impact of the Covid-19 crisis on child learning remains uncertain as we are currently facing the side effect of public health measures during the total lockdown and continue to affect the parenting practice in general. The study reveals that 98.4% in the endline compare to the baseline with 83% of parents washing their hands as recommended by health actors using soap or detergent.

Recommendations

With reference to above findings, it's recommended:

- **To MINEDUC:**
  - ☞ Own IDELA toolkit by empowering education inspectors to use it and coordinating ECD actors in the delivery of the tool as one of early childhood assessment instruments in order to dive deep the understanding and learning related to how the school readiness and transition from pre-primary to primary education are achieved by ensuring the blended child age appropriate, gender and disability inclusive activities.
- **To districts:**
  - ☞ promote awareness of the importance of parental support with emphasis on the engagement of fathers in order to promote the children's learning outcomes during community meetings and teach parents how to provide such support effectively and timely to boost children's willingness to learning and readiness to schooling at early age as well as enrolling children into pre-primary education at appropriate age (2 years)
  - ☞ Invest in setting up and renovate child age-appropriate playgrounds and equipment at pre-primary schools since the scarcity of such facilities would decline the emotional and joyful learning of basic literacy and numeracy
- **To schools of interventions and control schools**:
  - ☞ While parenting session is a very important strategy to improving learning outcomes for children at early age, it is recommended to keep referring to and using the project's parenting module on occasions of parents and schools' meeting. This module contains numerous games, playful activities relevant to boost child learning outcomes.
  - ☞ Embed disability friendly approach at different levels: toilets/WASH and schools and learning materials while constructing new school infrastructures and renovating existing infrastructures as well as procuring materials and equipment.

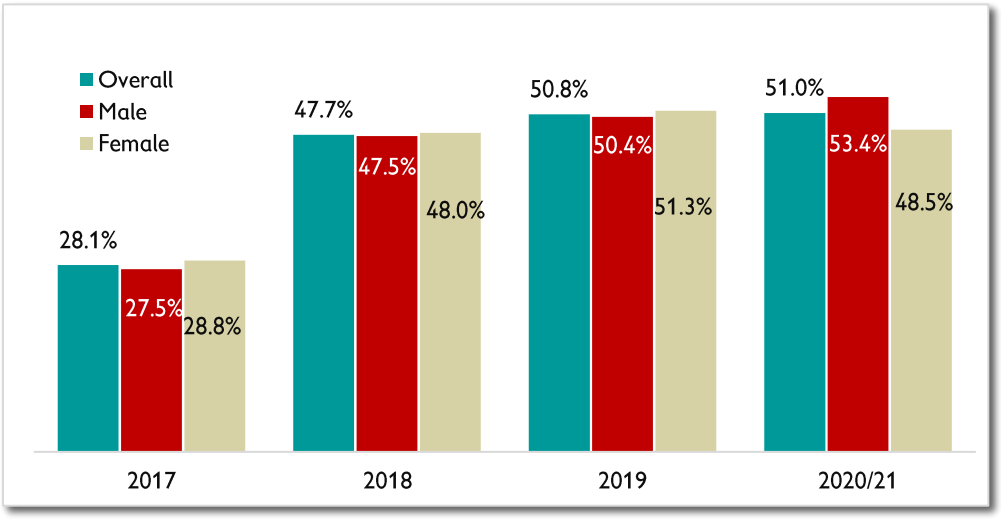
CHAPTER ONE: INTRODUCTION

The project consists of the second phase of Advancing School Readiness (ASR) in Rwanda entitled "**Enhancing sustainability and inclusion in ECD and successful transition from pre-primary to primary education**"" and focuses on two-pronged goals. The project built on the gains realised in the previous **Emergent Literacy and Math** (ELM) and **Advancing School Readiness** (ASR) programs implemented by SCI in Rwanda to cultivate sustainability, gender equality, and inclusion of children with disability in the pre-primary learning stage in Rwanda.
The project ensured the sustainability, inclusion, gender equity, and successful transition from pre-primary to primary education. This was achieved by relying on different approaches to strengthen home and community-based parenting education, centre-based teaching, and greater ownership of ECCD (Early Childhood Care and Development) by local and national education structures. In addition, these approaches are applied to draw lessons learnt in order to strengthen the capacity of schools, sectors, districts and national structures in charge of Early Childhood Education (ECD). It was designed to improve support for ECCD actors and advocate for increased resources to bring the best practices to scale.

1.1 Context analysis and rationale

The government rightly sees pre-primary education in Rwanda as an important alternative to solve problem of delayed school enrolment and failure in P1. In addition, pre-primary education introduces basic knowledge and skills that will make real schooling much more accessible. Despite the challenges in pre-primary education, including inadequate resources, there is an increase in access to pre-primary schooling and early childhood education. Such access resulted in the net enrolment rate for primary class one increasing from 28.1% (2017) to 51% in 2020/21 (53.4%, boys and 48.5%, girls) who enrolled in P1 when attended pre-primary schooling (MINEDUC, 2022).

Figure 1: Percentage of newly admitted pupils in P1 who attended pre-primary schooling



Furthermore, 25.9% of children aged 24-59 months are currently attending an organised early childhood education program in 2020/21. Therefore, the net-enrolment rate remains low and might be associated with the accessibility and the quality of pre-primary schools. In addition, low involvement of caregivers or parent might be also associated with low enrollment.

1.2 Project background

The Education Goal for 2021 in the Rwanda Country Strategic Plan (CSP) stipulates that children aged 0-6 have to achieve the appropriate developmental milestones. Under the Innovation Pillar of this CSP milestone, the country aims at building the capacity of Alternative Caregivers to enhance positive ECD. Therefore, the ASR Phase 2 trained the alternative caregivers such as nannies, house helpers, grandparents, and relatives who take care of the children without their parents.

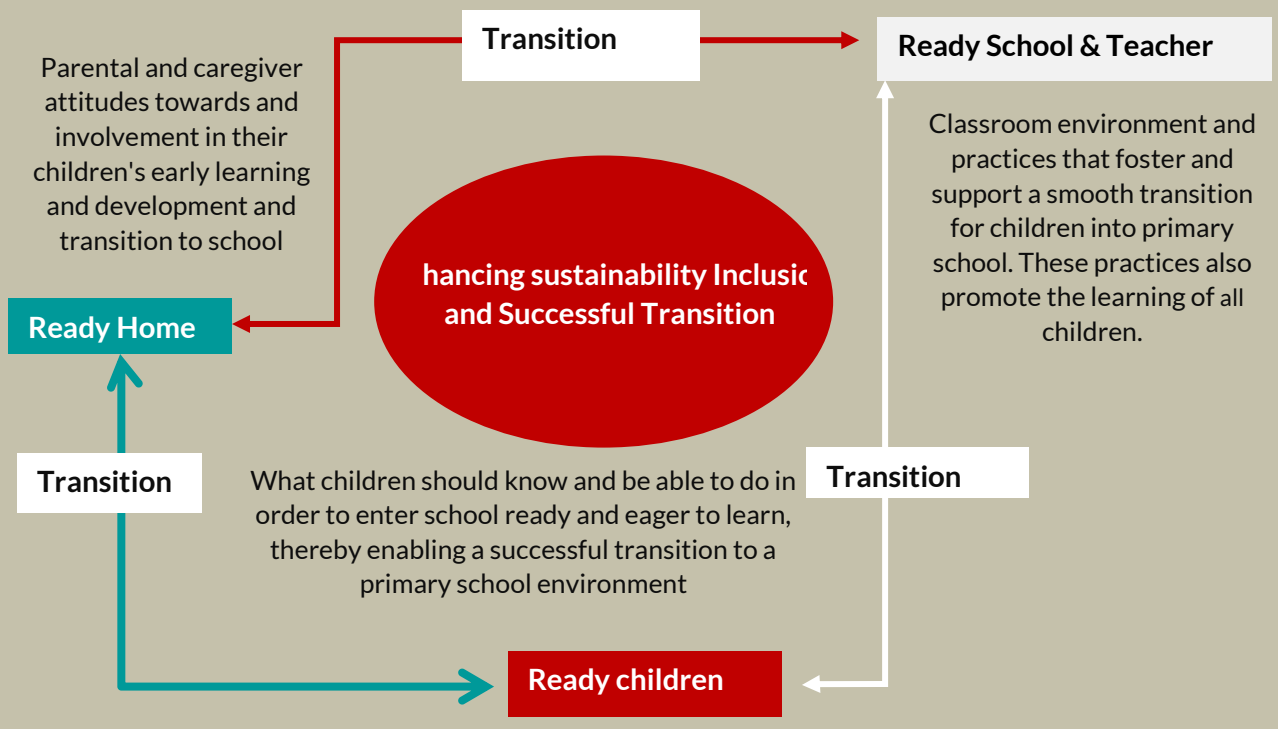
The **Advancing School Readiness Project second phase** consolidate the practices of ECD skills already acquired by the beneficiaries in Gasabo and Ngororero. It monitored the transition between pre-primary and primary education that children are going to undergo starting January 2021.

Finally, the project empowers the local leaders, and involve the government at high level in the sustainability of the program. The **ASR Phase 2** build the capacity of the education and volunteer task force in both districts, so they can effectively support the community and the schools in ECD.

On the advocacy level, **ASR Phase 2** continue to work with the government and its institutions to push for adding the preprimary teachers on the government payroll. ASR work closely with the university of Rwanda-College of Education, to help in the capacity building of the pre-primary teacher during the pre-service program.

In the same way, to address the SBC (Social Behaviour Change), the project focused on raising the awareness of male engagement in the parenting program for improved Early childhood development. The project also considered including all the children by supporting those with disabilities to have access to ECD. This started by raising the parents' awareness about the potential of children with disability. School readiness is the foundation of equity and quality education. It is gaining global support as a viable means to help young children reach their full developmental potential and engage in lifelong learning. School readiness is linked to improved academic outcomes in primary and secondary school and positive social and behavioural competencies in adulthood.

