

# AN EVALUATION OF THE CHILD-TO-CHILD SCHOOL READINESS PROGRAMME IN ETHIOPIA

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# Executive Summary

The purpose of the Child-to-Child Approach for School Readiness Programme (CtCSR) is to improve children's school readiness through a child-centred, peer tutoring approach that engages older children (Young Facilitators) to conduct early learning activities with pre-school aged children in their home villages. By the end of the programme, children are expected to achieve basic pre-literacy and numeracy competencies that can support their successful transition into Grade 1.

UNICEF contracted the Ontario Institute for Studies in Education at the University of Toronto to conduct an independent evaluation to determine whether children who participated in the CtCSR have better school readiness and early learning skills compared to children who have not participated in the programme. In addition, the evaluation investigated the programme benefits for Young Facilitators, families and teachers, and explored the process of programme implementation and issues related programme sustainability. The findings from this evaluation were intended to identify programme strengths and weaknesses that could be used to inform future decisions about improving quality or scaling up the programme.

## **Main Findings**

The overarching finding is that young children who participated in the CtCSR had significantly higher scores on all early numeracy and literacy tasks tested compared to children in the control group. Positive outcomes were found across all geographical regions in the study, and there is some evidence that the programme effects are larger now than during the pilot phase of the programme five years ago. The CtCSR appears to have an impact not only on children's academic skills but on their social skills as well. Through the programme, children learned to communicate, express themselves and ask questions, were less afraid of school, had friends when they started school, knew the school rules, were more disciplined and motivated, and were more interested in starting primary school. The CtCSR appears to have an impact on children's success in school, in the both the short and medium-term, including in the areas of on-time enrolment, academic achievement and dropout. However, because of the absence of longitudinal data on cohorts of intervention and control children, these findings should be treated cautiously.

Young Facilitators felt happier at school, were more confident, and had more positive attitudes towards learning as a result of participating in the CtCSR. Results from the Young Facilitator survey also suggest that their performance in school improved as a result of participating in the CtCSR. Both teachers and key stakeholders remarked upon the improvement of literacy skills among Young Facilitators and noted that the programme enhanced their leadership skills, their interest in becoming teachers, and increased their sense of belonging in the community.

Results from the parent survey indicate that their understanding of the importance of on-time school enrolment improved as a result of the CtCSR and, furthermore, parents in the CtCSR showed higher scores on awareness of the importance of child development and activities in the home for promoting children's early learning than parents of children in the control group. Results from the teacher survey suggest that teacher understanding and use of child-centred teaching methods improved as a result of their participation in the CtCSR and more child-friendly and cooperative learning environments have been created. While few of the teachers involved in the CtCSR are early grade teachers, there was some indication of indirect spillovers into Grade 1 classrooms, where teaching became easier and, as a result, teachers' willingness to teach Grade 1 has been enhanced.

This evaluation has shown that the CtCSR has expanded very rapidly from an initial three pilot schools in three regions in 2008, and there is considerable enthusiasm for further expansion. As might be expected, in the course of bringing the CtCSR to scale, there have been significant challenges to programme fidelity. Materials needed to deliver the programme are unevenly distributed and young children rarely received the early learning kit of books and materials proposed in the original CtCSR design. Furthermore, not all teachers and Young Facilitators have the appropriate guides and training of teachers has not happened as regularly as envisioned in the programme design, often with gaps as long as three years between training. Existing estimated recurrent per child costs of the CtCSR somewhere between USD \$12 to USD \$53 per child. Current funding—even in *woredas* supported by UNICEF—does not presently provide for all the materials needed for a high quality programme delivery.

## **Recommendations**

Based on the evaluation findings, the following recommendations are presented for the future implementation, sustainability and expansion of CtCSR:

1. **Expand Resources to Ensure Quality and Sustainability:** To be implemented effectively and equitably, this programme requires that sufficient materials be in place for children, Young Facilitators, and teachers. Training for teachers and Young Facilitators must be conducted in regular cycles, and materials must be updated to reflect local language, cultural background and needs.
2. **Enhance Access for Vulnerable and Disadvantaged Children, both Young Participants and Young Facilitators:** School directors and community leaders have an important role to play in identifying and recruiting the most vulnerable young children for the programme, including

those children from families with low levels of maternal education.

3. **Focus on Literacy as one important piece of a holistic approach to early childhood development.** The CtCSRП takes an appropriately holistic approach to early childhood development, and it is important to recognize its contributions not only to literacy but to numeracy and broader psycho-social development. However, the broader findings of this evaluation suggest that while the CtCSRП enhances literacy, children who attend the CtCSRП still have surprisingly low scores in early writing and reading.
4. **Ensure Alignment and Integration with National Plan for ECCE:** To maximize the benefits of the CtCSRП, it must be aligned with the other three pillars of ECCE in Ethiopia including parent education, health and stimulation, and formal school readiness programs offered through pre-school education.
5. **Future Research, Monitoring and Evaluation:** Future research is needed to assess the relative effectiveness of not only of different programme delivery models for the CtCSRП, but also to decide how the CtCSRП can best be aligned with the Ethiopian government’s plans to expand zero class. As noted in this evaluation, further research is needed to understand the medium and longer-term impacts of the CtCSRП (for example on school completion and primary school learning outcomes), and to explore the cost effectiveness of the CtCSRП as compared to other ECCE interventions. Smaller scale studies could provide useful information on how the programme could benefit children with disabilities or those in pastoralist communities, and provide more evidence on whether and how the CtCSRП enhances the life chances of Young Facilitators.

In conclusion, the results of this independent evaluation indicate that the CtCSRП has a significant impact on children’s school readiness, is easy to scale, and is enthusiastically supported by key stakeholders, parents and teachers. The considerable momentum in national plans for expanded access to ECCE suggests that this is an appropriate time for a rigorous, larger-scale comparative study of the impact of different packages of ECCE interventions on learning and other childhood outcomes in Ethiopia, within which the CtCSRП may continue to play a substantial role.



# Chapter 1 Introduction

The Child-to-Child Approach for School Readiness Programme in Ethiopia (hereafter the Child-to-Child School Readiness Programme or CtCSR) was piloted by the Government of Ethiopia with support from UNICEF in 2008/09, with the aim of improving children’s school readiness by engaging older children as “Young Facilitators” who conduct early learning activities with pre-school aged children in their home villages.

This report presents the findings from an impact evaluation that estimated the effectiveness of the CtCSR in UNICEF-supported areas by comparing the early learning outcomes of children who participated in the programme against those who did not participate. The evaluation was commissioned by UNICEF Ethiopia and conducted between October 2013 and January 2014. The evaluation answers the following primary research question:

**Do children who participated in the CtCSR have better school readiness and early learning skills compared to children who have not participated in the programme?**

The report also includes findings from a process evaluation that focused on describing the evolution and implementation of CtCSR. It provides an overview of the programme and its implementation in different regions of Ethiopia, illustrates its relevance and issues related to sustainability, explores the cost and cost effectiveness of the programme, and describes the perceived effects of the programme for Young Facilitators, families and schools.

The report is organized as follows. This introductory chapter provides background information on early childhood education in Ethiopia, and on the origins and objectives of the CtCSR. It also offers an overview of the evaluation design and methodology for the study. Chapter 2 explores the CtCSR model and its implementation and costs; Chapter 3 explores the programme’s impact on pre-school-aged children; and Chapter 4 examines the programme’s perceived effects on Young Facilitators, parents and schools. Chapter 5 concludes the report by summarizing the evaluation findings and making key recommendations. The report incorporates feedback from a validation workshop held by UNICEF and the Ministry of Education in Addis Ababa on March 20, 2014.

## Early Childhood Education and Care in Ethiopia

Around the world, it is increasingly understood that the first 2000 days (from conception to age 6) are critical for lifelong cognitive, psychological, and emotional development. Programmes that provide early childhood education and other services are viewed as important ways to improve the life chances of the poorest children and to ensure that they are ready to learn when they enter formal schooling at age 6 or 7 (Engle et al., 2011). Children who participate in quality early childhood education and care (ECCE) programmes have easier transitions to primary school and are more likely to progress through primary school than children who have not participated in such programmes (Aboud & Hossain, 2011; Berlinski, Galiani, & Manacorda, 2008; Malmberg, Mwaura, & Sylva 2011; Mwaura, Sylva, & Malmberg, 2008; Rao et al., 2012; UNESCO, 2006; Woldehanna & Gebremedhin, 2012).

In April 2000 at the World Education Forum in Dakar, Senegal, the international community reaffirmed its commitment to achieve *Education for All* by 2015. The first of six goals of the Dakar Framework for Action specifies the need to expand and improve comprehensive ECCE, especially for the most vulnerable and disadvantaged children. The widely-used term ECCE refers to programmes and processes that support development during the early years of life and encompasses education, physical, social and emotional care, intellectual stimulation, health care and nutrition. It also includes the support that families, schools, and communities need to promote children's healthy development. High-quality ECCE programmes can be an important pro-poor strategy if made available to disadvantaged children (UNESCO, 2014); however, children from poorer households and from rural communities are least likely to have access to such programmes (Orkin, Yadete, & Woodhead, 2012; UNESCO, 2014; Woldehanna & Gebremedhin, 2012).

Over the past 15 years Ethiopia has made remarkable progress towards achieving the *Education for All* goal of universal primary education. Strong leadership and commitment from the Ministry of Education (MoE), in collaboration with the efforts of international development partners, have resulted in the rapid expansion of access to schooling. Eliminating school fees, constructing new schools, training teachers, and conducting local government campaigns to encourage parents to enroll their children in Grade 1 when they are 7 years old have all contributed to this rapid expansion (Engel, 2010). However, significant challenges still remain. A large number of Ethiopian children begin Grade 1 when they are older than 7, and many have difficulty transitioning into school. Approximately 20 percent of students drop out before they complete Grade 1 (Ministry of Education, 2012). Results from Ethiopia's 2010 Early Grade Reading Assessment (EGRA) suggest that early literacy and numeracy skills are weak, with 34 percent of Grade 2 students unable to read a single word of a short story in their mother tongue (RTI International, 2010).

Historically, ECCE services in Ethiopia have not been integrated into public health and education services, but rather are provided on a relatively small-scale by private, non-governmental, and faith-based organizations. In 2007, a situation analysis was conducted that identified challenges to the development of ECCE services. These challenges included high fees, lack of teacher training, lack of a standard curriculum, lack of culturally relevant storybooks, low teacher salaries and high teacher turnover, the use of English as a medium of instruction, and, most importantly, a lack of awareness of the importance of ECCE (Orkin, Yadete, & Woodhead, 2012). The situation analysis also identified a number of existing opportunities including a curriculum for three-to six-year-olds, although not widely used; quality assurance and licensing mechanisms in some regions; many experienced teachers, although very few have ECCE training; private investors, NGOs and religious organizations with an interest in ECCE; and local rural institutions such as woman’s associations and farmers’ associations that could support the implementation of ECCE services.

Since 2007, the Government of Ethiopia has paid increasing attention to the provision of early childhood education. Ethiopia’s fourth Education Sector Development Plan (2010 to 2014) calls for an increase in gross enrolment to 20 percent in pre-school by 2014 and for a pre-school class (referred to as a “zero class”) to exist in all rural primary school compounds (Ministry of Education, 2010a). The key target outcomes are to develop a national ECCE steering committee, in addition to ECCE councils in regional and *woreda* (administrative) divisions; to establish national guidelines on curriculum and teacher training; and to increase the number of trained ECCE teachers from 37 percent to 60 percent. The government’s direct involvement in the provision of ECCE is limited to promoting ECCE and providing technical support and quality monitoring.

In 2010, the Ethiopian government also developed an ECCE Policy Framework in collaboration with UNICEF and other non-governmental organizations (NGOs) (Ministry of Education, 2010b), in addition to an ECCE strategic operation plan and guidelines. The new ECCE framework consists of four pillars. The first two pillars, parental education and a comprehensive programme of early child health and stimulation, focus on children from the prenatal period to age three and fall under the Ministry of Health.