Figure 2: Advanced School Readiness' theory of change



Three interlinked dimensions currently define school readiness: children, schools and families are considered ready when they have gained the competencies and skills required to interface with the other dimensions and support smooth transitions. For example, the child transitions to school, the school transitions to accepting new children into primary class 1, and the families transition to sending their children to school on time and interacting with the school. After two years of implementing Advancing School Readiness in the same districts (Gasabo and Ngororero), three components (section 1.3) were identified as the focal areas for the second phase of the project:

1.3 Project Components

The proper Transition from Pre-primary to Primary education

Given the huge difference in the pre-primary and primary school environments, different observations, studies, and case studies show that pre-primary graduates face challenges in adapting to the environment of primary schools. Looking at it from the teacher training point of view, given that the pre-primary and primary teachers receive different pre-service education, this results in having students treated differently.

The transition from early childhood education to primary education represents one of the greatest challenges for children in their first years of life. It can also be a key to future educational success (Gairín, 2005; Tao et al., 2019).
Children who have a positive transition are likely to have positive expectations of their ability to learn and succeed within the education system (Wallis & Dockett, 2015). The transition process may involve experiences of advancement and educational momentum or moments of risk and exclusion (Sierra, 2018; Woodhead & Oates, 2007).

While the environment in pre-primary is welcoming, playful, free, relaxed, and more or less like home, the primary school environment suddenly encompasses hard work and methodology not rooted in play. In addition, students may experience bullying from their peers. The trained primary teachers and parents of children in P1 should support children in this critical transition period.

Gender and Inclusion in ECD

During the implementation of Phase 1, the project has shown that ECD was not as inclusive as it should be. This observation was partly made based on the scarcity of children with disability in pre-primary classrooms. Generally, there is still discrimination made towards girls and boys with disabilities and a tendency among parents of children with disabilities to hide them to avoid what they call public mockery/stigma or to protect their self-image. In addition, there is a widespread belief that children with disabilities cannot learn. The project raised awareness among parents regarding educating children living with disabilities. The parenting program focused on including men as caregivers. During the implementation of Phase 1, it was noted that more women than men participated in parenting sessions. Research shows a huge contribution of men in children's development.

Sustainability and Scale-Up for the ASR

Unlike phase 1, phase two of the project focused on strengthening the existing workforce in the education sector, both at the local and central levels. Starting from the Sector and District officials, down to sector-based trainers and community volunteers, the project will build their capacity to ensure the future sustainability of ECD in these districts. To ensure the ASR program of ECD is

replicated in more districts of Rwanda, the project engaged the government, education sector partners, government institutions with education portfolios, such as the Rwanda Basic Education Board, National Child Development Agency, University of Rwanda-College of Education (URCE), etc. to influence them on the support of ECD, and decision making in favour of ECD. The outstanding advocacy point has started to consider the inclusion of pre-primary teachers on the government payroll: it is seconded by the training of the students in Teacher Training Colleges on ECD and play-based approach so when they become teachers, they could apply the ECD practices wherever they are deployed in the country.

1.4 Project Development Objectives

The overall project objective was to ensure sustainable and equal access for boys, girls and children with disabilities to pre-primary education in Gasabo and Ngororero and nationwide in the long run. The project aimed to track the endline evaluation for the following indicators:

- ☞ Proportion of enrolled children (girls and boys) aged 3-6 with improved child development outcomes on physical, cognitive, literacy-math, social-emotional aspects
- ☞ Proportion of Parents (of 3-6 aged kids) with improved ECD practices to stimulate children's development at home
- ☞ Proportion of pre-primary teachers trained who apply Ready to Learn / child development / positive discipline / child-centred methodologies in ECD classes
- ☞ Proportion of parents/caregivers with improved positive attitude, knowledge and practices towards supporting transition to primary school
- ☞ Proportion of children aged 3-6 with special needs (girls and boys) with improved child development outcomes on physical, cognitive, literacy-maths, and social-emotional aspects
- ☞ Proportion of trained teachers who apply inclusive and gender sensitive methodologies in their teaching (disaggregated by gender and pre/primary school)
- ☞ Proportion of children (girls and boys) with positive attitudes and knowledge and practices towards boys and girl's capability to learn
- ☞ Proportion of parents (of pre-primary and P1children) who receive the awareness message on transition best practices
- ☞ Proportion of trained primary school teachers applying the developed tool kit on transition, gender and inclusion
- ☞ Proportion of children (girls and boys) with special needs aged 3-6 who are attending pre-primary schools (by gender, poverty, ability)

CHAPTER TWO: EVALUATION DESIGN, METHODS, AND LIMITATIONS

This endline evaluation, designed as a learning and accountability tool for "**Enhancing sustainability and inclusion in ECD and successful transition from pre-primary to primary education project**", and utilisation-focused approaches with quantitative methodologies to engage key stakeholders in evaluation planning and data collection.

2.1 Objective of the Evaluation

The main objective of this evaluation is to assess trends and changes in cultivating sustainability, gender equality and inclusion of children with disability in pre-primary learning stage in Rwanda under the ASR Project intervention aims. The endline evaluation provides the project's status against each indicator of the project outcomes and information measure in the baseline evaluation, which used to measure against for reporting the project progress, effectiveness, and change during and after the project implementation.

In light of these trends, the following three questions must be answered:

1. Are children entering primary class 1 with the social and cognitive skills and competencies needed to succeed in school?
2. Are schools equipped and ready to provide optimal learning environment for children?
3. Are parents and caregivers ready to help their children make smooth transition to school?

In addition, the endline study provides updated contextual information that informs the project planning and implementation approach. The specific objectives of the study aim:

1. To present the end status of project indicators for tracking the changes impacted by the implementation
2. Provide detailed descriptions of household and caregiving, and teachers characteristics in the contextual influences of the sustainable inclusive and successful transition
3. To assess the existence and implementation of parenting practices in targeted communities and within household as well as schools and centers
4. To assess the numbers of targets and beneficiaries and provide a recommendation based on the endline data to set realistic targets

2.2 Evaluation Design, sampling strategy and data collection plan

The evaluation employed a pre-post approach[1] to analyse the views gathered from the respondents. Instead, a random sample of schools in Gasabo and Ngororero was selected for the treatment group. Furthermore, for validating the changes of the project, the project team considered the neighbouring districts with similar key characteristics as the comparison group (Nyabihu and Kicukiro District).

[1] The pre-post design help to manipulate target population and estimate the effect of the intervention and from a pre/post design because it can identify trends in the outcome rate that existed before the intervention. The outcome rate before and after the intervention is compared. And this can be evaluated by fitting two multivariate regression models to the temporal trend in outcome rates, one for the pre-intervention period and one for the post-intervention period. If there is no intervention effect, the slopes of regression lines and their intercepts can be the same. A one-time effect reflected as an increase in the intercept of the regression line. Ongoing, longer-term impacts result in a slight change in the slope in the post-intervention phase compared to the pre-intervention period. However, a quasi-experimental study design can often offer important insights into learning outcome adaptation and can lead to more generalizable study results based on more representative respondents.

The study population targeted all schools with pre-primary classes in Gasabo, Ngororero, Nyabihu and Kicukiro districts. In the first section of the report, classroom observation only focused on evaluating the schools and presenting the IDELA CE following the standard tools (see Annexes). The second section targeted Children (girls, boys with and without disabilities), parents/caregivers, and teachers) assumed to be retrieved in the previous IDELA National Survey. Finally, the endline evaluation covered only caregivers from Gasabo and Ngororero Districts in section three.

The evaluation team conducted a school-based survey using the following tools and methods: IDELA, teacher and caregivers' questionnaires (from June-October 2021), and classroom observation (February 2022). Brief descriptions of these tools and methods are below, with additional detail on IDELA, the classroom observation protocol, and the teacher/caregiver's questionnaire, including descriptions of differences in tools.

Classroom observation

Classroom observation protocol: ASR's classroom observation protocol contained a structured classroom observation followed by a closed-ended interview questionnaire on demographics and teacher practice, administered face-to-face with the observed teacher. Classroom observation examined 26 distinct literacy lesson quality indicators and instructional delivery techniques. In total, the IDELA CE sample 113 schools for both treated and control districts so to compare and analyse in deep the variation from the indicators.

Table 1: Sample size for the school for IDELA CE

Treatment		Control	
Gasabo	15	Kicukiro	24
Ngororero	50	Nyabihu	24
Total	**65**	**Total**	**48**

School readiness assessment

Children's School Readiness Children were assessed using the International Development and Early Learning Assessment (IDELA), a tool used globally to measure children's school readiness in key developmental domains: Motor Skills, Early Literacy, Early Numeracy, Social-Emotional Skills and Executive Function.

The children with disabilities have been purposively sampled and added to the respondents in each selected area prior interviews to assess their inclusion in the project implementation. Diversity was promoted by including girls and boys with different types of disabilities and, accessibility was also ensured by conducting interviews in physically accessible locations to facilitate children with limited mobility, use of interpreters for those with speech or hearing disabilities.

The target sample for this study has been calculated using information from previous studies of children's early learning in Rwanda that used the IDELA tool. Cluster sampling calculations were used to account for children learning within the same classrooms with a minimum detectable effect of .35 standard deviations, intra-cluster correlation of .20, baseline-endline correlation of .61, power of .80, and a significance level of .05. The sample was then increased by 15% to account for possible attrition.

Radio Program and Parenting care

The enumerators collected quantitative data from caregivers of the children ready to start ECCD centers or have already joined the program. Endline was collected from the existing frame shared by community volunteers for caregivers in the Gasabo and Ngororero districts. The data collected from the caregivers included household demographics, formal education, disability status, access to education during COVID-19, exposure to the projects, learner support during COVID-19. The endline study was cross-sectional and primary data were collected using a quantitative approach. KoboTool Box used to collect both caregivers survey, and the advanced Excel/Stata version 17 was used to analyse quantitative data. Sampling was conducted in two districts (Gasabo and Ngororero) targeting ECCD centers. The purposive sample considered parents who have children living with disabilities in these districts.

Unlimited population: $n = \frac{z^2 \times \hat{p}(1-\hat{p})}{\varepsilon^2}$ Finite population: $m = \frac{n}{1+\frac{z^2 \times \hat{p}(1-\hat{p})}{\varepsilon^2 N}}$

Where, n = Sample size; ε = Margin of Error; Z = linked to 95% confidence interval (use 1.96)

$\hat{p}$ = population proportion and m = the resulting equation for sample size. N = Concerned population size. The sample size for caregivers is 365 surveyed to have a confidence level of 95% that the real value is within ±5% of the measured/surveyed value.

2.3 Data analysis methods and analytical framework

The main purpose of this analysis is to present a profile of children's early development, home and classroom environment. The planned data analysis was dominated by advanced descriptive statistics covering students' learning outcomes and learning materials and activities occurring in children's homes. To test the comparability of learners in the treated and controlled districts, the findings show a comparison of means through t-tests assuming unequal variance between the two samples and clustering within schools or (treatment) district. In addition, the report uses multivariate regression models to explore relationships between early learning and family background characteristics, home environments, and other key factors related to inclusion and impact of COVID-19. In addition, correlations between child and parent items were reported where relevant.

In addition to the IDELA classroom environment, the report presented a descriptive statistic of items in IDELA classroom environment tools such as general classroom, health and sanitation, literacy and numeracy, etc. The presentation of descriptive statistical data will be differentiated by intervention and non-intervention schools. Further analysis can be conducted according to the needs of the program. For example, to see if there are any differences in achievement of IDELA scores between boys and girls or between groups, to see if there are any differences in IDELA scores with socio-economic backgrounds or to see what factors influence IDELA scores among socio-economic backgrounds, access to materials reading, and parenting, etc. We measure gains in knowledge of ECD concepts due to the training following a pre-test/post-test evaluation design.

The difference of means (paired-samples *t*-test) was used to assess knowledge gains among youth trainees between the pre-test and post-test.

2.4 Context and assumptions used during the data analysis

The endline evaluation reflects the changes in the community and caregivers' decision-making to send their children to the ECCD centres after the lifting of the restrictions related to the COVID-19 pandemic. Surveys was conducted at the end of the project to confirm baseline and end line data, and IDELA (International Early Childhood Development & Learning Assessment - and parent survey) are used to track progress on children development outcomes, and parents and teachers' engagement.

The major assumption for the realisation of this outcome is that the Rwandan education officials have strong interest in promoting early learning in Rwanda, which is in line with the national early childhood development policy[2].

Additional assumptions are that providing support to teachers as they develop and apply knowledge of early learning methodologies so to improve children's learning outcomes in pre-primary schools.

In Rwanda, the lockdown (March 2020) has generally caused a severe change on the learning environment, where aged children missed their intakes, including pre-primary children. The lockdown imposed on the learners and education system entirely to a shift in the learning methods. The post-COVID-19 (when the total lockdown was lifted in July 2020), even during the lockdown, the government of Rwanda demanded each establishment to re-model digitally (mainly higher learning institutions).

Primary and secondary learners attended lessons via radio and TV, where Save the Children International was among the partners who facilitated the transition and supported the Ministry of Education/Rwanda Education Board to teach learners remotely.

[2] https://bit.ly/3yiy3bC

CHAPTER THREE: EVALUATION FINDINGS AND DISCUSSION

Readiness for school is said to occur when children are in a position to participate fully in school life. It is the combined result of having a ready child, a ready home and a ready school-teachers and activities that allow children to settle into school life and the preparation children receive before entering primary school.

Section one: School and classroom observation

The section discusses the following points: Schools description and characteristics, Pre-primary learning environment (i.e. General Classroom and Physical environment, Social environment and interaction, Temporary environment, Learning environment and IDELA Classroom Environment score), Inclusion and classroom observation outcome (i.e. Accessible and Inclusive WASH facilities toilets, their facilities characteristics, and Teachers' profile).

Section Two: School Readiness Assessment and Transition

This section describes children's performance on the direct child assessment, focusing on differences between the skills of children in the two study groups. Total domain scores are calculated by adding the weighted score of each item in the domain so that all items contribute equally to the domain score. The total IDELA score is calculated by adding the weighted score of each item and dividing it by the total number of items so that all items contribute equally to the total score. Therefore, the analyses presented below display the proportion of IDELA questions answered correctly out of all possible correct answers. The section discusses the following points: Home environment, Home Learning Environments, ECCD participation and expectations, Child Results and Home environments and child development

Section Three: Radio Program and Parenting care

The section discusses the following points: Radio Programming Characteristics, KAP on the Parenting practice and positive discipline, Home Environment/ Parenting Practice (i.e. Caregivers practising positive parenting and discipline, and Spending time with children)

Section four: Impact of Covid-19 on Child Learning

The section discusses the following points: Radio programming on learning continuity and Child protection and violence during the lockdown.

Section one: School & Classroom Observation

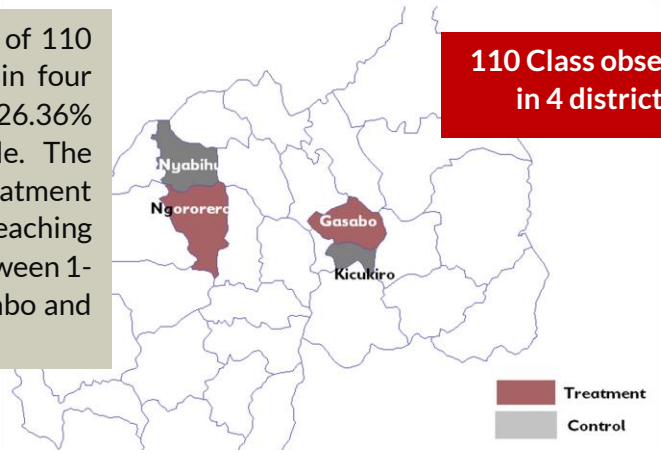
IDELA Classroom Environment

IDELA classroom environment was used to measure ECCD classroom quality, with a focus on learning environments for children under the project. The school environment plays a key role in determining the children's positive and capacity development chances. The classroom environment uses IDELA to assess the key information about the quality of ECCD center's environment. Collecting information about the quality of ECCD environment, along with child level data on early learning and development and caregiver survey, provide a much needed, nuanced picture of how the overall quality of care and support affects children's developmental outcomes in the long and short term. A classroom environment observation can also help identify specific targeted interventions needed and improvement in early childhood care and development (ECCD) centres.

The IDELA Classroom Environment (CE) assessment divided into five main components: General Classroom Setting, Health & Sanitation, Schedule (daily and routine), Literacy and Numeracy and Interaction. Each component is subdivided into several variables that are discussed in each part. Overall, IDELA CE asks different questions with the final result is the weighting of a rating index with a scale of 1-5.

3.1 Schools description and characteristics

The evaluation team observed a total of 110 schools (one observation per school in four districts). Of the teachers observed, 26.36% were male and 73.63% were female. The teaching experience varies from treatment and control group, 51.82% have been teaching more than three years and 59.46%, between 1-3 years, for the treatment group (Gasabo and Ngororero Districts).



Across the 110 schools sampled at the endline, the average children's age in the sampled schools varied between 4 years to 6 years, but children of 3 years of age attend school mostly in Ngororero District. However, despite the challenges of COVID-19, as discussed in Part 4.

Table 2: Average age of children in the observed class

Age	Overall	Gasabo	Kicukiro	Ngororero	Nyabihu
2 years	5.5	33.3	0	33.4	33.3
3 years	41.8	8.7	13.04	54.35	23.91
4 years	70.9	11.54	19.23	48.72	20.51
5 years	82.7	13.19	19.78	47.25	19.78
6 years	70.9	14.1	17.95	44.87	23.08
7 years	12.7	14.29	0	71.43	14.29
> 7 Years	6.4	20	0	60	20

Ngororero District is characterised by children starting pre-primary classes at the age of two and late pre-primary classes (7 and more than seven years) (see Table 2).

The delay to enroll children aged 7 or more were linked to the COVID-19 and other factors.

The observed classroom learners were taught in Kinyarwanda which dominated the language of instruction throughout the districts (Refer to table 3 below). Rwanda has promoted linguistic diversity and endorsed "**English**" as a medium of instruction since 2019 in the lower primary class to achieve language proficiency[3]. Hence, the sampled schools that use the English on average as the language of instruction in their pre-primary classrooms were 75.45%, higher in Kicukiro District, 86.36%, followed by Ngororero, 83.67%, and Gasabo ranked the last with 53.3%.

Table 3: Language spoken by facilitators/teachers in the classroom

Language	Overall	Gasabo	Ngororero	Treatment	Kicukiro	Nyabihu	Control
Kinyarwanda	**95.45**	100	100	100	77.27	100	89.13
French	**12.73**	13.33	8.16	12.5	31.82	4.17	17.39
English	**75.45**	53.33	83.67	65.63	86.36	62.5	73.91

[3] https://bit.ly/3sVI1Q1

3.2 Pre-primary learning environment

The evaluation team observed lessons and recorded fulfilment of four main domains (physical environment, social environment and interaction, temporary and literacy environment) from 7:30 to 11:30 AM for two weeks in February 2022. Each domain has a dedicated time allocation and interval. An additional section covers lesson delivery methods that combine criteria into broader categories that reflect the core pillars of pre-primary literacy lessons.

3.2.1 General Classroom and Physical environment

Classroom Organisation

As presented in the table 4, the Classroom Organization was evaluated using eight questions (i.e. classroom size, cleanliness of the classroom space, adequate furniture, availability of learning area and gross motor play space, etc). The classroom organisation was described using different items and scored from 1 (lowest) to 5 (highest) and the observers highlighted that only four evaluation items have the highest score comparing treated districts with controlled districts: cleanliness of the classroom space (4.16 vs 4.04), the layout of the ECCD centre's learning (3.31 vs 2.83), the materials in the ECCD center's learning areas (3.66 vs 2.83) and the ECCD centre's outdoor (gross motor) play equipment/materials (2.38 vs 1.91). Hence, the treatment group showed a significant difference between the intervention and control groups in the declared items (description), except for the classroom space's cleanliness. Overall, it was observed that the majority of classrooms observed are clean (4.11, IDELA classroom organization score), but many of schools don't have sufficient outdoor play equipment (2.18, IDELA classroom organization score).