The third and fourth pillars focus on non-formal and formal school readiness programmes for children aged 4 to 6. The third pillar consists primarily of the CtCSRP. Piloted in 2008/09 in three regions, this programme is now, according to UNICEF statistics, delivered through child volunteers enrolled at more than 3,354 schools in seven regions of Ethiopia.<sup>1</sup> An evaluation of the pilot programme showed both good gains in school readiness and considerable enthusiasm from key stakeholders for the programme, as will be described in this report.

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<sup>1</sup> Oromia, Harari, Tigray, Amhara, Somali, SNNPR and Benishangul-Gumuz

The fourth pillar calls for the establishment of a variety of pre-schools that will be community-based, privately run, or faith-based. Private pre-schools are fee paying and mostly located in urban areas. Government pre-schools include preschools set up and managed by *kebele* offices and include zero classes attached to government primary schools in urban and rural areas, with teachers paid by parent fees or from community contributions (Orkin, Yadete, & Woodhead, 2012). The Ministry of Education is responsible for providing an enabling environment for the establishment of pre-schools including training teachers, developing a curriculum, providing play and teaching materials, providing supervision and quality assurance, and registering pre-schools at the regional level. It is envisaged that pre-school teachers will hold a 10-month pre-school teacher-training certificate from the Kotebe Teacher Education Institute or have attended a two-month course to upgrade their skills, which would be offered through the same teacher training institutes that have been used to upgrade the qualifications of primary school teachers.

In combination, the four pillars represent a comprehensive and integrated approach to early childhood development that covers the prenatal period to the time when children enroll in primary school. These new policy commitments by the Ethiopian government signaled the beginning of important gains for Ethiopian children and a national commitment to the provision of universal, low-cost and quality ECCE programmes. In 2011/12, the Ethiopian Ministry of Education reported that 1.62 million (21.6 percent) of the country's estimated 7.51 million children aged 4 to 6 had access to some form of early childhood education. Of these, 13.7 percent of children had access to zero class, 5.3 percent to kindergarten, and 2.6 percent to the CtCSR (Ministry of Education, 2012). In 2013 the Ministry reported that 26% of children ages 4 to 6 had access to some form of early childhood education.

Nonetheless, there are still many challenges to achieving good quality ECCE programmes for the poorest children, including a lack of formal pre-schools in rural areas, a lack of trained pre-school teachers, and a fragmented quality assurance system that does not ensure that quality pre-school education is provided to the most disadvantaged children and to rural populations (Ministry of Education, 2010a; Orkin, Yadete, & Woodhead, 2012). None of the national planning documents have budgets attached to them. However, by recent estimates only 0.06 percent of the total budget for education in the ESDP IV, approximately 115 billion birr, is allocated to federal and regional government support to ECCE, with no allocation for teacher training, provision of materials, operating costs, or teacher salaries (Orkin, Yadete, & Woodhead, 2012). The ECCE Framework states that bilateral and multilateral development partners will mobilize resources and provide funding for ECCE although it is not clear which donors will provide assistance and how much will be provided.

## Programme Description and Goals

The CtCSRП was launched as part of UNICEF's mid-term strategic plan (2006-2009) in order to improve children's school readiness by providing a low-cost informal education programme. The programme is not intended to replace comprehensive early childhood education programmes. The CtCSRП is based on a successful rights-based model developed by the Child-to-Child Trust (UK) in 1987 and employs a child-centred, active learning approach that engages older children on health and education issues and who then disseminate their learning to other children, their families, and their wider communities through participatory activities. In 2007 the CtCSRП was piloted in partnership with the governments of six countries: Bangladesh, China, Democratic Republic of Congo, Ethiopia, Tajikistan and Yemen. Country partners have access to a common set of learning and training materials, developed by the Child-to-Child Trust, that are adapted to meet the local context.

CtCSRП uses cross-age peer tutoring whereby older children tutor younger children in pairs or small groups, with explicit teaching support in a co-operative, child-centred learning environment. This type of peer tutoring has been proven to boost children's reading and mathematics levels (Ginsburg-Block, Rohrbeck, & Fantuzzo, 2006; Rohrbeck, Ginsburg-Block, Fantuzzo, & Miller, 2003; Tymms et al., 2011; Topping et al., 2011). Older children often become models of appropriate behaviour by facilitating study sessions, asking questions and encouraging positive social interactions. Cross-age tutoring not only helps to develop academic skills, but also enhances social skills, self-esteem, and peer relationships. Peer tutoring benefits all children who participate: the young child gets personalized input of the older child who has higher learning skills in a one-to-one or small group setting, while the older child reinforces his/her previous learning as well as develops new skills. There is some evidence that peer tutoring interventions are more effective and show greater gains for children from disadvantaged backgrounds, for students in Grades 1 to 3 compared to older students, and when there is a two years' age difference between tutee and tutor (Rohrbeck et al., 2003).

### Primary and Secondary Programme Goals

The overall aim of the CtCSRП is to help young children successfully transition into primary school by

1. Enhancing children's school readiness skills, both academic and socio-emotional, and ensuring on-time enrolment (*Ready Children*)
2. Engaging older children and families as partners in children's development (*Ready Families*)
3. Improving primary schools' capacity to effectively engage young children in learning (*Ready Schools*)

By the end of the programme, children are expected to achieve basic pre-literacy and numeracy competencies that can support their successful transition into Grade 1.

In addition to the primary goal of enhancing children’s school readiness, the CtCSR has five secondary goals aimed at engaging older children and families as partners in children’s early learning, and developing and improving primary schools’ capacity to effectively engage young children in learning. Table 1.1 below outlines the primary and secondary goals for the programme.

*TABLE 1.1 CtCSR Primary and Secondary Goals*

<b>Primary Goals Ready Children</b>	<b>Secondary Goals Ready Families &amp; Ready Schools</b>
Ensure children who begin Grade 1 have developed a strong foundation in language, early literacy and numeracy, and the social and emotional skills required for successful learning in school.	Enable Young Facilitators to develop skills that support pre-school children’s early learning as well as increase Young Facilitators’ positive attitudes towards learning, their self-esteem, and their confidence.
Increase the number of girls and boys who are enrolled in grade 1 at 7 years of age (known as on-time enrolment).	Increase the awareness of parents and families of the importance of child development and on-time school enrolment; help families develop skills for promoting children’s early learning.
Decrease dropout rates and enhance children’s overall primary school performance.	Enhance Grade 1 teacher understanding and use of child-centred teaching and learning methods.  Increase teacher awareness of how early childhood experiences significantly influence children’s later learning, as well as improve the quality of the teaching and learning methods and materials they use when teaching.  Foster partnerships between the school (directors and teachers) and home (parents and families); enable schools to effectively address the needs of its youngest learners; create child-friendly learning environments; improve educational school standards. .

# Evaluation Design

## Primary Research Question

The purpose of the impact evaluation was to estimate the effectiveness of the CtCSR in UNICEF-supported *woredas*, and to provide evidence that can be used to inform future decisions about improving programme quality or scaling up the programme. The first and primary question for this evaluation, addressed in **Chapter 3** of this report, is

**Do children who participated in the CtCSR have better school readiness and early learning skills compared to children who have not participated in the programme?**

To answer this question within the time period requested (October 2013-January 2014), a quasi-experimental design was used in which children who participated in the CtCSR (intervention group) were compared with children from neighbouring schools who did not have access to the programme (control group). Data were collected from three regions in which the CtCSR is well established and from schools that receive UNICEF support in order to ensure some similarity in programme resourcing and implementation. Data were collected from Grade 1 children in their first term of school. All children who participated in this assessment were selected from a random sample of schools that were stratified in proportion to the total number of CtCSR schools in UNICEF-supported *woredas*. The random selection of schools and children within schools reduced selection bias, as much as possible, and increased the likelihood of having a representative sample of the population in the regions in which data were collected. Comparing the results of these two groups of children provides robust evidence as to whether the CtCSR is working as intended. Analysis of covariance (ANCOVA) was used to determine whether the differences in learning outcomes between the CtCSR group and control group were statistically significant after controlling for extraneous (covariate) factors that might also explain differences in the outcomes between children (e.g., children's age, family assets and maternal level of education). The University of Toronto Research Ethics Board approved the study protocol for this evaluation.

## Secondary Research Questions

A secondary set of questions, discussed in **Chapter 4** of this report, addresses the perceived effects of the programme on Young Facilitators, families, and teachers/schools:

- Does participating in the CtCSR help Young Facilitators develop new skills that enhance the early learning of pre-school children and improve Young Facilitators' self-esteem, confidence, and positive attitude towards learning?
- Does participating in the CtCSR improve family awareness of the importance of child development, improve families' skills for promoting early learning opportunities, and improve families' understanding of the importance of on-time school enrolment?
- Does participating in the CtCSR improve teachers' understanding and use of child-centred teaching and learning methods and awareness of how early childhood experiences influence later learning?

For this set of research questions, we relied primarily on recall data collected through surveys

with the three groups of actors: teachers, parents, and Young Facilitators. In the absence of baseline data, recall methods helped us to reconstruct baseline information *ex post* and the data were triangulated with qualitative data from interviews with key stakeholders, including school directors and officials from Woreda Education Offices and REBs. Comparative data were collected from parents whose children received the CtCSR intervention and parents of control children. No control data were collected from Young Facilitators because it was not possible to find a comparable group of older children from control schools given that Young Facilitators are carefully selected by school staff to participate in CtCSR. No control data were collected from teachers who did not participate in the programme. This approach was deemed as appropriate for answering secondary questions given the timeline and budget available for this evaluation. The evaluation timeline did not allow for the collection of baseline data, prior to the programme.

Process related questions are answered in **Chapter 2**, which focuses on the implementation and sustainability of the programme.

- How has the CtCSR been implemented and how has it evolved?
- What processes account for any regional or other variation in the CtCSR and its outcomes?
- How do key stakeholders understand the benefits of the CtCSR?
- How do key stakeholders understand the challenges facing the CtCSR?
- How sustainable and cost-effective is the CtCSR?

To answer these questions we relied on secondary reports, administrative data, and interviews and surveys of key stakeholders at the *woreda*, regional and national levels.

### **Sample, Scope, Instruments, and Procedures**

The CtCSR intervention group consisted of young children, parents, Young Facilitators, teachers, school directors, and key stakeholders who had the CtCSR available to them. The control group consisted of young children and parents who did not have the CtCSR available to them, but otherwise closely resembled the CtCSR group. A control group made it possible to infer what the learning outcomes of CtCSR children would have been if they had not received the programme.



Figure 1.1 Map and Regions of Ethiopia



Three regions (Harari, Oromia, and Tigray) were selected as the focal point for the impact evaluation to enable us to compare and contrast the overall impact of the programme on children’s learning outcomes across regions and to gain an understanding of contextual differences that influence programme implementation. These regions were selected because they had been implementing the CtCSR for five years and are thus regions where programme impacts should be most discernable when compared to regions that have only recently begun offering the CtCSR. Data related to the process evaluation and implementation of the programme was collected in five regions (Harari, Oromia, Tigray, Benishangul-Gumuz, and SNNPR). Amhara and Somali, the most recent regions to introduce CtCSR, were not included in the evaluation design because they were still in the initial stages of programme implementation.

Our methodology for selecting our sample of schools was as follows. UNICEF provided a list of all UNICEF-supported schools implementing the CtCSR in the three regions where the impact evaluation was conducted. The sampling strategy was to stratify by region (proportional to the number of UNICEF-supported schools in each region) and then a simple random sampling procedure was used to select fourteen intervention schools (see Table 1.2). Ten schools in close neighbouring villages that were not implementing the CtCSR, but were otherwise similar to the intervention villages, were selected for the control group schools. In Tigray, we found upon arrival for fieldwork that the CtCSR had been scaled up to cover all *woredas*. Because of the strong likelihood that many families had been exposed or affected by the CtCSR, no control group was selected for this region. In total, the school sample size included 7 to 9 percent of CtCSR schools in UNICEF-supported *woredas*. (In Tigray, we could not estimate the sample size due to the

ongoing scaling up of the programme.) It should be noted that remote schools inaccessible by public transport were not selected due to time and budget constraints.

Children were recruited from the catchment area of each CtCSR and control school. To minimize possible bias, children were selected by independent researchers using a simple random sampling technique which used name lists provided by each school. School staff did not select children. The sample included 715 young children (415 intervention and 300 control), a sample size that permitted a sufficient level of power to observe significant treatment effects across the total sample.