Table 4: Classroom organisation

Description	Overall	Control	Treatment	Difference
Size of the classroom	4.05	4.09	4.03	-0.06
Arrangement of the classroom space	3.8	3.83	3.78	-0.04
Cleanliness of the classroom space	4.11	4.04	4.16	0.11
Furnitures in the classroom	3.71	3.87	3.59	-0.28
Layout of the ECCD centre's learning	3.11	2.83	3.31	0.49**
Materials	3.29	2.78	3.66	0.87***
Availability and safety of gross motor	3.36	3.44	3.31	-0.12
Outdoor play equipment/materials	2.18	1.91	2.38	0.46**

*** p<0.01, ** p<0.05, * p<0.1

Health and Sanitation

The health and sanitation sub-component consist of three questions: toilet facilities, handwashing facilities and handwashing practices in school. The lowest health and sanitation sub-component index is handwashing practices, while the highest score is toilet facilities. However, overall scores for the health and sanitation items are moderate based on the index scale (1 to 5), e**specially for handwashing facilities and practices in school questions. This is because most children (both in treatment or control districts) do not learn how to wash their hands during school time in handwashing facilities and practices**. Although the school has materials for handwashing like clean water and container materials, the handwashing practices in school are still moderate because there is no handwashing schedule from the teachers.

Hence, this handwashing practice must be applied in school to teach children to wash their hands before eating their food or dirty washing objects. For the toilet facilities question, treated districts have a lower index than controlled districts. The main problem of most ECCD in this study is that the availability of toilet facilities is still critical as most construction projects rely on the government and few on the private sector. In many cases, the toilet area is available to children but is not clean or well maintained. Even worse, there is no toilet area for children, or the toilet is dangerous (For example, the hole is too big) for ECCD children.

Three items described the health and sanitation to observe: toilets, handwashing facilities, and children washing their hands. The observer reported having fewer WASH facilities in the treated districts than in controlled districts (3.09 vs 3.7). In the treatment group, children washed their hands but did not show a significant difference compared to the control group. **Hence, it was observed that most facilities (i.e. toilets) in Gasabo and Ngororero are old and do not have specific toilets for pre-primary learners.**

Table 5: Health and sanitation

Description	Overall	Control	Treatment	Difference
ECCD centre's WASH facilities	3.35	3.70	3.09	-0.60**
ECCD centre's handwashing facilities	3.25	3.26	3.25	-0.01
Children wash their hands (Handwashing practices)	3.05	3.04	3.06	0.02

*** p<0.01, ** p<0.05, * p<0.1

3.2.2 Social environment and interaction

It was observed that **child-teacher interaction within the classroom is higher in the treatment group than in the control group.** But, the engagement of boys and girls in the class was slightly similar to the controlled group (3.97 vs 4). Therefore, it implies that the inclusion of boys and girls is a foundation of Rwandan education but needs to stick to the principle to score the ceiling value. Teacher supports group work and Teacher uses free choice time (i.e. corner play, creative) at 3.67(lower score in Table 6). What does it mean? Why do teachers don't support group works, because this is gap among scores you display. Please, interpret this data. However, although they don't support group work as required, they are tending to be gender sensitive by engaging girls and boys at 4.75 (higher score).

Table 6: Interactions within the classroom

Description	Overall	Control	Treatment	Difference
Teacher uses of discipline	4.58	4.35	4.75	0.40**
Teacher interacts with children	4.62	4.35	4.81	0.47**
Teacher promotes positive child-child	4.71	4.44	4.91	0.47**
Teacher uses free choice time (i.e. corner play, creative)	3.67	2.65	4.41	1.75***
Teacher supports group work	3.67	2.48	4.53	2.05***
Children are engaged (participated) in the classroom	3.98	4.00	3.97	-0.03
Teacher connects lessons to children's	3.75	3.17	4.16	0.98***
Teacher engages with boys and girls	4.75	4.70	4.78	0.09
Teacher involves children with different levels of learning ability in the class	4.69	4.57	4.78	0.22*
Children respect one another	4.58	4.48	4.66	0.18

*** p<0.01, ** p<0.05, * p<0.1 Scale varies from 1 (min) to 5(max)

3.2.3 Temporary environment

Schedule

Table 7 summarises two characteristics of classroom schedule, daily and routine schedule. **The classroom schedules were more used and referred to in the treatment districts than in the controlled districts.** The daily schedule description was reported to have a 2.01 difference (4.31 vs 2.3) and significant, following a daily schedule, 1.38 difference more (3.91 vs 2.52) to the control districts and 0.71 difference (4.19 vs 3.48) in the facilitator's preparation or motivated to follow a daily schedule. The same on the routine schedule, it was reported to have 1.87 difference (4.56 vs 2.7) and significant on daily routine, follow a routine schedule, 1.3 difference more (4.13 vs 2.83) to the control districts and 0.71 difference (4.19 vs 3.48) on the facilitator's preparation or motivated to follow a routine schedule. In schedule sub-components, most ECCD indicate that the daily schedule posted in the classroom provides a good balance of routine activities and a rotation of skills-based activities. The availability of a daily schedule in the classroom caused the teacher to follow a daily schedule. Still, to some extent, schedules are changed due to circumstances, including prolonged rainfall in the morning hours (during the evaluation period).

Table 7: Classroom schedule

Description	Overall	Control	Treatment	Difference
Daily Schedule				
ECCD centre's daily schedule	3.47	2.30	4.31	2.01***
Teacher/facilitator follows daily schedule	3.33	2.52	3.91	1.38***
Facilitator's preparation/motivation	3.89	3.48	4.19	0.71**
Routine Schedule				
ECCD centre's daily routine	3.78	2.70	4.56	1.87***
Teacher/facilitator follows daily routine	3.58	2.83	4.13	1.30***
Facilitator's preparation/motivation	3.89	3.48	4.19	0.71**

*** p<0.01, ** p<0.05, * p<0.1

3.2.4 Learning environment and class attendance

Literacy

The literacy sub-component consists of six questions: print environment, reading activities, book environment, reading book activities, encourages children to use language during class, and encourages children's understanding of languages. The lowest index of literacy sub-component is reading book environment, while the highest score was encouraging children to use language during class. The print environment is one of the beginning stages of literacy development. The letters, numbers, shapes, and colors found in the classroom all provide opportunities for emerging readers (children) to interact with print and the written word in their environment. However, Environmental print is the first print a child learns to "**read**". Print includes letters and words that are printed or handwritten. Most ECCD is defined or set up print material in class.

The data shows that the print environment score is 4.13 for the treatment district and 3.04 for the controlled districts. It indicates that print materials exist in the classroom on walls or objects (for

example, posters or labels on objects) and enough in the treatment district. Many ECCD have many print materials in their classroom, but the display themes are monotonous and diverse to be interesting for children. Hence, teachers display materials and use them for facilitating in the reading to the children, which results in the higher reading activities score, where the score was 4.34 for treatment and 2.39 for controlled districts.

Book use practice is as important as the print-rich environment. Each school must provide the reading materials such as storybooks, magazines, photo albums, etc. Not all children are privileged enough to have an environment at home which helps them find a life-long love of books, so, the classroom has to become this place. And the most important thing is all the reading materials must be accessible for children. The field observation found that many schools have enough children's books compared to the classroom size or sharing books (i.e. one book for three children). It causes the reading book activities more accessible, which is 4.22 for treatment and 3.09 in controlled districts.

Table 8: Conducive environment to literacy and numeracy

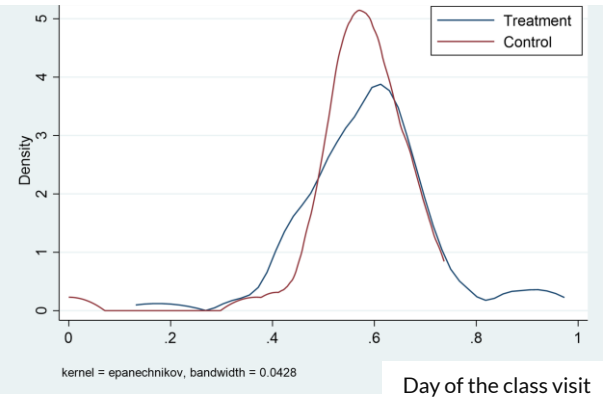
Description	Overall	Control	Treatment	Difference
Literacy				
Print environment	3.67	3.04	4.13	1.08***
Letter or word reading activities	3.82	3.09	4.34	1.26***
Book environment	2.96	2.39	3.38	0.98***
Book/reading related activities	3.75	3.09	4.22	1.13***
Teacher encourages children to use language	4.00	3.48	4.38	0.90***
Teacher improves children's understanding	3.78	3.04	4.31	1.27***
Numeracy				
Display of written numbers	3.67	2.83	4.28	1.46***
Resources to practice counting	3.04	2.30	3.56	1.26***
Number related activities children	3.98	3.44	4.38	0.94**
Patterns, sorting or comparison	2.93	2.39	3.31	0.92**

*** p<0.01, ** p<0.05, * p<0.1

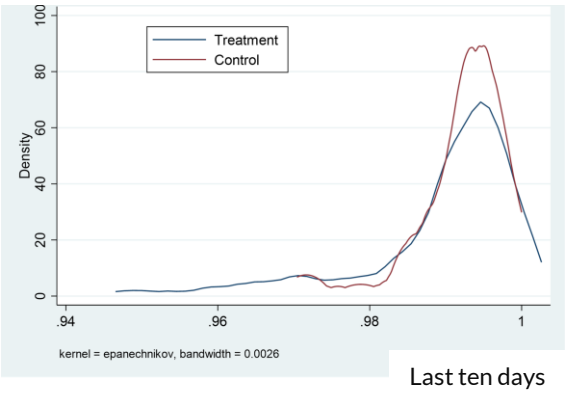
Attendance

The classroom observers find a statistically significant difference in the reported children with regular attending class in the treatment districts for the day of the class visit and a slight difference for the last ten days of the visits. Figure 3 depicts the change in both scenarios by treatment group, which narrowed and shifted towards a higher score for the treatment group. Again, the difference is prominent compared to the control districts.