*Table 1.2 Sample Sizes in the CtCSR and Control groups*

	CtCSR			Control			Total	
	Region <i>N</i>	Schools <i>N</i>	Participants <i>N</i>	Region <i>N</i>	School <i>N</i>	Participants <i>N</i>	School <i>N</i>	Participants <i>N</i>
Young Children	3	14	415	3	10	300	24	715
Parents	3	14	415	3	10	300	24	715
Young Facilitators	3	14	283	-	-	-	14	283
Teachers	3	14	82	-	-	-	14	82
School Directors	5	16	16	-	-	-	16	16
Key Stakeholders	5	16	29	-	-	-	16	29

Several research instruments were used in this evaluation. Instruments such as the child assessment, the parent interview, the Young Facilitator survey, and the teacher survey were adapted from an evaluation of UNICEF’s pilot CtCSR conducted in 2009. Instruments for key stakeholder interviews (including UNICEF staff, REB and Woreda Education officials) and school director interviews were developed for this evaluation. The child assessment, parent interview, Young Facilitator survey, and teacher survey were translated into Oromiffaa and Tigrinya by a local professional translation company and were checked for accuracy by local research assistants. Each instrument is described in Appendix 1B. A copy of each instrument including informed consent forms is in Appendix 1C to 1G. Wherever possible, findings from this evaluation are compared to findings from the 2009 pilot evaluation, also conducted in these three regions, to assess the extent to which the programme effects have changed over the years.

Twelve research assistants, all of whom are educators and were blind to the evaluation objectives, were recruited locally to conduct the child assessment, parent interview, Young Facilitator survey and teacher survey. An international and a national research consultant trained these research assistants during a three-day data collection workshop. As part of the training, each research assistant piloted the child assessment with a Grade 1 child at a local school to ensure all research assistants were equipped to undertake the fieldwork effectively. An explicit data collection protocol for the child assessment and parent interview ensured standardized testing conditions in each study site. This protocol included a script to be used to put children at ease and guidelines prohibiting the research assistant from commenting on a child’s performance and other behaviors

that might influence the child's answers. The research consultants supervised and monitored the data collection process by visiting the research assistants in their field sites. Once all data were collected and sent by the research assistants to the national research consultant, two data entry specialists entered the coded data into Excel-based templates using a document containing data entry instructions.

## **Limitations**

As with any study, it is important to describe any explicit limitations. In this evaluation, we were not able to collect baseline data on children's school readiness pre-programme due to time constraints. Furthermore, time and funding constraints prohibited the collection of observational level data from schools and the Young Facilitators that might shed light on teaching and tutoring practices. Furthermore, we were unable to access administrative data on on-time enrolment and persistence in school that might enable us assess medium-term impact of the CtCSR over successive cohorts of young children and the Young Facilitators. Finally, detailed data on programme cost was not made available to us and therefore we have relied on cost estimates provided by previous reports.

There are several other limitations inherent to the design of this study. First, it was not possible to collect baseline data to assess possible pre-programme differences between children. We discovered some differences in maternal level of education that favoured children in the CtCSR group and differences in children's age that favoured the control group. While we statistically controlled for these differences to examine programme impact, these differences may still have contributed to bias in the results. Second, our design did not involve the collection of village-level covariates or programme quality data that may have contributed to variations in children's programme experiences. However, we recruited participants randomly from 24 intervention and control schools that were considered to be similar in terms of the economic development and status of their communities. Third, the sample size and design enabled us to investigate overall programme effects between CtCSR and control groups, but was not large enough to provide robust information about differences between regions and differences in outcomes within the CtCSR group. Fourth, research assistants were not totally blind to the programme status of children. Children were assessed in their homes and for research assistants to deduce programme status and identify CtCSR children from control children from their confidence, speech and learning behavior would be relatively easy. However, all research assistants were blind to the objectives of the research evaluation.

# Chapter 2 The Ethiopia Child-to-Child School Readiness Programme: Origins, Implementation and Sustainability

In order to understand the effectiveness and sustainability of the CtCSR in Ethiopia, this chapter presents evidence gathered from document analysis, administrative data, and interviews with key stakeholders, parents, and teachers about the programme's origins, design, evolution, and implementation. It also briefly reviews issues related to the cost and sustainability of the programme. Key questions answered in this chapter are as follows:

- How has the CtCSR been implemented and how has it evolved?
- What processes account for any regional or other variation in the CtCSR and its outcomes?
- How do key stakeholders understand the benefits of the CtCSR?
- How do key stakeholders understand the challenges facing the CtCSR?
- How sustainable and cost-effective is the CtCSR?

## The Origins and Design of the CtCSR in Ethiopia

The Ethiopia CtCSR was piloted in 2008 in Ethiopia, as part of a wider UNICEF-funded CtCSR initiative aimed at improving children's early educational development. The programme provides a low-cost alternative for supporting young children's school readiness in communities where formal early childhood education programmes are unavailable or not accessible to most families. The model uses cross-age peer tutoring: older children tutor younger children.

### **CtCSR Model**

According to the UNICEF Strategic Framework (2008) for the CtCSR, the overall aim of the CtCSR is to help young children successfully transition into primary school by first, enhancing children's school readiness skills (both academic and social); second, engaging older children and families as partners in children's development and; third, improving primary schools' capacity to effectively engage young children in learning. To fulfill its aims, the programme encompasses the three core dimensions of school readiness:

- ✓ **Ready Children**, focusing on children’s learning and development
- ✓ **Ready Families**, focusing on parental and caregiver attitudes and involvement in their children’s early learning and development and transition to school
- ✓ **Ready Schools**, focusing on the school environment, including practices that foster and support children’s successful transition into primary school as well as practices that advance and promote all children’s learning

The programme is intended to provide a low-cost alternative to early childhood education programmes in communities where formal pre-schools are not available or limited to only a small number of children. That said, this informal approach is not to replace comprehensive early childhood education programmes. By the end of the programme children are expected to acquire basic pre-literacy and numeracy competencies that can support their successful transition into Grade 1.

The CtCSR consists of five activity sets. Each set of activities is designed for seven group sessions. In the seventh group session for all activity sets, young children review what they have learned. Each set begins with simple tasks that gradually become more challenging. The programme must be implemented sequentially because each set of activities builds upon the skills a child has acquired and/or developed by completing the previous set. Each activity has been carefully selected to support continuous learning and interaction. The numeracy activities are designed to help children apply mathematical concepts to real-life situations. Children use everyday objects to solve problems and estimate sizes and shapes, thereby becoming familiar with numbers, quantities, and counting. Pre-literacy activities are based on the four components of emerging literacy: listening, speaking, reading, and writing. Children explore literacy through singing songs, learning poems, making up stories, creating books and reading together, learning sight vocabulary, exploring sound-symbol relationships, and drawing and talking about ideas.

The design of the CtCSR involves an older child or “Young Facilitator” in Grades 5, 6, 7, or 8 who works with young children to help them acquire school readiness skills including numeracy, pre-literacy, and social skills. The young children are suggested to be preschool-aged, that is, 4- to 6-years-old. The proposed structure of the programme is based on weekly club meetings at the primary school. During the sessions, Young Facilitators work with young children, under the guidance and supervision of a teacher, on a series of planned activities designed to support child development and learning through play (p. 13). The weekly meetings provide children with all the materials needed to carry out the early learning activities. Children are encouraged to continue using the materials outside of the school clubs.

The programme design documents do not indicate how the Young Facilitators are to be selected. Strong interpersonal skills, an ability to interact well with young children and a personal desire to participate in the programme, in addition to a mastery of basic numeracy and literacy skills, are important criteria for the identification and selection of Young Facilitators (pg. 13). For recruiting young children, school directors and community leaders should collaborate to identify all eligible children; once children are identified, parents should be informed and encouraged to enroll their children (p. 13). The Young Facilitators can be involved in this type of mapping activity alongside the school directors and community leaders.

Programme materials, including four storybooks and an activity booklet for the young children, as well as guides for Young Facilitators and Teachers, are a very important element of the CtCSR. The Child-to-Child Trust and UNICEF developed materials for use across the countries piloting the programme (p. 15-16).

- The Young Child's Early Learning Pack is a kit filled with activities to foster literacy and numeracy including storybooks, counting games and basic materials such as paper, glue, crayons and scissors.
- A Guide for Young Facilitators is an easy-to-use guide that contains step-by-step instructions for each activity and suggestions for how children can continue to work together outside the group sessions.
- A Guide for Teachers contains all the information teachers need to facilitate group sessions. For each session, the guide highlights learning objectives and the materials needed to carry out the suggested activity. Warm-up activities and suggestions for fun review activities from the last session are included. At the conclusion of each session, teachers are expected to review the suggested home learning activities.

The Young Child's Early Learning Pack, Guide for Young Facilitators and Guide for Teachers, including the purchase of pens for the Young Facilitators and the provision of the Young Child's Early Learning Pack or a kit with learning materials (pencils, story books, and activity booklets) for each CtCSR child, are all mentioned as key to the delivery of the CtCSR. The development and use of these materials helps to strengthen young children's emerging skills in reading, writing, and numeracy. These materials were adapted for use in the three pilot regions in Ethiopia (Harari, Oromia, and Tigray). In subsequent years, the materials were also adapted for use in other regions as the programme expanded.

A 2009 evaluation of the CtCSR during its first year of implementation across the UNICEF-supported pilot countries formed an important part of the initial programme design. Entitled "Getting ready for school: A child-to-child approach," this evaluation showed a high degree of interest and enthusiasm for the programme in the Ethiopian communities where it was introduced. Findings from this evaluation included:

- The training and development of Young Facilitators as community resources to enhance younger children's school readiness was well received.
- There was a medium-sized positive programme effect on children's development in beginning mathematics and a large effect on children's beginning literacy.
- No significant programme impact on families was found and programme impacts on Young Facilitators and teachers were not easy to discern due to sampling issues.
- Stakeholders noted some challenges associated with the programme's implementation. Some school directors felt that insufficient teaching and learning materials had been allocated to each school and that some materials were not suited to outdoor learning. Both school directors and UNICEF staff reported parental concern that the Young Facilitators' time spent in the programme took away from their ability to provide needed

assistance at home although Young Facilitator attendance at the programme remained high. School directors, community leaders, and UNICEF staff all expressed concern about the availability of long-term funding to maintain the programme. School directors believed that the lack of incentives for teachers posed the greatest challenge to long-term growth and sustainability of the programme as teachers need to spend a considerable amount of time supervising Young Facilitators and monitoring the programme.

The 2009 evaluation recommended that UNICEF should continue to explore long-term funding options to ensure the sustainability of the programme, and that the programme developers might want to modify specific areas of development where less significant impacts on readiness were found. It also suggested modifying teaching and learning materials (including creating materials suitable for use outdoors) and enhancing training for Young Facilitators to include a stronger focus on the use of child-centred methods of pedagogy.

### **Evolution and Expansion of the Programme in Ethiopia**

The CtCSRP in Ethiopia is organized by Regional Education Bureau, where responsibility falls under the Director of Teacher Development. The programme was piloted and at least initially concentrated in UNICEF-supported *woredas*. Programme planning documents suggest that at the *woreda* level the programme is organized by primary Schools Directors; both teachers and members of the Parent-Teacher Association are expected to provide supervision (Ministry of Education 2010). Initial plans in Ethiopia called for teachers from lower primary grades (1 and 2) and more senior grades (5, 6, and 7) to be involved in supporting the programme and working with the Young Facilitators. No clear guidelines emerged from our review of programme documents or through our interviews with UNICEF and REB staff about how individual *woredas* or schools are chosen to participate in the programme. However, it would appear that the programme was grafted on to already existing UNICEF initiatives in specific *woredas* receiving longer-term support from UNICEF.

An initial training of teachers and Young Facilitators is an important part of the CtCSRP model in Ethiopia. Once trained, teachers in each region train the Young Facilitators. Sensitization of parents and communities to the need for enhanced school readiness is also part of the programme model intended to be delivered by teachers and schools. The Young Facilitators receive support from teachers at their local schools, who meet with them at least once a week to assist them in planning their lessons and reflect on their experiences from the previous week of activities. The Ministry of Education anticipates that, eventually, 30 Grade 5 or 6 Young Facilitators will be trained per school and that each will interact with three to five young children (Ministry of Education 2010a).