Figure 3: Reported children with regular attending class



Day of the class visit

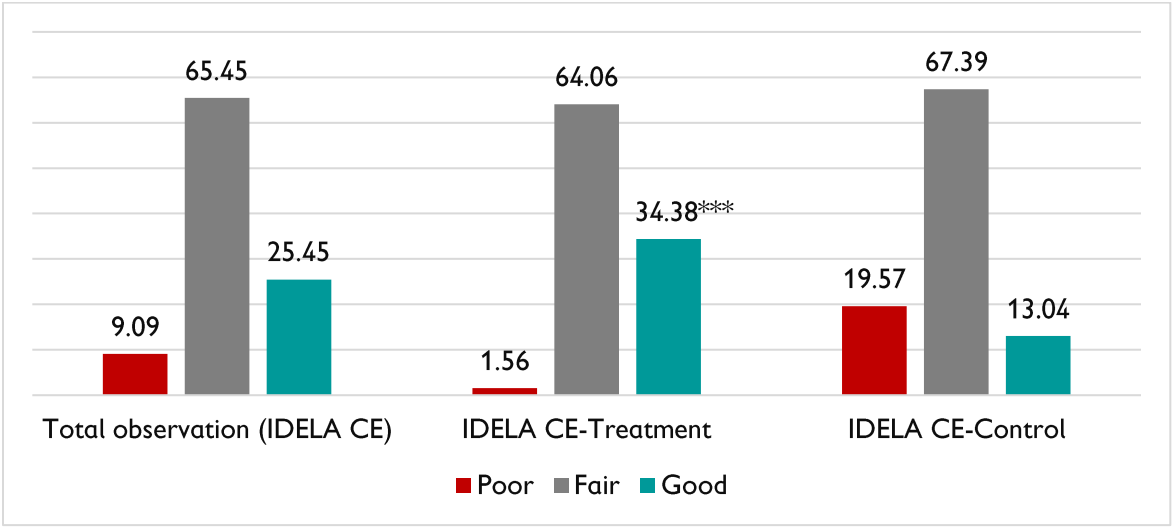


Last ten days

3.2.5 IDELA Classroom Environment score

The overall classroom environment rate was reported to have a fair score dominating treatment and control, 64.06%, and 67.39%, respectively. While the observation score showed that treated districts had preferred scores to control, 34.38% compared to the controlled districts (13.04%), and control districts reported poor scores compared to the treated districts (1.56%) 19.57% in control districts.

Figure 4: Classroom environment score



*** p<0.01, ** p<0.05, * p<0.1

Hence, Table 9 showed positive associations between scores: available resources and classroom organisation presented a robust correlation between them with 0.83 and statistically significant, while the remaining variables were moderately correlated with the classroom organisation except for the routine schedule and interactions with children presented a significant weak correlation, 0.35. Moreover, health and sanitation presented a significant moderate correlation with available resources. On the other hand, the daily/routine and literacy/numeracy environment showed a significant weak correlation with health and sanitation. At the same time, interactions have a very weak and non-statistically significance with health and sanitation. Also, the data showed that classroom schedules (daily and routine) have a significant and strong correlation with available resources (0.79), literacy and numeracy environment (0.72) and interactions (0.59).

Table 9: Correlation between scores

	A	B	C	D	E	F	G
A. Classroom Organisation	1						
B. Health & Sanitation	0.43	1					
C. Daily Schedule	0.42	0.27	1				
D. Routine Schedule	0.35	0.24	0.89	1			
E. General resources	0.83	0.62	0.79	0.74	1		
F. Literacy & Numeracy Environment	0.51	0.26	0.72	0.64	0.69	1	
G. Interactions	0.35	**0.12**	0.59	0.53	0.51	0.75	1

3.3 Inclusion and classroom observation outcome

3.3.1 Accessible and Inclusive WASH Facilities

During the classroom observation, it was reported that 28.18% (34.78%, Control **and 23.44% in Treatment)** schools have accessible inclusive toilets and disability friendly toilets to use.

28.18% Schools have accessible & inclusive toilets

Are their inclusive WASH facilities that are accessible (e.g. by ramp) and disability friendly to use?

3.3.2 WASH facilities characteristics

42.73% (treatment district, 34.38% and 54.35%, control district) of all schools observed have WASH facilities were appropriate for ECCD center and they have separated facilities for ECCD children. However, when asked if the schools have appropriate and separated WASH facilities for ECCD children (boys and girls), only 67.27% of schools observed have separated facilities (treatment districts, 67.19% and controlled district, 67.39%). Furthermore, the classroom observation revealed that the mean of the toilet holes was five in average for both treatment and control, where toilet number holes were 5.6 in average the treatment group compared to 4.1 holes in the control group. Still, there was no significant difference in numbers.

3.3.3 Teachers' profile

Altogether, 110 schools were surveyed and 98.18% of teachers were facilitating during the classroom observation, among them; 73.64% were female, while 26.36% were male teachers (treatment, 82.81%, female and 17.19%, male; control, 60.87%, female and 39.13%, male).

Table 10: Teacher's characteristics

Characteristics	Overall	Control	Treatment
Gender			
Female	73.64	60.87	82.81
Male	26.36	39.13	17.19
Education			
A2 (Education, ECE, others)	85.45	80.43	89.06
A1	3.64	8.7	
A0	8.18	8.7	7.81
Other	2.73	2.13	3.13
Experience			
Less than a year	14.55	26.09	6.25
1-3 Years	33.64	32.61	34.38
Higher than 3 years	51.82	41.3	59.38

Table 10 showed that 85.45% of teachers have A2 in education, ECE or related education background and 8.18% of the teachers were graduates. However, considering teaching experience, 14.55% of teachers have less than a year (6.25%, treatment and 26.09%, control), 33.64% of teachers (control, 32.61% and treatment, 34.38%) have 1-3 years' experience. In comparison, 51.82% of teachers (control, 41.3% and treatment, 59.38%) have more than three years of teaching experience.

3.3.4 Factors associated with the classroom environment

Early childhood education needs to associate with different factors to impact the successful transition to school (or school readiness as proxied using IDELA CE Score). Of course, the factors might vary according to the nature of the project. Still, the endline considered to receive the treatment has an intervention package that can trigger or speed up the changes such as mentorship to the teachers, girls enrolled in the class, children who miss classes, being supported by Save the Children, gender of the facilitator or teacher, years of experience.

Using both children's early skills and classroom environment observation tools allows for analysing the relationships between children's development and their classroom environment. As mentioned in the previous section, the classroom environment consists of different components that help score and predict the classroom environment. Both children in the treatment and comparison group scored the IDELA CE item. Still, schools under treatment have more advantages to score higher by 68.7% and 59% when inclusion and gender equity are not in place. Table 11 also presented that teachers' experience matters a lot; an additional year of teaching experience can contribute 26.9% and 27.1% to the IDELA-CE score, ignoring the inclusion and gender equity. However, having more female teaching in pre-primary classes negatively affects the IDELA-CE score from 29.2% and 33.2% when ignoring inclusion and gender equity.

Table 11: Factors associated with the classroom environment

Variables	(1) IDELA CE Score	(2) IDELA CE Score
Treatment	0.687***	0.590***
	(0.278)	(0.137)
Inclusive WASH Facilities	0.149	
	(0.147)	
Gender Equity	0.203*	
	(0.122)	
Length of SC Support	-0.0200	
	(0.0709)	
Facilitator/teacher gender	-0.292**	-0.332**
	(0.133)	(0.135)
Facilitator/teacher with years of experience in the profession	0.269**	0.271**
	(0.0945)	(0.0927)
Constant	2.978***	3.154***
	(0.224)	(0.174)
Observations	110	110
R-squared	0.386	0.357
R-squared Adjust	0.350	0.338

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Section Two: School Readiness Assessment and Transition

School Readiness Assessment and Transition

We used the International Development and Early Learning Assessment (IDELA), as our school readiness assessment tool. The IDELA measures (a) emergent language and literacy, (b) emergent numeracy, (c) socio-emotional development, (d) motor development (fine and gross motor skills), (e) executive function, and (f) approach to learning. International Development and Early Learning Assessment, or IDELA. This metric is a holistic, rigorous, open-source, direct child assessment easily adapted and used in different national and cultural contexts. In addition, IDELA measures children's development and learning, and the IDELA Caregiver questionnaire was used to interview parents/caregivers.

☞ The IDELA child assessment contains 22 questions in four domains: motor development, emergent literacy, emergent numeracy and socio-emotional development. It also contains two questions related to executive functioning (short-term memory and inhibitory control) and assessor-rated questions related to children's approaches to learning.

☞ The IDELA caregiver questionnaire contains questions about children's family, and household environments and the tool are also a companion tool to the IDELA child assessment. We use the IDELA-caregiver assessment to understand better the home environment of targeted children, including indicators on their family demographics, experience with pre-primary/ nursery or ECD, home learning resources, interactions with caregivers, and socioeconomic status, and knowledge, attitudes, and practices.

3.4 Home environment

Child characteristics

Schools in the treatment were selected based on the available pre-primary program within the school and the same in the comparison schools. The school's random selection of students was done using systematic random sampling based on the student enrolment list. Due to implementation practicalities, it was impossible to avoid spillover effects between treatment and control groups. The average age of children was around six years for both treated districts and controlled. Out of total children in treatment, 55.95% and 43.24% were girls in Gasabo and Ngororero Districts, respectively (compared to 50.7% and 55.26% in control areas, Kicukiro and Nyabihu Districts, respectively). There was no difference in the average age and proportion of girls between the project and non-project sites.

Table 12: Child characteristics

	District	Baseline (N=596)		Endline (N=304)	
		Age (Average)	Girls (%)	Age (Average)	Girls (%)
Treatment	Gasabo	4.7	48.5	6.2	55.95
	Ngororero	4.5	53.3	6.3	43.24
	Total	4.6	52.2	6.26	50
Control	Kicukiro	4.3	47.7	5.96	50.7
	Nyabihu	4.3	45.3	6.2	55.26
	Total	4.3	46.5	6.09	53.06

Family characteristics

Looking at parent characteristics of the children who are enrolled in pre-primary and primary class 1, data display a range of household environments in which children are developing. Analysis of family backgrounds for mother and father, comparing baseline and endline evaluation. The findings showed that– mothers were younger and literate compared to fathers regardless of education.