In 2007 (E.C 2000), UNICEF provided funding for a pilot of the CtCSR initiative in UNICEF-supported *woredas*. The CtCSR was piloted in three pilot schools, one in each of the following regions: Harari, Oromia, and Tigray.<sup>2</sup> From that starting point, the number of schools and regions implementing the CtCSR has grown exponentially. The programme has expanded not only within the three regions that were the first to pilot the programme, but also regionally to include Benishangui-Gumuz, Southern Nations, Nationalities, and People's Region (SNNPR), and Somali region. Within all regions except Harari, it has spread significantly beyond UNICEF supported *woredas*.

During the field research conducted for this evaluation, we discovered that there is no single reliable source of data on the number of schools or children reached by CtCSR. UNICEF itself only tracks CtCSR data in *woredas* receiving UNICEF funding; however, as described above, the programme has expanded into many non-UNICEF funded *woredas*. REB keep a closer track of schools implementing the programme, and as of 2012 include both CtCSR schools and enrolled children as part of their reporting to the federal EMIS System. However, questions were raised about the reliability of this reporting. Thus, below we present both the UNICEF data from its funded *woredas*, and the data provided to us by REB officials during our key stakeholder interviews.

As can be seen from the UNICEF data in the table below (Table 2.1), there has been exponential growth in the programme implementation, from the three initial pilot schools in 2008/9 to an estimated 3,345 schools in January 2014:

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<sup>2</sup> The first cohort of young children to complete the CtCSR at these schools is currently in Grade 6.



Table 2.1 CtCSR in UNICEF-Supported Woredas

Year	Regions	# of schools implementing CtCSR	Remarks
2008/2009	3 regions (Oromia, Tigray, Harari)	20 schools	Pilot
2009/2010	3 regions (Oromia, Tigray, Harari)	71 schools	2 <sup>nd</sup> year of piloting
2010/2011	5 regions (Oromia, Tigray, Harari, SNNP, Benishangul Gumuz)	410 schools	Scaled up in 2 more regions
2011/2012	7 regions (Oromia, Tigray, Harari, SNNP, Benishangul Gumuz, Somali, Amhara)	756 schools	Scaled up in 2 more regions
2012/2013	7 regions (Oromia, Tigray, Harari, SNNP, Benishangul Gumuz, Somali, Amhara)	1,103 schools	
2013/2014	7 regions (Oromia, Tigray, Harari, SNNP, Benishangul Gumuz, Somali, Amhara)	3,345 schools	

Source: UNICEF Ethiopia, January 2014.

REB reported an even more impressive expansion during our field research. While the programme has not expanded beyond UNICEF-supported *woredas* in Harari, the REB reports that all 1800 schools in Tigray are currently implementing the CtCSR. This is the largest expansion experienced in any region and represents a unique effort to universalize access to the programme.

Below are the data on expansion provided in our interviews with REB officials in five regions:

- In **Harari**, the programme was piloted in one school in 2000 E.C. and has expanded as follows:
  - In 18 rural schools in 2010 (2003 E.C.)
  - In 20 schools in 2011 (2004 E.C.), two of which were urban.
  - In 29 schools, 2 urban and 27 rural, in 2012 and 2013 (2005 and 2006 E.C.) (An REB official reported that data from 2000 E.C. to 2002 E.C. was unavailable.)
  
- In **Oromia**, the programme was piloted in one school in 2001 E.C. and has expanded as follows:
  - In 21 schools in 2002 E.C.
  - In 131 schools in 2003 E.C.
  - In 439 schools in 2004 E.C.
  - In 472 schools in 2005 E.C.
  - Data from the REB was not yet available for 2006 E.C. except that the programme was being implemented in 131 in 32 UNICEF-supported woredas.
  
- In **Tigray**, the programme was piloted in one school in 2000 E.C. and has expanded as follows:
  - In 2 schools in 2001 E.C.
  - In 7 schools in 2002 E.C.
  - In all 1800 schools in 2003 E.C.
  
- In **Benishangul-Gumuz**, the programme was also piloted in 2002 E.C. in Amharic in one school and has expanded as follows:
  - In 24 schools in 2003 E.C.
  - In 43 schools in 2004 E.C.
  - In 2005 E.C. the programme was also offered at 4 schools in three local languages: Barta, Gumuztigna, and Shenashenya.
  - In 48 schools in 14 woredas In 2006 E.C.
  
- In **SNNPR**, the programme was first offered in 4 pilot schools in Sidamo (Sedaminia) in 2003 E.C. and has expanded as follows:
  - In 55 schools in 2004 E.C.
  - In 107 schools in 2005 E.C.
  - The only 2006 E.C. data available are from UNICEF: 80 schools are implementing the programme in 8 UNICEF-supported *woredas*. The REB reports that CtCSR materials are currently being printed in Gedeofa and Amharic.

UNICEF reports that the programme is presently offered in seven local languages: Amharic, Oromifa, Tigrinya, Somali, Gedeofa, Sedaminia, and Harari. The REB in Benashegui Gumuz reported additional languages of delivery: they now offer the programme in the three local languages of Barta, Gumuztinga, and Shenashenya, having gained the ability to do so because a first cohort of primary children educated in these languages has entered Grades 5 and 6 and can be engaged as Young Facilitators (2006 E.C.).

Key stakeholders in all regions described to us with considerable enthusiasm how they decided to expand the CtCSR after the pilot year, based on the positive results they witnessed. A few also

mentioned the support received from UNICEF that had made this expansion possible. REB officials in all regions told us that there is strong demand from parents and communities to expand the programme. Their comments reflected both enthusiasm and a sense of the challenge involved in rapid scale up. For example:

- In Harari, REB officials are eager to expand the programme but report that they need more funding to do this, and that UNICEF support has gradually been decreasing.
- In Oromia, REB officials plan to expand the programme to all *woredas* in 2006 E.C.
- In SSNPR the REB reports that many *woredas* have already started to provide the CtCSR, but without materials or training. Some simply copy the materials from neighbouring *woredas* and implement the programme. The REB plans to translate the material into all 15 local languages, but lacks funding to do so.
- In Benishangul-Gumuz, a Woreda Education Officer reported that some communities are “strongly demanding” that the Woreda Education Offices expand the programme to their areas while an REB official noted how the REB wants the programme to be offered in more local languages.

One of the interesting findings from this evaluation is related to the overlapping provision of zero class (0 class) and the CtCSR in some regions. The Government of Ethiopia is committed to the expansion of zero class for children at age 6, and generally children who attend zero class will not be eligible to participate in the CtCSR. Across the regions, enrolment in zero class ranges from 50 to 80 children per class, and there is very limited funding for materials, infrastructure, and teacher training. In Tigray the REB is implementing a model in which 4- and 5-year-old children may participate in the CtCSR and then move to zero class when they are 6, and from there to Grade 1 when they are 7 years of age. In some cases parents appear to prefer the CtCSR over zero class: for example, in Oromia an REB official noted that “children prefer Child-to-Child to zero class because Child-to-Child is in a home in the village and they don’t have to walk as far.”

As of 2012, all REBs have begun to report on pre-school enrolments in the Educational Management Information System, including numbers from the CtCSR, zero class, and kindergarten. However, while schools and some *woredas* have kept local statistics on children in the CtCSR, there is no source of reliable longitudinal aggregate data on the growth in the number of schools and *woredas* in the programme, nor on the total number of children reached or their progress through primary school, nor the total number of children reached. This issue deserves attention, as it is essential for understanding the longer-term effects of the programme on success in schooling.

## Findings on Programme Implementation

In what follows we outline findings on key aspects of programme implementation gathered from each region, including programme structure, training and materials, role of Young Facilitators, and role of teachers. We focus in particular on the extent to which the programme is being delivered

in ways that match the programme design as set out in the Ethiopian and the UNICEF-wide CtCSR documents.

## **Programme Delivery and Structure**

Field research, including surveys and interviews with key stakeholders, showed that the CtCSR in Ethiopia is generally being implemented according to the plans and programme design described above. The CtCSR generally runs for 35 or 36 weeks in all regions. CtCSR sessions are conducted in the villages where the young children live, with sessions being conducted near the children's homes: under the shade of a tree, in the shade of a home, or in the home of a young child or a community member. Some communities have provided benches for the young children to sit on.

Young Facilitators and young children meet in learning sessions that are one to three hours long and are held once or twice weekly over a 36-week period during the school year. The number of hours that Young Facilitators teach the young children each week varies across regions and across schools within regions from one hour once a week to as much as two days a week for two hours (as reported by Harari REB). Key stakeholders commonly reported that each Young Facilitator works with five young children. (One stakeholder reported that some Young Facilitators work with six young children.)

Key stakeholders across all regions commonly described how the CtCSR teacher met with Young Facilitators as a group during the week (in some cases for one hour). The teacher advised the Young Facilitator on how to teach, what local materials to use, and what to cover in the next CtCSR session with the young children. Young Facilitators met with children on Saturday and/or Sunday (or in some cases also during the week). This is different from the original model in which teachers supervised the weekly CtCSR sessions with young children. After the weekly CtCSR session or sessions, the CtCSR teacher brought together the Young Facilitators to evaluate and discuss the session(s): what were the challenges and how to overcome them. Teachers also periodically visited the Young Facilitators and young children in their home communities. How often this visit occurs depends on several factors: how many Young Facilitators the teacher is supervising, the distance of the communities from the school, the health of the teacher, etc.

On the whole, Young Facilitators appeared to be implementing the activities and sessions with young children as per the programme design. In the Young Facilitator survey they were presented with eight statements regarding the types of activities they do with young children as part of the CtCSR. The Young Facilitator survey response choices were as follows: *Not at all*, *A little*, and *A lot*.

Table 2.2 shows that most of the time Young Facilitators indeed focused often on promoting a range of readiness skills targeted by CtCSR. The Young Facilitators helped their tutees to learn to count from 1 -10, to recognize and name shapes, to sort objects by size and shape, and to carry out simple addition and subtraction operations. They were somewhat less likely to help children to learn to write their names, to read, sing songs, or say rhymes. Interestingly, 20-27 percent of

the time the target activities were not implemented that often, and 4-7 percent of the Young Facilitators reported that they did not target at all activities such as learning to write one’s name, sing songs, play with rhymes, or learning to read. Additional work is needed to explore the source of this variance – whether it is linked with specific regions, lack of proper training materials, low attendance, and so on.

*Table 2.2 Frequency of CtCSRP Early Learning Activities as Reported by Young Facilitators*

	A lot	A little	Not at all
Did you help children to write their names?	66%	27%	6%
Did you help children to count 1 -10?	86%	12%	2%
Did you help children sort objects by size and shape?	74%	23%	4%
Did you help children make simple patterns?	71%	23%	6%
Did you help children add and subtract?	71%	25%	4%
Did you sing songs and say rhymes with children?	73%	20%	7%
Did you help children read?	71%	24%	6%
Did you help children recognize and name shapes?	76%	21%	4%

Note: *n* = 283

## Young Child Participants and Their Selection

According to our surveys, the young children who participated in the programme were typically aged 6 (and between ages 5 to 10). Children were therefore slightly older than the 4 to 6 age group specified in the original programme model. As can be seen in Table 2.3, results from the parent interview indicated that overall, 79 percent of children participated in most sessions or all sessions, while 21 percent participated in half or fewer sessions. Also as can be seen in Table 2.3, there were regional differences in survey results from parents: more young children attend the programme sessions regularly in Harari and Tigray in comparison with Oromia.

*Table 2.3 Children's Attendance in CtCSR as Reported by Parents*

	Total (n= 415)	Oromia (n = 235)	Harari (n = 60)	Tigray (n = 120)
Young children participated in every or almost every child-to-child session	31%	11%	95%	35%
Young children participated in most sessions	48%	58%	3%	53%
Young children participated in about half or fewer of the child-to-child sessions	21%	31%	2%	13%

The most common reason that children missed CtCSR sessions (as reported by eight percent of parents with children in the programme) was that the child was needed to help at home or in the field. Approximately two percent of parents reported their children did not participate for the following reasons:

- concern for child's safety (programme was in unsafe area, etc.)
- their child and/or family was treated badly by others at the programme
- no one was available (adult/older child) to take the child to the programme
- they did not believe that this programme was benefiting the child
- the child was not interested in the programme/did not wish to continue.

Nevertheless, 99 percent of parents (n = 406) reported that they were happy that their children participated in the programme. To illustrate, a *woreda* official in Oromia noted how they had a graduation ceremony for the first cohort of young children who completed the CtCSR in 2003 E.C.

As noted, the CtCSRП does not prescribe how Young Facilitators select the children they will work with, though in most cases they are described as taking on five young children. In some cases these young children may be the Young Facilitator’s siblings. This approach differs from the original programme model which suggests that school directors and community leaders should collaborate to identify and select young children. There is some variation by region. For example, in Oromia we were told that elders and other community members choose which young children will be selected to participate in the programme. Various regions have introduced ways of ensuring that opportunities to participate are more equally distributed. For example, school representative in Harari noted that Young Facilitators could only choose one child per family to give children from different families an opportunity to participate.

### **Teachers and Training**

According to the teacher survey results, teachers in the CtCSRП had one to 23 years of teaching experience, with an average of eight years. There were no major regional variations in the characteristics of teachers in the programme. Field interviews suggested that teachers volunteered for the programme and often became enthusiastic advocates for it. Key stakeholders in all regions reported that they did not have trouble recruiting teachers to participate in the CtCSRП.

The UNICEF (2008) Strategic Framework for the programme suggests that teachers from both Grade 1 and higher primary grades (Grades 5 and 6) should be jointly responsible for coordinating and implementing the programme. The rationale for this recommendation is that it is not enough for Young Facilitators to be supported by their current teachers and that they need also guidance and support from primary level, Grade 1 and 2 teachers, who are more aware of the kind of developmentally appropriate readiness skills that need to be fostered in the CtCSRП. Based on our field visits and interviews, in practice it seems that CtCSRП teachers are most often teaching upper primary school grades (such as 5 and 6) and not in the primary grades.

Training of teachers is an important part of the design of the CtCSRП. However data from key stakeholders regarding the implementation of teacher training indicated that it varied significantly, a fact that may contribute in turn to the quality of implementation by the Young Facilitators, and ultimately, to child outcomes. For example, in Oromia some school directors noted that there one round of training that lasted five days at the Woreda Education Office several years earlier, but no other systematic training had taken place since then. On the other hand, one school director reported that the Woreda Education Officer trains CtCSRП teachers once or twice a year and another indicated that CtCSRП teachers are trained at the REB once a year.

It seems that teacher training occurred more systematically in the pilot years of the programme but has been less consistently offered in subsequent years as the programme has expanded to new *woredas* and regions. In some cases teacher training has not taken place for at least three years. This observation is also echoed in information gathered from CtCSRPs teacher surveys. On average 56% percent of the teacher responders indicated that they attended all or most of the CtCSRPs training sessions, but this varied by region: 89 percent in Harari, 55 percent in Oromia, and 48 percent in Tigray. Key stakeholders reported that some teachers who were trained on CtCSRPs had changed schools. As a result, some schools that had previously implemented the CtCSRPs had to suspend the programme because no trained teachers were left in the schools. It is important to underscore that teacher training is an essential component of the success of the CtCSRPs, and without trained CtCSRPs teachers the programme cannot function.

One aspect of the CtCSRPs teacher survey focused on teacher satisfaction. As described further in Chapter 4, our findings suggested high levels of satisfaction among teachers participating in the programme: 93% percent of the CtCSRPs teachers who completed the survey responded that they were highly interested in continuing their participation in the CtCSRPs in the following year. Only a very small percentage (4 percent) of teachers indicated that they did not wish to participate in CtCSRPs in the following year.

Interestingly, a common suggestion from stakeholders at all levels with regard to bringing more teachers into the programme was for the introduction of some form of incentive and recognition to teachers. For example, a UNICEF representative from SNNPR noted that teachers were requesting various incentives such as financial incentives, additional materials, and additional training. In Harari, each CtCSRPs teacher receives a gown (white lab coat), a bag, and a teacher's guide. Representatives at a CtCSRPs school in Harari indicated they set up performance-based competitions and give certificates for the best Young Facilitators and best CtCSRPs teachers. At a CtCSRPs school in one region, CtCSRPs teachers were given certificates of completion in 2003 E.C. but this practice did not continue in subsequent years.

Key stakeholders in all regions described how they conducted activities with the community that included training on CtCSRPs as well as activities undertaken to increase community awareness of the importance of ECCE. In UNICEF-supported *woredas*, UNICEF has conducted training for all stakeholders: *woreda* officials, teachers, supervisors, REB, Parents, and community members. In UNICEF-support *woredas* in Tigray, schools work closely with the Women Development Team, a network of community women, to track the children in the community including their enrolment and attendance in school, including the CtCSRPs and zero class. Members of this team were initially working in the areas of health and nutrition, but now have expanded responsibilities that include education and are trained by UNICEF on CtCSRPs. This collaboration is reported by UNICEF and the *woredas* in Tigray to be very effective for tracking and monitoring the educational path of all children in the community and supporting the teachers involved in CtCSRPs.



In sum, teachers play a pivotal role in the success of the CtCSR. To enhance the success of the programme, teachers from both primary grades and from higher grades should be involved. To maintain the freshness of the programme regardless of region, teachers need consistent and regular in-service training, access to training materials, as well as recognition of and encouragement for their motivation and involvement in the programme..

## **Materials**

It was commonly reported in the surveys and interviews conducted for this evaluation that the availability of CtCSR materials does not match the standards set out in the programme design, particularly in regions and *woredas* where the programme has been rapidly expanded. Thus, as reported to us by one UNICEF official:

The standard norms of CtCSR is that all young learner should receive a bag of books and materials and at the initial phases it was maintained. Compared to the trend of scaling up of CtCSR with the available resources for the regions, in some cases it couldn't be possible to provide books & materials to each individual young learner. In that case, one set of materials are shared by 2/3 children or given to the Young Facilitators to use for a group of young learners. (Personal communication March 2014)

In the regions included in this evaluation, it was reported that the CtCSR is conducted using Guides for Teachers and Guides for Young Facilitators, reading and picture books, a child activity book, and in some cases additional materials such handmade letter charts, number charts, and other teaching aids. However, reporting from our surveys and key stakeholder interviews on the availability of other materials varied quite widely, with all stakeholders at all levels in all regions describing lack of sufficient materials to conduct the programme as designed. Since the schools in the CtCSR sample for this evaluation are all UNICEF supported, this implies that even with UNICEF funding, not all schools are able to provide the materials deemed essential to the programme. The situation is likely to be far worse in schools that adopted the CtCSR without UNICEF funding.

Results from the teachers' survey indicate that teachers were most likely to receive reading and picture books (story books) for the CtCSR although not all teachers received all materials (Table 2.4). On average, three out of four teachers had received the Teacher's Guide, though there is with large regional variation (91 percent in Tigray compared to only 56 percent in Oromia).

Most key stakeholders reported that each Young Facilitator received a Young Facilitator guide. In some, but not all cases, Young Facilitators received a bag, storybooks, pens, and exercise books. Some school directors reported that Young Facilitators got to keep the guide, but many had to return it to the school at the end of the year.

*Table 2.4 CtCSRP Materials Received (Teachers Reports)*

	Total (n = 82)	Oromia (n = 41)	Harari (n = 9)	Tigray (n= 32)
Reading and picture books	91%	90%	75%	97%
Teachers' Guide	73%	56%	78%	91%
Number cards or other materials for counting	60%	45%	50%	81%
Young Facilitator's Guide	77%	71%	78%	84%
Children's Activity Sheet	79%	73%	78%	88%

We were told by key stakeholders that many schools did not receive enough materials to distribute to each young child a bag with the storybooks and activity book. In these cases, the Young Facilitators are given the complete set of materials to share with the group of young children.

During key stakeholder interviews, only Harari REB officials showed us a CtCSRP Implementation Guide, which they had developed and distributed. As noted above, wherever the programme is expanding rapidly, and particularly in *woredas* not funded by UNICEF, the shortage of programme materials presents a pressing challenge.

While the 2009 pilot programme evaluation reported that materials were criticized for not being appropriate for outdoor use, none of the key stakeholders interviewed for this evaluation mentioned this concern.

However, one issue noted by some key stakeholders as well as by our field researchers is that some images and stories used in the materials provided to the children lacked local relevance. For example, in the young children's activity book there were illustrations of objects that are unfamiliar to rural children in Ethiopia, such as an acorn, an iron, and an ironing board. One of the storybooks is based on a Norwegian fairy tale called "The Three Billy Goats Gruff," and children do not have the background knowledge to understand this fairy tale. As a result, REB officials in Harari and Tigray noted that they planned to revise the materials further to better reflect their local context and relevant background knowledge. The Tigray REB plans to evaluate and revise CtCSRP storybooks based on local culture and to include health and sanitation topics in the stories. As materials are being updated and translated, there is the opportunity to develop storybooks based on local folk tales. As noted earlier, both SNNPR and Benishangul-Gumuz translate materials into additional mother-tongue languages to be able to expand the programme, and it will be important to attend to background knowledge relevant for these new sites.

## **Young Facilitators**

Across participating regions, the students selected to be Young Facilitators were those who are also considered most well behaved and who have high academic achievement. Results of the Young Facilitator survey indicated that males are slightly more likely to be Young Facilitators than females (58 percent compared to 42 percent). In some instances, Young Facilitators were also chosen because of their ability to communicate in certain mother-tongue languages (Benishangul-Gumuz). With few exceptions (discussed in Chapter 4), key stakeholders reported that they do not have difficulty recruiting Young Facilitators. As for retaining Young Facilitators throughout the year, all key stakeholders reported that Young Facilitators do not drop out of the CtCSR.

While the programme design indicated that Young Facilitators should normally be in Grades 5 and 6, the findings of this evaluation show Young Facilitators come from Grades 5 through 8. For example, in five of the eight CtCSR schools in Oromia, Young Facilitators are in Grades 5 or 6, while in the other three schools the Young Facilitators are in Grades 5 through 8. This range of grades is evident in the demographics of the students who completed the Young Facilitators survey: 19percent were in Grade 5 ( $n = 54$ ), 37percent in Grade 6 ( $n = 105$ ), 20 percent in Grade 7 ( $n = 56$ ), and 24 percent in Grade 8 ( $n = 67$ ). Young Facilitators were most commonly in Grade 6.

As described further in Chapter 4, the degree of authority and responsibility implied in selecting their own young child participants may contribute to students' enjoyment in being a Young Facilitator. In most cases, Young Facilitators received no tangible incentives such as or "thank you" cards or gifts in recognition for participating in CtCSR; however, there were some exceptions. In Harari, each Young Facilitator was given special uniform (a shirt and a pair of pants) to wear. In Tigray, the REB reported that Young Facilitators received a bag and a dictionary in recognition of their participation.

As can be seen in Table 2.5, Young Facilitators generally reported satisfaction with the materials, training and support they received in the CtCSR. As will be discussed further in Chapter 4, Young Facilitators reported that they like being a Young Facilitator and are interested in the CtCSR activities. In addition, Young Facilitators generally reported that teachers provided them with clear instructions and that the Young Facilitators' guide was easy to understand.

*Table 2.5 Young Facilitators' Perceptions of CtCSR*

	A lot	A little	Not at all
The teacher in the Child-to-Child programme gives clear instructions on how to work with the young children	76%	18%	6%
The Young Facilitator's guide is easy to understand	72%	23%	5%

Note:  $n = 283$

### **Costs Associated with the Programme**

This evaluation did not collect primary data on costs associated with the CtCSR. Rather, it relied on estimates presented in two reports that were prepared for UNICEF: the 2009 CtCSR pilot

evaluation and a 2012 report entitled “Cost Simulations and Scenarios for School Readiness Programmes in Ethiopia.” The estimates presented in these two reports are triangulated with findings from key stakeholders’ interviews and survey results.