Table 13: Family characteristics by intervention

	Variable	Baseline		Endline	
		Control	Treatment	Control	Treatment
Mother	Age (Average)	31.8	32.2	34.4	34.8
	Never attended, %	6.18	10.79	9.92	9.56
	Less than primary education, %	62.36	74.1	16.53	23.53
	Primary education, %	3.37	5.76	42.15	42.65
	Secondary education, %	20.22	7.91	27.27	23.53
	Higher education, %	7.87	1.44	4.13	0.74
	Literate, %	90.06	81.29	88.43	89.71
Father	Age (Average)	37.04	37.5	35.7	36.6
	Never attended, %	7.49	18.95	15	22.06
	Less than primary education, %	59.03	68.95	13.33	16.18
	Primary education, %	6.17	3.16	40	38.97
	Secondary education, %	18.5	8.42	23.33	20.59
	Higher education, %	8.81	0.53	8.33	2.21
	Literate, %	90.95	78	84.17	79.41

3.5 Home Learning Environments

The home learning environment includes the availability of resources/tools that contribute to home learning and activities.

Resources

A significant difference has occurred in the availability of materials among the households in the treatment group. The availability of key learning materials like storybooks, textbooks, colouring books, comic books, drawing books, hand-eye coordination materials, and numbers were significantly higher in the intervention areas. Marginal difference was found in the availability of textbooks, magazine, religious book colouring books, comic books, homemade toys, store-bought toys, household and outside objects, drawing, puzzle, hand-eye coordination, shapes, and numbers.

Table 14: Materials and Resources useful for children

	Baseline		Endline		Difference
	Control	Treatment	Control	Treatment	
Storybook	15	11	24.8	23.5	12.5***
Textbook	30	22	29.8	40.4	18.4***
Magazine	5	4	1.7	1.5	-2.5
Religious book	75	56	36.4	36.8	-19.2***
Colouring book	4	2	4.1	4.4	2.4
Comic book	2	1	2.5	100	99***
Homemade toy	43	38	65.3	68.4	30.4***
Store-bought toy	35	24	32.2	30.1	6.1
Household objects	62	61	70.2	72.1	11.1**
Outside Object	84	78	85.1	85.3	7.3**
Drawing	32	19	50.4	55.1	36.1***
Puzzle	6	4	5.8	16.9	12.9***
Hand-eye coordin.	4	5	2.5	10.3	5.3
Shapes	6	2	3.3	4.4	2.4
Numbers	7	6	17.4	22.8	16.8***

*** p<0.01, ** p<0.05, * p<0.1

Activities

The engagement of children in various activities has improved in the endline as compared to the baseline. The proportion of children engaged in various activities with parents, which was higher in control for some activities in the baseline, has reversed in the endline study. During endline, there are larger proportions of caregivers engaged in the activities like teaching numbers, teaching letters, teaching new things and drawing compared to the control group. The proportion of children engaged in various learning activities increased compared to the baseline with significant increase in proportion of caregivers teaching numbers, letters, new things, and also playing and drawing with children.

Table 15: Engagement of children in key learning activities

	Baseline		Endline		Difference
	Control	Treatment	Control	Treatment	
Reads to child	41	30	52.5	68.38	38.38***
Tells stories	**36**	**35**	**47.11**	**72.06**	37.06***
Sings	62	57	55	68.38	11.38*
Takes child out	**57**	**45**	**46.28**	**48.53**	3.53
Plays with child	**80**	**69**	**64.46**	**77.94**	8.94**
Draws with child	**30**	**22**	**47.93**	**61.03**	39.03***
Teaches new things	39	28	66.94	67.65	39.65***
Teaches letters	**44**	**35**	**74.38**	**76.3**	41.3***
Teaches numbers	**51**	**48**	**72.73**	**75.74**	27.74**
Hug	**86**	**75**	**92.56**	**93.28**	18.28***

*** p<0.01, ** p<0.05, * p<0.1

Child adversity

The ECCD children had to face a number of adversities. Unlike the expectation, the prevalence of yelling and hitting has slightly decreased in the endline with no significant difference in treatment and control areas. Around 5 in 10 children were hit or yelled at by the family members (both at baseline and endline for project area). The increase, though small, was surprising. Although there was no qualitative data to verify the findings, it can be possibly due to increase in age. The proportionate increase in control and no significant difference between control and treatment indicates that the slight increase cannot be attributed to the project. There was no significant difference in the child adversity index for children in treatment and control areas.

Table 16: Child adversity

	Baseline		Endline		
	Control	Treatment	Control	Treatment	Difference
Yells	66	56	55.37	52.94	-3.06
Hits	**52**	**40**	**62.5**	**50**	10
Slap	**63**	**56**	**33.96**	**71.43**	15.43
Child adversity index	60	51	51	58	7

*** p<0.01, ** p<0.05, * p<0.1

3.6 Child Results

This section describes children's performance on the direct child assessment, focusing on differences between the skills of children in the two study groups. Total domain scores are calculated by adding the weighted score of each item in the domain so that all items contribute equally to the domain score. Next, the total IDELA score is calculated by adding the weighted score of each item and dividing by the total number of items so that all items contribute equally to the total score. Therefore, the analyses presented below display the proportion of IDELA questions answered correctly out of all possible correct answers.

Table 17: Overall IDELA Findings

	Baseline		Endline		
Items & Scores	Control	Treatment	Control	Treatment	Difference
Emergent Numeracy	30	30	65.5	67.4	37.9
Social-Emotional	27	28	52.9	57	28.9**
Emergent Literacy	23	22	59.7	65.8	43.8***
Motor Development	37	41	67.7	70.4	29.4*
Total IDELA	**27**	**30**	61.5	65.1	**35.1*** **

*** p<0.01, ** p<0.05, * p<0.1

The overall IDELA score has significantly improved for each period of the evaluation baseline (control, 27% and treatment, 30%) and endline (control, 61.5% and treatment, 65.1%). This improvement pattern could be observed across domains, resulting in the total IDELA score. The socio-emotional and emergent literacy score presented the highest difference and significance almost double compared between baseline and endline, 28.9%, 43.8% and 29.4%, respectively, considering the treated districts. The **average IDELA score** for the endline is about 35.1% higher than the baseline within the treatment group. However, there was a slight difference between control and treatment in the endline, about 3.7%.but the slight difference might be associated with various factors as follows:

1. Since the curriculum's launch, REB has organised a series of teacher ToT across the country from 2016 to 2018. First occurred District Maters Trainers (DMAST) in 2016, and 2017-2018, the DMAST changed into Sector-based Trainers (SBTs), from which the SCI model for ASR Phase two is currently built from. This implies that every sector has at least two or three pre-primary teachers trained on the National Curriculum content, and 80% of the SCI model for ASR Phase two covers numeracy and literacy areas and the core of the curriculum.
2. Regarding the ECD Working Group, SCI is counting around 20 partners invested in early learning. Each of them has a "teacher training component". This also implies that SCI is empowering teachers on teaching approaches. Still, also other partners have such interventions in different coverage.
3. The last possible factor that causes a slight difference is that Save the Children offers expertise in the "National ECD Master Trainer" under the project. In addition, SCI has contributed to the National curriculum and teacher training materials development. Such extra intervention contributed to the pre-scale-up of the project phase because SCI capacitated teachers beyond the ASR scope. For example, participation in different teacher's training occurred in Rubavu, Nyabihu (controlled district), Huye, Karongi, Kayonza, etc. The teachers in these districts got similar packages same to the treated districts. But for the district of intervention, there was consistent monitoring, coaching, and feedback, which may contribute to teaching improvement.

3.7 Home environments and child development

To understand the factors related to students' current school readiness level, we performed a multivariate regression of student characteristics on total school readiness score (IDELA Score). Holding other factors constant, the analysis revealed that a child is predicted to have a school readiness score 29.5 points higher for each year of age, on total school readiness score and there was no predicted difference between boys and girls. Moreover, considering home learning environment, only learning materials predicted to have a positive effect by 5.9 points increase on school readiness score and inclusion, by considering children living with disability, the social-emotional score on average increases by 45.7 points compared to a child without disability. However, a child who experience adversity (slapped, hitted and yelled) was predicted to have a decrease in school readiness score by 13 points.

Table 18: Effects of home characteristics and learning environment on the IDELA scores

Variables	Motor	Literacy	Numeracy	Social-Emotional	IDELA
Enrolled in 2020	0.235	0.134	0.0301	0.0179	0.118
	-0.181	-0.0697	-0.1	-0.142	-0.108
Grade Level (P1)	0.698**	1.010***	0.775***	0.13	0.804***
	-0.224	-0.155	-0.146	-0.223	-0.16
Child age years	0.250**	0.218***	0.283***	0.277**	0.295***
	-0.0857	-0.0495	-0.0422	-0.0928	-0.0593
Learning Materials	0.0357	0.0522**	0.0555*	0.0594	0.0592**
	-0.0238	-0.0169	-0.0201	-0.0316	-0.0164
Average monthly income	0.0251	0.0275	0.0831	0.162	0.0819
	-0.0778	-0.0625	-0.0663	-0.0916	-0.0754
Home Learning Activities	0.0141	-0.00053	0.0211	0.0529	0.0229
	-0.033	-0.0191	-0.0189	-0.0294	-0.0215
Negative Discipline	-0.195***	-0.106**	-0.0977*	-0.0557	-0.13***
	-0.0486	-0.0318	-0.04	-0.0436	-0.0315
Child Sex	0.0372	0.108	-0.00989	-0.0919	0.0214
	-0.111	-0.0957	-0.0852	-0.12	-0.0824
Disability	0.0805	0.189	-0.107	0.457*	0.161
	-0.175	-0.335	-0.21	-0.178	-0.212
Constant	-2.093***	-2.17***	-2.633***	-2.723***	-2.77***
	-0.497	-0.333	-0.297	-0.454	-0.306
Observations	202	202	202	202	202
R-squared	0.454	0.599	0.553	0.263	0.612
Adj R^2	0.425	0.578	0.529	0.224	0.592

Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Section Three: Radio Program and Parenting care

Radio Program and Parenting care

At the end of March 2020, the Government of Rwanda announced the nationwide closure of all educational institutions in response to the COVID-19 pandemic. Following this announcement, Save the Children Rwanda and education stakeholders adapted the Early Childhood Development program into an Interactive Radio Instructions programme to ensure the continuity of education. In addition, given the nature of the pandemic, we scaled up. We adapted the ASR project to become a home-focused Interactive Radio Programme designed to be facilitated by parents, caregivers and older siblings and sometimes facilitated by Friends of Family (IZU) via weekly phone calls.