The 2009 evaluation estimates that in-country startup costs for the initial pilot in a small number of schools in three regions was USD \$47,849.20. These costs included adaptation and translation of programme materials into three languages but did not include costs associated with the initial meetings establishing programme design and buy-in from key stakeholders. Ongoing programme costs were estimated in the 2009 evaluation at USD \$121,419.12 per annum, or USD \$6,070.96 per school, and USD **\$53.77 per young child**. These on-going costs included costs for programme advocacy and sensitization, training of teachers and Young Facilitators, preparation and production of all resources (including teacher and Young Facilitators guides, the training materials, and materials for young children), and programme implementation costs born by UNICEF.

The 2012 report details a cost simulation that provides a very different assessment of programme costs based on the ongoing programme implementation structure observed in two *woredas*. This estimate is based on a programme model that has one teacher supervising seven Young Facilitators who deliver the CtCSR to five young learners (each cluster reaching 35 children in total). Costs under this programme model include two days of training of teachers and Young Facilitators at the *woreda* level (including the sitting fee); provision of materials to teachers (pens, exercise books, and a teacher’s guide); provision of books, bag, pens and exercise books to the Young Facilitator; and provision of exercise books and pencils to the young children. In this model, each young child does not receive his/her learning kit as expected in the original programme design, and production and redevelopment costs of materials are not included. Thus overall estimated unit cost (per child) in 2012 for this programme delivery model is much lower, and was estimated at 164 Birr per child per year.

UNICEF Ethiopia also provided an estimate based on recent programme spending, suggesting that current costs are closer to USD \$15-17 per young child (a calculation based on the costs of providing each child with a learning kit). However, due to the changed financial reporting mechanism/software in UNICEF’s accounting systems, it was not possible for us to secure an expenditure report that would allow us to verify this cost estimate.

These are very different estimates of the cost per child of delivering the CtCSR, none of which fully reflects the ongoing costs of managing the programme, sensitization and advocacy, preparation, translation and updating of new materials, and any costs associated with time contributed by the teachers and Young Facilitators or incentives for them. Nor is there any allowance for the type of monitoring and evaluation needed to ensure that the programme is delivered with fidelity to the original model, and that data on the number of schools and children enrolled in the programme (whether as tutors or as tutees) and their later school careers are routinely collected.

Regardless of the above, it is interesting to consider a rough comparison of costs using the estimates and assumptions provided in the 2009 and 2012 reports. As Table 2.6 below shows, it is possible to compare estimated recurrent costs per child of different early childhood education programmes. The estimates below do not include capital costs for building classrooms, another major expense. The estimated recurrent unit costs of the CtCSR are 734 birr (USD \$53.77<sup>3</sup>) per child, which is higher than the recurrent costs for a zero class at 390 birr (USD \$28.55). (Note that we are not including here capital costs of classrooms in the zero class estimates, or the startup cost and the time of teachers, Young Facilitators, training and materials development in the CtCSR estimates in the 2012 costing report).

*Table 2.6 Per Child Unit Recurrent Cost Comparison of ECCE Programme Interventions (Ethiopian Birr)*

Type of Intervention	CtCSR		Kindergarten*	Zero Class*
	2009 Estimate	2012 Estimate		
<b>Costs in birr</b>	734	164	1055	390
<b>Costs in \$</b> (USD- 1 ETB 13.66)	\$53.73	\$12.01	\$77.23	\$28.55

\*These are recurrent costs and do not include the cost of building classrooms.

Given the variation in the three cost estimates presented here, we recommend that UNICEF complete a more careful, realistic, and accurate costing of the programme – acknowledging not only that costs vary when the programme is delivered with a full package of materials and training, but that the relationship between costs and outcomes in children will vary when a different package of training and materials is delivered.

In this study we looked at schools where, at minimum, facilitators and teachers received some training and some programme materials. However, most informants noted that there has been a steady deterioration in the per-child funding available as the programme has expanded. UNICEF should be concerned to find out what impact the lower expenditures per child have on programme efficacy.

<sup>3</sup> Based on exchange rate of USD 1= ETB (Ethiopian birr) 13.66

## Summary and Discussion

This chapter has presented findings on the origins, evolution, expansion and implementation of the CtCSR in Ethiopia.

As we have shown, the CtCSR has expanded rapidly from an initial pilot involving schools in three regions. While it was impossible to find reliable data on the total number of schools currently offering the CtCSR, we can say with confidence that the CtCSR is offered in more than 3,345 schools in seven regions and in 10 languages (including three languages only recently introduced). No reliable data exist regarding the total number of children reached each year through the programme, but a rough calculation based on the notion that there are 20 Young facilitators in each school serving five children each would suggest that upwards of 334,500 young children are enrolled in the programme each year.

Our interviews suggest that there is considerable enthusiasm for further expansion of the programme at all levels in all regions, though actors in some regions (for example Harari) are more cautious due to resource constraints, while in other regions rapid expansion is continuing regardless of the availability of funds and full access to materials and training. Tigray stands out in this regard for its commitment to universalization.

As might be expected, our findings suggest that there have been challenges in delivering the programme, specifically with regard to fidelity to the original programme design. In particular, materials are unevenly available, and all reports suggest that young children rarely receive the early learning kit of books and materials proposed in the original CtCSR design. At times teachers and Young Facilitators lack access to guides and supporting materials. It was reported that training of teachers does not happen as consistently and regularly as envisioned in the programme design. Since our data were collected primarily from CtCSR schools in UNICEF supported *woredas*, we suspect that materials are even scarcer in *woredas* that are introducing CtCSR without UNICEF support. This suggests that, at least under current funding parameters, the programme model and its quality is being eroded, a fact that may be interpreted erroneously as reflecting failure of the CtCSR design.

Based on the limited information available, it is difficult to assess the true costs of the CtCSR, and therefore we are unable to make a robust analysis of value for money in this report. Recurrent costs for delivering the programme range from USD \$12 to USD \$53 per child, and these estimates do not appear to appropriately reflect such costs as upgrading of materials, provision of materials to each young child, UNICEF management costs, and costs related to evaluation and monitoring of the medium, and longer term effects of the programme on the school success of young children in the programme and on the Young Facilitators. It should be emphasized again that current funding—even in *woredas* supported by UNICEF—is not sufficient to cover the cost of all the materials needed for a high quality programme, as originally conceptualized.

Several other findings raised in this chapter deserve attention:

- As will be elaborated in Chapters 3 and 4, findings about the procedures used for the selection of the Young Facilitators and the young children in the programme suggests that the programme could be more explicitly targeted to the most vulnerable children.
- To maintain the freshness of the programme regardless of region, teachers need consistent and regular in-service training, access to training materials, and their involvement and motivation should be recognized and encouraged. There was considerable variation in reports from teachers and from regions about programme implementation in each of these areas.
- There is concern among many stakeholders about retaining teachers in the programme, with incentives proposed by several informants in order to maintain commitment and motivation.
- Only few of the teachers in the programme are from the early grades suggesting a missed opportunity to create enhanced linkages between children and their future teachers. To enhance the success of the programme, teachers from both primary grades and from higher grades should be involved.
- We also note that there is an urgent need for better monitoring and collection of data in order to evaluate the value for money of the CtCSR. Without information on schools delivering the programme, on the number of children enrolled and their medium- and longer-term achievements, and on the true costs associated with delivering the programme, it is difficult to compare the value of the CtCSR compared to other ECCE interventions.

# Chapter 3 Primary Outcomes: Young Children

The primary goal of the CtCSR is to increase young children’s readiness for school by providing them with opportunities to acquire basic foundational early numeracy and literacy skills, as well as social and emotional skills for learning, such as task persistence and confidence. Thus, according to the UNICEF Strategic Framework (2008) for the CtCSR, by the end of the programme children are expected to acquire school readiness competencies that can support their successful transition into Grade 1, including the ability to count to 10, recognize shapes, write their name and read simple words (see Table 3.1). The medium-term goals of the programme are to increase on-time enrolment rates, decrease primary school dropout rates, and enhance children’s overall school performance in their early years of primary school.

This chapter presents CtCSR outcomes related to children’s early numeracy, literacy, and social and emotional skills for learning gathered through multiple and complementary methods, including direct assessment of school readiness, parent interviews, teacher surveys, and key stakeholder interviews. We also present findings from key stakeholders, parent interviews and teacher surveys related to on-time enrolment, drop-out trends, and children’s overall school performance in the early years of primary school.

*Table 3.1 Expected Learning Competencies of Children Who Complete CtCSR*

Pre-Literacy Competencies	Numeracy Competencies
Listen to and talk about a story	Count from 1 to 10
Create a new ending to a story	Match objects to numbers from 11 to 20
Retell a familiar story	Recognize and name shapes
Sing songs and recite rhymes	Sort objects by size and shape
Know some letters	Measure and compare height and length
Read some words	Make simple patterns
Write their own name	Use objects to solve simple addition and subtraction problems
Express ideas through drawings	



## Child Characteristics

### Gender, Age and Socio-Economic Status

In total, 715 young children participated in the child assessment of school readiness, including 415 children who participated in the CtCSR (Intervention group) and 300 children who did not participate in the CtCSR (Control group). Data collection took place three to six months after they participated in the CtCSR. Table 3.2 shows the socio-demographic characteristics of the children who participated in the evaluation. Forty-seven percent of the participants were girls and 53 percent were boys.

#### *Children's Age*

Children's age ranged from 6 to 11, with an average age of 7.41 years at the time of data collection. Children's age ranged from 5 to 10, with an average age of 6 years when they participated in the CtCSR. Children in the control group were, on average, 3 months older (7.74 years) than children in the CtCSR intervention group, a difference that was statistically significant (see Appendix 3A).

#### *School Enrolment and Grade*

Ninety-one percent of children in the CtCSR group and 90 percent of children in the control group were in Grade 1 at the time of data collection. One percent of children in the CtCSR group and six percent of children in the control group were not in school at the time of data collection. Children who were 7 years old were slightly more likely to be in Grade 1 in the CtCSR group compared to the control group (97 percent compared to 91 percent).

#### *Family Demographics*

Two indices of socio-economic status were used: owning material goods (household assets) and maternal education. Families owned, on average, 5 out of 12 possible household assets.<sup>4</sup> There was no difference between the CtCSR and control groups on this index. The maternal level of education of participants was low across the sample: overall, 54 percent of mothers had never attended school, 33 percent had some primary school education, and only 12 percent had completed primary school (to Grade 8). Compared to mothers in the CtCSR group, mothers in the control group were less likely to have had formal education, a difference that was statistically significant (see Appendix 3A).

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<sup>4</sup> Bed, chair, table, watch/clock, radio/TV, phone/cell phone, lamp, latrine, water pump, bicycle, boat, motor vehicle

*Table 3.2 Frequency Distribution of Child and Family Demographic Variables*

Variable	CtCSR (N = 415)		Control (N = 300)		Total (N = 715)	
	N	%	N	%	N	%
<b>Gender</b>						
Male	211	51%	169	56%	335	53%
Female	203	49%	131	44%	380	47%
<b>Mother's education</b>						
None	202	49%	183	61%	385	54%
Some primary	138	33%	94	32%	232	33%
Completed primary	73	18%	21	7%	94	13%
<b>Household assets (#)</b>						
		<i>Mean</i>		<i>Mean</i>		<i>Mean</i>
		5.02		5.11		5.06
<b>Child's Age (yrs)</b>						
		7.41		7.74		7.55

On the whole, while the CtCSR and control groups were similar with respect to gender and level of household assets, children in the CtCSR group were on average 3 months younger than children in the control group, and were somewhat more likely to have mothers who had at least some access to schooling (for more details see Appendix 3A). These subtle differences between the CtCSR and control groups may be related to a possible selection bias that comes from having mothers who have had some education and want their children to have education, and perhaps also to the prevalence of maternal education among the Young Facilitators who are also allowed, in some cases, to select their own siblings, friends and neighbours for tutoring.

In sum, these findings indicate gender parity in terms of children's participation in the CtCSR; that, on average, children were 6 years old when they participated in the programme; and that children in the programme were on average 3 months younger than children in the control group. Although the programme is intended to serve children in the 4 to 6 age range, the findings suggest that children were generally 6 years or older when they participated. Amongst the children who participated in the evaluation, none of them were 4 years old when they participated in the programme and very few were aged 5 when they participated in the programme. There were more children in the control group than in the intervention group whose mothers had no formal education.

## Relationships Between Child Characteristics and School Readiness

A correlational analysis indicated that household assets and maternal level of education were positively and significantly associated with overall child assessment scores on early numeracy, literacy, and socio-emotional skills across the CtCSR and control groups (see Appendix 3B). The correlations were in the low range: in general, children whose mothers were more educated or whose families owned more household assets were likely to obtain higher scores on the school readiness assessment than children whose parents owned fewer assets or whose mothers were less educated. The results in the previous section suggest that children whose mothers were less educated may be less likely to participate in the programme. Therefore, future programme efforts should improve access and encourage participation in these vulnerable and disadvantaged groups. Child's age was positively and significantly associated with scores on early literacy, but age was not associated with early numeracy nor social and emotional skills for learning. Children's gender was not associated with children's scores on the school readiness assessment.

Given that household assets, maternal level of education and child's age correlate with the school readiness scores, these variables were used as covariates (controls) in subsequent analysis aiming to determine the effects of participation in CtCSR on children's school readiness.

## Early Numeracy Skills

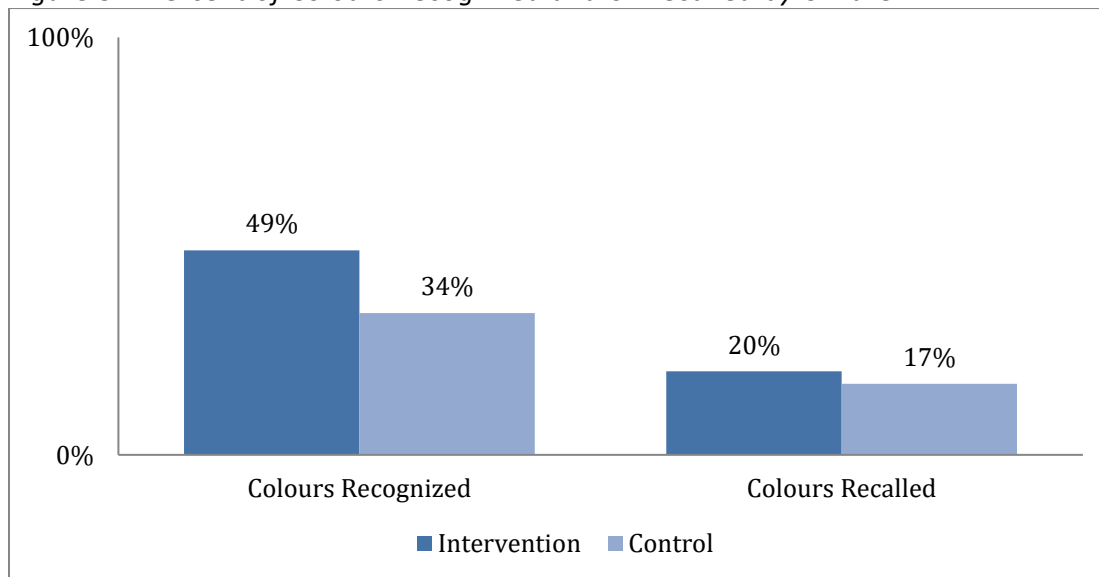
Seven tasks were used to assess children's early numeracy skills: (i) naming and recognizing colours, (ii) naming and recognizing numerals, (iii) counting to 10 aloud, (iv) counting 10 objects to assess one-to-one correspondence (i.e., counting while pointing to each object), (v) basic adding and subtracting, (vi) making patterns, and (vii) naming and recognizing shapes. The skills tested align with the early learning competencies expected of children who attend the CtCSR (Table 3.1). **Children who attended the CtCSR performed significantly better on early numeracy tasks than children who did not attend the programme including colour recognition, numeral recognition, making patterns and shape recognition.** The results for each of the seven early numeracy tasks are discussed in detail in the following sections below.

## Naming Colours

Each child was shown nine coloured cards (red, blue, green, yellow, black, white, orange, pink, purple). The child was asked to name each colour (recognition score). If the child was unable to name colours, the research assistant then said the name of the colours aloud and asked the child to point to the corresponding colour card (recall score).

There was a significant group effect on both the recognition and recall score (after controlling for age, maternal education, and physical assets, see Appendix 3C for additional details). In both cases the CtCSR group performed significantly better than the control group, though the difference between the groups was especially noticeable on the recognition scores. In other words, children in the CtCSR group were better able to name the colours, and when they were unable to name the colours they were better able to recognize them than children in the control group (see Appendix 3C for more details). These differences are illustrated in Figure 3.1 which shows that, on average, children in the CtCSR could name 49 percent of colours compared to 34 percent of children in the control group, indicating a medium positive programme effect on children's ability to recognize colours. As might be expected some children in the CtCSR and control groups (6-9 percent) were unable to name or recognize any colour names.

*Figure 3.1 Percent of Colours Recognized and or Recalled by Children*

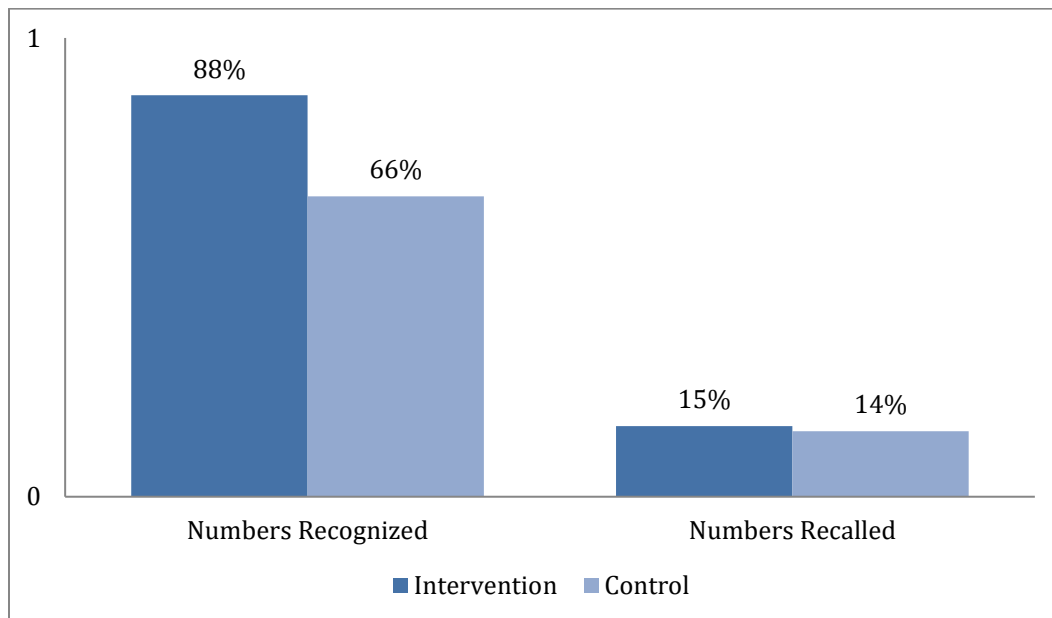


## Numeral Recognition and Recall

Each child was shown a page with the numbers 0 through 9 in mixed order and was asked to say the name of each numbers he/she knew (recognized). If the child was unable to name numerals, the research assistant then said the name of each of these numerals aloud and asked the child to point to that numeral (recalled).

There was a significant group effect on both the numerical recognition tasks. The CtCSR group performed significantly better than the control group (after controlling for age, maternal education, and physical assets, see Appendix 3C for additional details). As Figure 3.2 shows, on average, children in the CtCSR group recognized 88 percent of numerals compared to 66 percent of children in the control group, indicating a large positive programme effect on children’s ability to recognize numerals (see Appendix 3C). There was no difference between the groups in their ability to recall numbers: children in the CtCSR group recalled 15 percent of numerals and children in the control group named 14%. Sixty-two percent of children in the CtCSR group and 34 percent of children in the control group could recognize all ten numbers. As might be expected in both groups there were a few children who were unable to recognize or recall any number: 2 percent in the CtCSR group and 7 percent of children in the control group (see Appendix 3C).

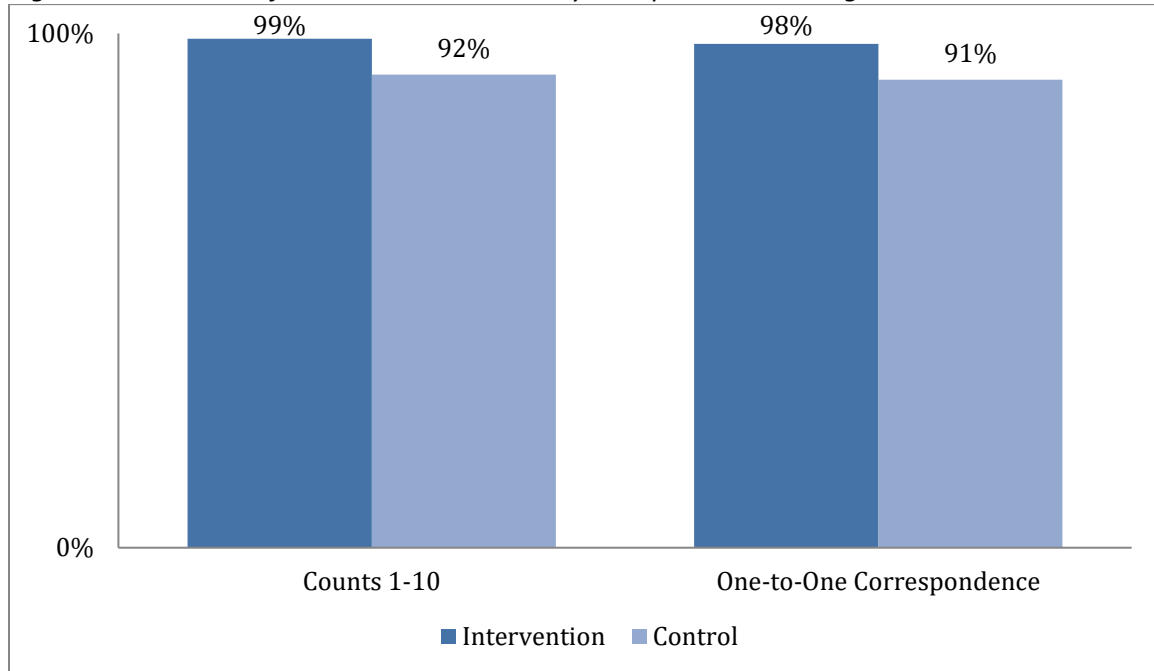
Figure 3.2 Percent of Numerals Recognized and Recalled by Children



The research assistant asked each child to count from 1 to 10. Each child was scored based on the extent to which he/she could count from 1 to 10 correctly. For the second part of the task, the research assistant placed 10 bottle caps (all the same colour) in a row in front of the child and asked him/her to count the bottle caps. Each child was scored based on the extent to which he/she could point to each bottle cap and name its place in the row from 1 to 10 correctly. This demonstrates a child's conception of one-to-one correspondence. Scores on each of these components could be 0 or 1.

Figure 3.3 shows that 99 percent of children in the CtCSR group could count correctly from 1 to 10 compared to 92 percent of children in the control group, indicating a small positive programme effect on children's ability to count 1 to 10 (see Appendix 3C). Ninety-eight percent of children in the CtCSR group demonstrated one-to-one correspondence compared to 91 percent in the control group, indicating a small positive programme effect on children's ability to count one-to-one correspondence (see Appendix 3C for additional details).