Our educational radio spots have been designed to be as 'parent-friendly' as possible since most parents and caregivers have become responsible for facilitating their children's education after the nationwide closure of educational institutions. The **15-30**-minute radio spots are usually a combination of songs and short activities, including games and trivia introducing educational content such as letters, figures, body parts, and physical activities. This programme employs radio-based lesson formats to aid local-level teaching facilitators working within community-led child care centres. Community facilitators and IZU also act as a network to disseminate information and communicate with parents in their communities. This approach improved both the teaching skills among community facilitators and increased child development-related knowledge among parents.

3.8 Radio Programming Characteristics

The section described a demographic profile of the respondents who heard parenting sessions broadcast on the radio. Figure 5 shows that broadcasted programs via radio were listened by 14.9% increase from the baseline indication, 38.92% and 53.82% in the endline. The program awareness from the community volunteers and/or the broadcasted session's re-timing (**from 3PM to 5PM**) has contributed to such an increase in the listening of parenting sessions via interactive radio programs.

Figure 5: Heard parenting sessions broadcasted on the radio

*** p<0.01, ** p<0.05, * p<0.1

3.9 KAP on the Parental involvement in home learning activities

Table 19 summarized the reported mean comparison between endline and baseline on the topic learnt. In comparison with the baseline and endline within the treatment districts (Gasabo and Ngororero), parents/caregivers' attendance has increased significantly to all sessions, with little but significant increase in helping a child learn at home and making books, 11% and 19%, respectively. In addition, the remaining topics were increased by more than 30% from the baseline indication, for example 45%, let's count (baseline, 29% and 74%, endline), 52%, talking and listening to a child (baseline, 12% and 64%, endline) and 45%, learning about letters together (baseline, 26% and 72%, endline).

Table 19: Mean comparison between endline and baseline on the topic learnt

Topic followed on radio	Baseline	Endline	Difference	Sign
Helping Your Child to Learn at Home	0.59	0.70	+0.11	**
Let's Count	0.29	0.74	+0.45	***
Talking and Listening with My Child	0.12	0.64	+0.52	***
Learning about Letters Together	0.26	0.72	+0.45	***
Sorting and Organizing	0.10	0.62	+0.51	***
Learning about Shapes and Measurement	0.09	0.58	+0.49	***
Knowing about Books and Writing	0.06	0.41	+0.34	***
Making books	0.00	0.19	+0.19	***

*** p<0.01, ** p<0.05, * p<0.1

Table 20 summarized the mean comparison between endline and baseline on the take-up message from the broadcasted radio sessions. The take-up message varied from parents/caregivers to another, and there is a strong significant increase comparing baseline and endline indicators, 28.7% to 67.2%, respectively.

Table 20: Mean comparison between endline and baseline on take-up message

Take up message with child	Baseline	Endline	Difference	Sign
Use of body parts	0.08	0.601	0.521	***
Language skills	0.044	0.542	0.498	***
Thinking and mathematics	0.477	0.734	0.257	***
Relationship with others and emotions	0.47	0.771	0.301	***
Positive discipline	0.367	0.712	0.345	***

*** p<0.01, ** p<0.05, * p<0.1

Parents were asked as to how much time they spared to support their children's learning at home. Data displayed in Table 21 indicates 62.3% of parents reported devoting more than one hour per day to supporting their child's learning while schools are closed.

Table 21: Mean comparison between endline and baseline on session broadcasted

Session broadcasted	Baseline	Endline	Difference	Sign
Introduction of role of parents	0.83	0.78	-0.05	
Oral language (listening and speaking)	0.23	0.75	0.52	***
Psychomotor development (Final and Gross)	0.02	0.23	0.21	***
Early Maths-Lets count	0.57	0.74	0.17	***
Early Literacy –Knowing the alphabets	0.66	0.71	0.05	
Sorting and classification	0.33	0.65	0.32	***
Knowing about books and print	0.24	0.56	0.32	***
Patterns	0.11	0.31	0.2	***
Measurement and comparison	0.37	0.55	0.18	**
Emotional knowledge and social perspective talking	0.06	0.4	0.34	***
Social awareness and Relationship Management	0.1	0.3	0.2	***
Wrap and reminder about the role of parents	0.05	0.29	0.24	***

*** p<0.01, ** p<0.05, * p<0.1

During the focus group discussion, parents mentioned that they liked topics on games and making didactic materials, which helped them to understand the relevance of games in developing children's brains and social interaction. They mentioned a topic called Mariza, which emphasises listening to a child; from this topic, parents said that "they learnt how to engage children in sharing relevant information like teaching them disciplinary skills and having a discussion on what they learnt from school as a way of making a recap and coaching".

The parents said that they also liked a session on emotional reaction ("***amaragamutima"***); that session helped parents to practice positive discipline in their parenting after knowing that hurting a child creates enormity between children and parents, and again it affects child growth. Therefore,

this session helped parents to regulate their emotional reactions. Even if the child is in the wrong, a parent should step in and talk with the child on how to solve the problem without harming the child.

3.10 Responding to COVID-19 measures within the family

The government response measures and the impact of the crisis on child learning remains uncertain as we are currently facing the side effect of public health measures during the total lockdown (March – July 2020) and continue to affect the parenting practice in general. However, different education actors have collaboratively supported learners. This sub-section aims to assess the household and teacher behaviour and impacts of COVID-19 on socio-economic status and education for pre-primary schools.

Figure 6: Observing COVID-19 measures: handwashing and wearing masks

Means to wash hands: 67.32% of caregivers who participated in the endline survey reported to wash their hands, before and after certain activities from 43.94% in the baseline. The 23.38% difference results from the health and sanitation awareness for washing the hands in the COVID-19.

Child wears mask when goes out, 98.44% in the endline from 97.26%, in the baseline survey including going and come to school wearing masks.

The study reveals that 98.4% in the endline compare to the baseline with 83% of parents washing their hands as recommended by health actors using soap or detergent. The remaining percentage use hand sanitisers. The evidence on the benefits and harms of children wearing masks to mitigate transmission of COVID-19 and other coronaviruses is limited. Furthermore, some studies confirm that children wearing or using masks decline the attack of influenza and other respiratory viruses (Burnett & Sergi, 2020; Wang et al., 2020).

Besides protective measures against COVID-19, the effects of Coronavirus on household behaviour are associated with mental health characteristics. They are all likely to experience emotional discomfort given the spread of COVID-19. In addition, health concerns, stress from the disruption needed for public health measures, and social distancing may all impact one's mental health and/or may exacerbate underlying symptoms.

3.11 COVID-19 effect on teaching and child learning

Teachers who participated in the survey said that COVID-19 affected them in many ways, including the inability to complete what they had planned to teach; children transition from pre-primary to primary one when they haven't studied in the top class. In addition, it affected the income levels of both teachers (they were not on the government payroll, they were only getting paid by parents when the schools were functioning; therefore, with the school's closure, their payment stopped).

A teacher from CS Miduha in Gatumba sector said that 'we faced a challenge when schools reopened because we received many new children where the ones we had before were also still with us, so the number of children strongly increased beyond our capacity to control and even in our small classes there was a big challenge of congestion'. This was hard to handle because in teaching pre-primary children we need enough space for learning games and corners.

Parents attendance in the parenting sessions on how to support children learn at home and what they learnt

Of 48 parents who participated in the discussion, 77% (37) said they listened/ followed the parenting sessions on supporting children learn from home aired through radio. In contrast, 23% (11) of them did not follow the parenting sessions. The parents who followed the parenting sessions mentioned some of their topics, including sorting, arranging and counting sessions on psychology, social interaction, and positive discipline. They reported that they learned how they could facilitate their children in learning how to count, know colours, do home chores, play with a child, sing with/for them, tell stories aimed at teaching children to know different things, and show them affection.

A parent from Bwira sector in Ngororero District stated that 'Before the training I did not know what children in pre-primary school are doing at school because I used to hear my child saying or talking about "***Inguni***" **(learning corner)** and I could not understand what is meaning and sometimes, I would get angry of the teachers thinking that it is a form of punishing children but later after following the radio sessions I got to know that it is one way of teaching children in pre-school'.

Parents confirmed that radio sessions helped them learn more about male engagement in parenting, and it encouraged men to support their children in learning and even support/ help their wives. Their involvement can vary in taking care of their children like carrying, playing, reading and supporting in going through what they learnt at school and telling them stories. Parents said this kind of engagement taught men to show affection to their children and even the entire family, following the radio parenting sessions provided by save the children. However, 23% (11) among the interviewed parents did not manage to follow the radio sessions on parenting due to a lack of radio sets, failure to meet the time when the sessions were aired out because they would be in other working activities.

> **One of the parents from Gasabo district** quoted that " play with my child with the purpose of teaching her math and Colors, I sent her in the house to bring me two Onions to see if she can handle this, I also sent her to bring me a red cup to see if the child can differentiate colors, this has been my technique to teach her without using written notes" This was a result of radio session on parenting and supporting children learn from home that was given by save the children.

Parents said that all of the activities helped to associate most often with their children, which increased relationship between parents and their children and it brought up an understanding of parents' role in supporting their children in learning beyond paying school fees and learning materials.

Changes experienced after practising radio sessions about supporting children to learn from home?

Respondents (parents) said that after practising what they learnt from the parenting radio sessions, they had seen changes in their children. For example, children's regular attendance increases; even in the bad weather condition (rain season), children want to go to school when the rain stops. In addition, children learnt how to take care of their hygiene, children's confidence in relating with parents and other children has improved. Parents added that children's knowledge improved and their performance in school.

> **One of the parents** testified: 'I have two children, the older one didn't attend pre-primary just directly joined primary one because I did not know about the pre-primary program but after getting training from Save the children I took the second in pre-primary school and these two children are different in the way that younger one who joined pre-primary is very sharp and active compared to the older'

Besides the parent's experience in child learning, Table 22 shows that any form of learning parent attended via radio program during lockdown or after affects the total IDELA score by 34 points.

Table 22: Effects of child characteristics and COVID-19 on the IDELA scores

Variables	Motor	Literacy	Numeracy	Social-Emotional	IDELA
Following lessons on radio	0.256*	0.323**	0.279*	0.299*	0.340**
	(0.108)	(0.105)	(0.111)	(0.133)	(0.101)
Child Age	0.434***	0.499***	0.503***	0.299***	0.513***
	(0.0669)	(0.0405)	(0.0350)	(0.0635)	(0.0515)
Child Sex	0.0960	0.203*	0.0152	0.109	0.125
	(0.0841)	(0.0856)	(0.0909)	(0.110)	(0.0823)
Constant	-2.794***	-3.260***	-3.178***	-1.977***	-3.310***
	(0.451)	(0.233)	(0.210)	(0.408)	(0.312)
Obs	303	303	303	303	303
R-squared	0.303	0.410	0.403	0.161	0.430
R^2 Adj	0.296	0.404	0.397	0.152	0.425

Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

CHAPTER FOUR: CONCLUSION AND RECOMMENDATION

4.1 Conclusion

This report summarises the early childhood study findings conducted in four districts (Gasabo, Kicukiro, Ngororero and Nyabihu), where two districts were treated (Gasabo and Ngororero). The study was designed to ensure sustainable and equal access for boys, girls and children living with disabilities to pre-primary education from the project implemented by Save the Children International-Rwanda Country Office. Therefore, the study assessed progress from baseline to endline for section two (and compared two groups) and three, radio program and parenting care. However, the absence of the comparison group in section three and the absence of baseline in section one, classroom environment observation, do not affect the quality of the intervention.

The endline evaluation has demonstrated the importance of a successful transition to school; the experiences during the transition may have a long-term impact on the child's future development and learning at the primary school and subsequent levels of education. However, the negative or adverse effects of the transition on the child if not addressed on time. Furthermore, a successful transition to school is a sure way of consolidating the child's early childhood education achievements and development. Although parents and caregivers cannot provide the same kind of firsthand knowledge of school and classroom life as students, they can respond to the learning environment mainly by availing homemade learning materials such as toys and books to facilitate the children.

Section one: Overall, schools in the treated districts showed a great indication across the 110 schools sampled at the endline. The overall classroom observation rate was reported to have a fair score dominating treatment and control, 64.06% and 67.39%, respectively. While the observation score showed that treated districts had preferred scores to control, 34.38% compared to the controlled districts, and control districts reported poor scores compared to the treated districts 19.57% in control districts. The team reported that 28.18% of schools have accessible, inclusive WASHs and disability-friendly WASHs during the classroom observation. Using both children's early skills and classroom environment observation tools allows for analysing the relationships between children's development and their classroom environment.

Section two: The overall scores demonstrated that students' school readiness and the transition were above 60% for both controlled and treated districts in the endline evaluation. The IDELA scores have improved heavily for children enrolled in the treated districts. The average scores for children in the treated districts reached 65.1% during endline from 30% during baseline. The scores have increased by more than 3.7% compared to the controlled districts only in the endline evaluation. The slight changes in the endline were associated with the curriculum's launch and organised series of teacher ToT across the country from 2016 to 2018. Each of them has a «teacher training component». This also implies that SCI is empowering teachers on teaching approaches. In addition, SCI has contributed to the National curriculum and teacher training materials development. Such extra intervention contributed to the pre-scale-up of the project phase because SCI capacitated teachers beyond the ASR scope. For example, different teacher training participation occurred in Rubavu, Nyabihu, Huye, Karongi, Kayonza, etc. The teachers in these districts got similar packages same to the treated districts.

Section three: We adapted the ASR project to become a home-focused Interactive Radio Programme designed to be facilitated by parents, caregivers and older siblings and sometimes facilitated by Friends of Family via weekly phone calls. Parents were asked how much time they spared to support their children's learning at home. The government response measures and the impact of the crisis on child learning remains uncertain as we are currently facing the side effect of public health measures during the total lockdown and continue to affect the parenting practice in general. The study reveals that 98.4% in the endline compare to the baseline with 83% of parents washing their hands as recommended by health actors using soap or detergent. In addition, health concerns, stress from the disruption needed for public health measures, and social distancing may all impact one's mental health and/or may exacerbate underlying symptoms.

4.2 Recommendations

With reference to findings and observations recorded during assessment, it's recommended:

- **To MINEDUC:**
  - ☞ Own IDELA toolkit by empowering education inspectors to use it and coordinating ECD actors in the delivery of the tool as one of early childhood assessment instruments in order to dive deep the understanding and learning related to how the school readiness and transition from pre-primary to primary education are achieved by ensuring the blended child age appropriate, gender and disability inclusive activities;
- **To districts:**
  - ☞ promote awareness of the importance of parental support with emphasis on the engagement of fathers in order to promote the children's learning outcomes during community meetings and teach parents how to provide such support effectively and timely to boost children's willingness to learning and readiness to schooling at early age as well as enrolling children into pre-primary education at appropriate age (2 years)
  - ☞ Invest in setting up and renovate child age-appropriate playgrounds and equipment at pre-primary schools since the scarcity of such facilities would decline the emotional and joyful learning of basic literacy and numeracy
- **To schools of interventions and control schools**:
  - ☞ While parenting session is a very important strategy to improving learning outcomes for children at early age, it is recommended to keep referring to and using the project's parenting module on occasions of parents and schools' meeting. This module contains numerous games, playful activities relevant to boost child learning outcomes.
  - ☞ Embed disability friendly approach at different levels: toilets/WASH and schools and learning materials while constructing new school infrastructures and renovating existing infrastructures as well as procuring materials and equipment

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Annexes

IDELA Scores by domains, and disaggregated by gender

	Endline			Gender		
Scores	Control	Treatment	Difference	Girls	Boys	Difference
Emergent numeracy	65.5%	67.4%	1.8%	66.7%	66.3%	0.4%
Social Emotional	52.9%	57.0%	4.1%	54.2%	55.9%	-1.7%
Emergent literacy	59.7%	65.8%	6.0%	60.5%	65.1%	-4.7%
Motor development	67.7%	70.4%	2.7%	68.3%	69.8%	-1.6%
Total IDELA	**61.5%**	**65.1%**	**3.7%**	**62.4%**	**64.3%**	**-1.9%**
Short-term memory	58.7%	61.6%	2.9%	60.0%	60.3%	-0.3%
Inhibitory control	71.7%	77.7%	6.0%	74.1%	75.4%	-1.3%
Executive Function	65.2%	69.6%	4.4%	67.1%	67.9%	-0.8%
Observed persistence	79.1%	84.7%	5.6%	81.5%	82.5%	-1.1%

	Endline			Gender		
Variable	Control	Treatment	Difference	Girls	Boys	Difference
Emergent Numeracy						
Size and length	89%	92%	3%	91%	90%	1%
Sorting and classification	50%	55%	5%	53%	53%	1%
Shape identification	41%	45%	4%	44%	43%	1%
Number identification	122%	117%	-6%	117%	122%	-5%
One to one Correspond.	70%	70%	0%	70%	70%	0%
Addition and Subtraction	63%	66%	3%	65%	64%	1%
Puzzle Completion	24%	26%	3%	27%	24%	3%
Emergent numeracy	66%	67%	2%	67%	66%	0%

	Endline			Gender		
Variable	Control	Treatment	Difference	Girls	Boys	Difference
Social Emotional						
Self-Awareness	76%	78%	1%	78%	76%	1%
Friends	49%	57%	8%	51%	55%	-4%
Emotional awareness	46%	46%	0%	46%	47%	-1%
Empathy	38%	47%	9%	41%	44%	-3%
Solving conflict	55%	57%	2%	55%	57%	-2%
Social Emotional	53%	57%	4%	54%	56%	-2%

	Endline			Gender		
Variable	Control	Treatment	Difference	Girls	Boys	Difference
Emergent Literacy						
Expressive Vocabul.	49%	58%	9%	53%	54%	-1%
Print Awareness	68%	66%	-2%	64%	69%	-5%
Litter identification	67%	79%	12%	66%	80%	-13%
First letter sounds	41%	42%	2%	40%	43%	-3%
Emergent writing	62%	67%	5%	64%	66%	-3%
Oral comprehension	72%	82%	10%	76%	78%	-3%
Emergent literacy	60%	66%	6%	60%	65%	-5%

	Endline			Gender		
Variable	Control	Treatment	Difference	Girls	Boys	Difference
Motor development						
Drawing a person	72%	77%	6%	72%	77%	-4%
Folding paper	35%	35%	0%	35%	36%	-1%
Copying a shape	75%	77%	2%	76%	77%	-1%
Hopping	89%	91%	3%	90%	90%	0%
Motor development	68%	70%	3%	68%	70%	-2%

	Endline			Gender		
Variable	Control	Treatment	Difference	Girls	Boys	Difference
Total IDELA	61%	65%	4%	62%	64%	-2%
Short-term memory	59%	62%	3%	60%	60%	0%
Inhibitory control	72%	78%	6%	74%	75%	-1%
Executive Function	65%	70%	4%	67%	68%	-1%
Observed persistence	79%	85%	6%	81%	83%	-1%

Available documents upon request

1. Terms of Reference
2. Datasets and Stata Do-files
3. IDELA Questionnaires (Children, Caregivers, Classroom)
4. Radio Program and Parenting care Questionnaires

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