*Figure 3.3 Percent of Children that Correctly Completed Counting Tasks*

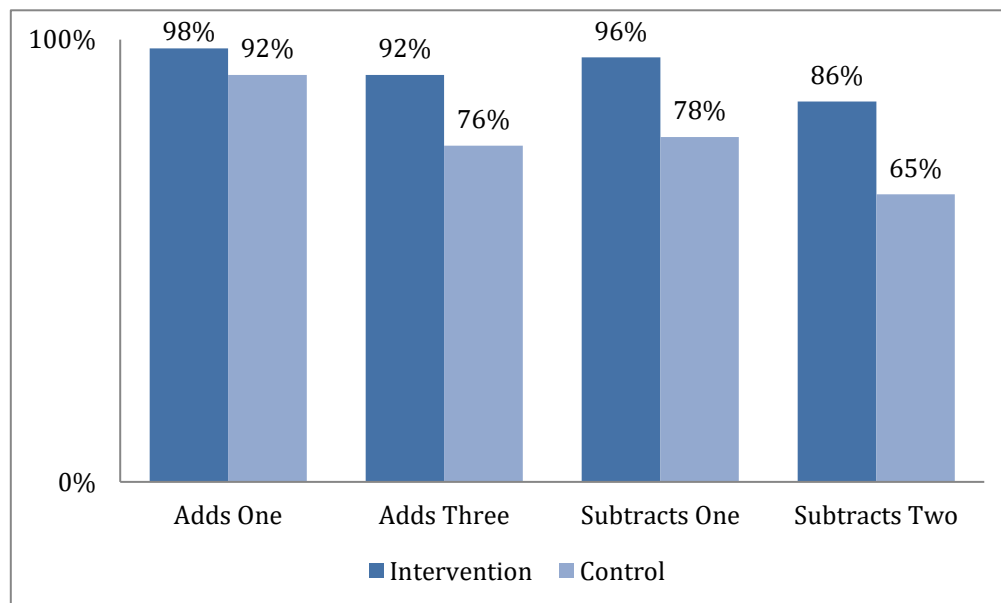


## Addition and Subtraction

Two tasks were used to assess children’s addition skills followed by two tasks that assessed subtraction. For the first addition task, the research assistant placed one bottle cap in front of the child and asked: “If I add one more bottle cap, how many bottle caps would I have then?” For the second addition task, the research assistant placed two bottle caps in front of the child and asked: “If I add three more bottle caps, how many bottle caps would I have?” For the first subtraction task, the research assistant placed three bottle caps in front of the child and asked: “If I took one bottle cap away, how many bottle caps would I have?” For the second subtraction task, the research assistant placed five bottle caps in front of the child and asked: “If I took two bottle caps away, how many bottle caps would I have?” For all tasks, children were given credit for saying the name of the correct number or showing the correct number with their fingers. Scores on each of these components could be 0 or 1.

Figure 3.4 shows that 98 percent of children in the CtCSR group could add one compared to 92 percent of children in the control group, and 92 percent of children in the CtCSR group could add three compared to 76 percent of children in the control group, indicating a small positive programme effect on children’s ability to solve simple addition problems (see Appendix 3C). Ninety-six percent of children in the CtCSR group could subtract one compared to 78 percent of children in the control group, and 86 percent of children in the CtCSR group could subtract three compared to 65 percent of children in the control group, indicating a medium positive programme effect on children’s ability to solve simple subtraction problems (see Appendix 3C for additional details).

*Figure 3.4 Percent of Children that Correctly Solved Simple Addition and Subtraction*

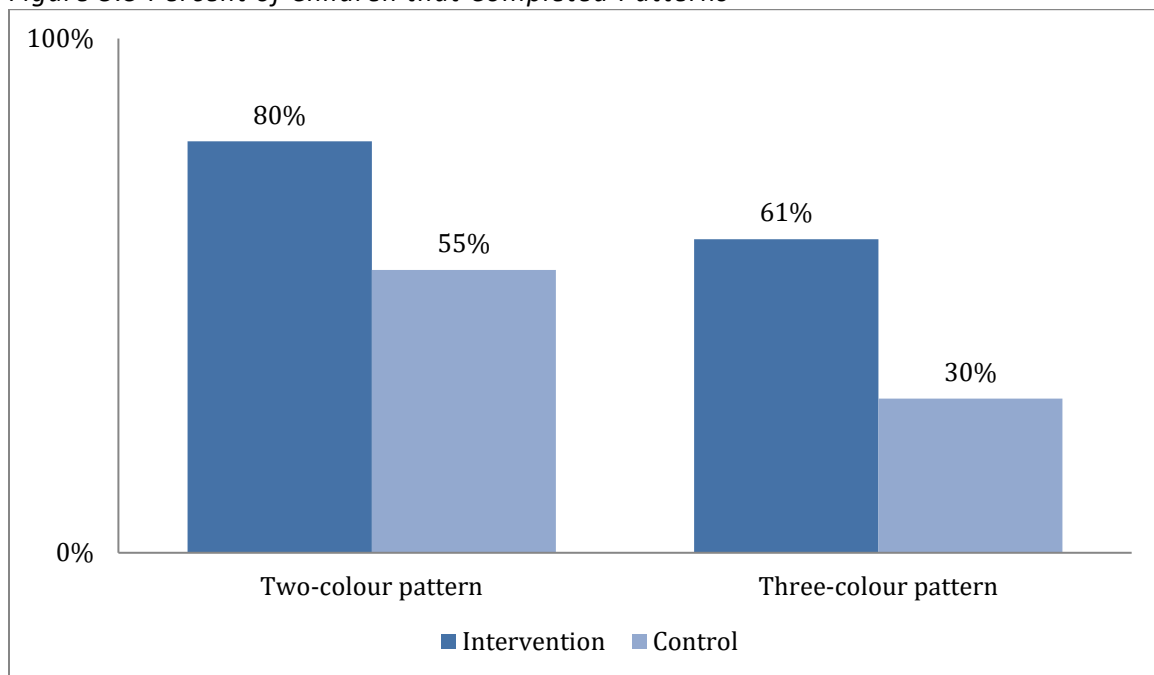


## Making Patterns

Each child was asked to complete a pattern with two different coloured bottle caps. The research assistant placed the bottle caps, one by one, in front of the child while saying the colour of each bottle cap (e.g. red, green, red, green, red). The child was given three different coloured bottle caps (red, green, and orange) and asked to continue the pattern by placing one of the bottle caps down. Once this task was completed, the research assistant asked each child to complete a pattern made with three different coloured bottle caps.

Figure 3.5 shows 80 percent of children in the CtCSR group could complete a two-colour pattern compared to 55 percent of children in the control group, and 61 percent of children in the CtCSR group could complete a three-colour pattern compared to 30 percent of children in the control group, indicating a medium positive programme effect on children's ability to complete patterns (see Appendix 3C).

*Figure 3.5 Percent of Children that Completed Patterns*



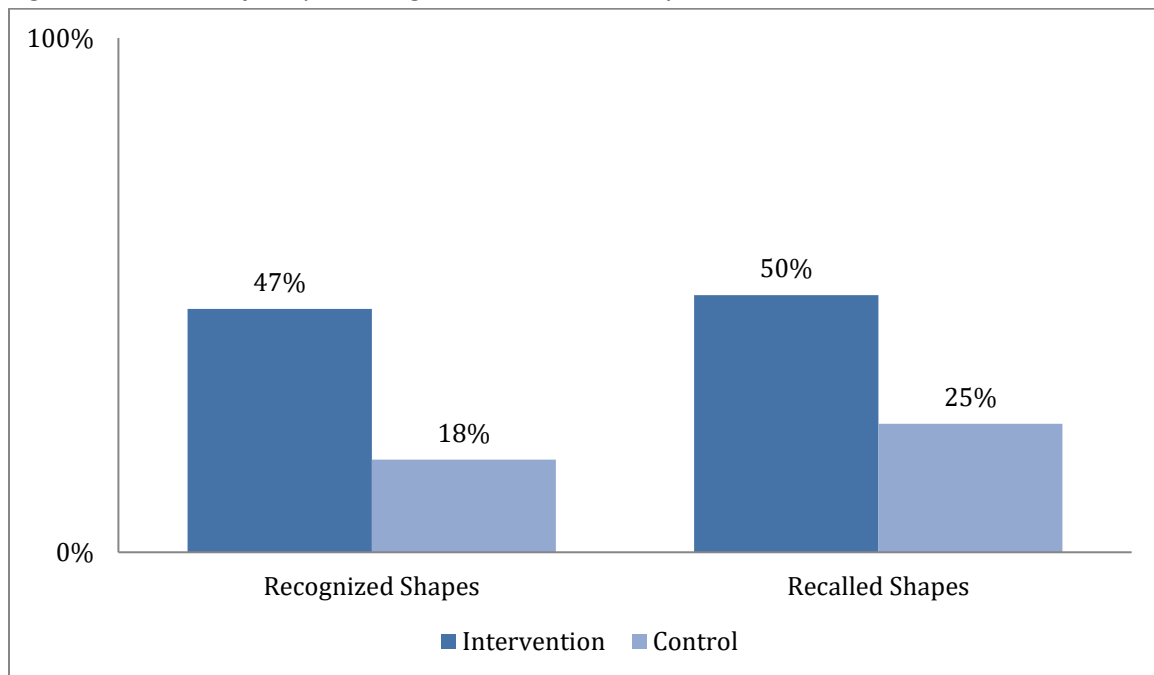


## Shape Recognition and Recall

Each child was given a paper with a square, triangle, and circle on it and was asked to name any of the shapes on the paper (recognized). When a child was unable to name a shape, or named a shape incorrectly, the research assistant then said the name of the shape and asked the child to point to that shape (recalled).

Figure 3.6 shows that, on average, children in the CtCSR group recognized 47 percent of shapes compared to 18 percent of children in the control group, indicating a medium positive programme effect on children's ability to recognize shapes (see Appendix 3C). Thirty-three percent of children in the CtCSR group could recognize all three shapes correctly compared to 13 percent in the control group. Thirty-four percent of children in the CtCSR group could not recognize a single shape compared to 69 percent of children in the control group. On average, children in the CtCSR group recalled 50 percent of shapes compared to 25 percent of children in the control group, indicating a medium positive programme effect on children's ability to recognize shapes (see Appendix 3C).

Figure 3.6 Percent of Shapes Recognized and Recalled by Children



## Early Literacy Skills

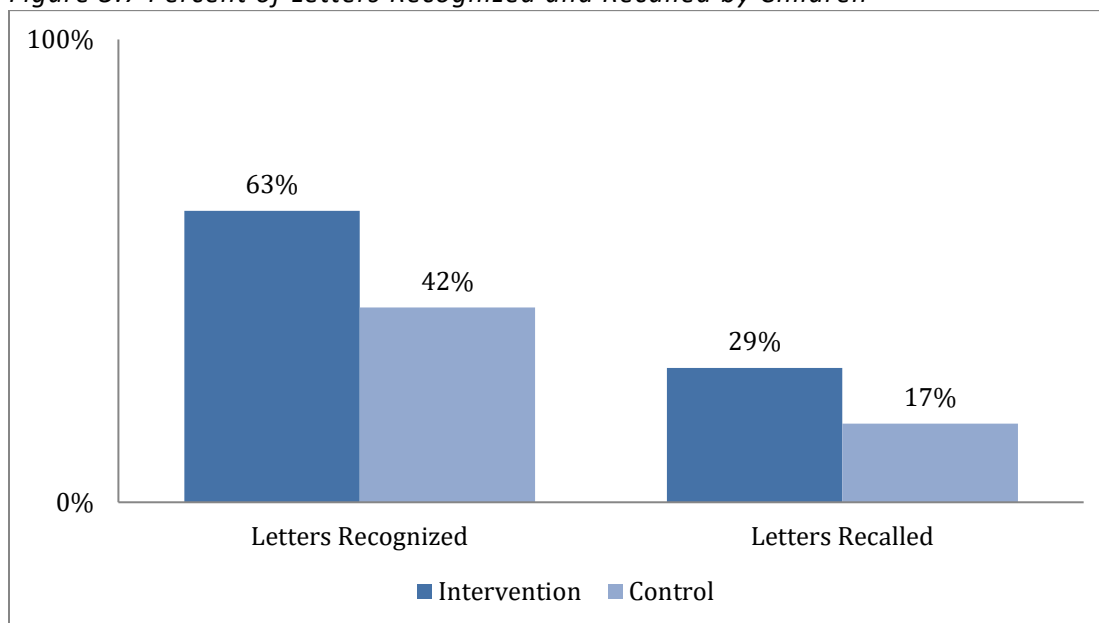
Four tasks were used to assess children’s early literacy skills: (i) naming and recognizing letters, (ii) reading simple words, (iii) writing letters, and (iv) writing their name. The skills tested align with the early learning competencies expected of children who attend the CtCSR (Table 3.1). **In comparison with the control group, children who attended the CtCSR performed significantly better on early literacy tasks including letter recognition, reading simple words, and writing their names.** The results for each of the four early literacy sub-tasks are discussed in detail in the sections below.

### Letter Recognition and Recall

Each child was given a page with 26 letters of the alphabet printed in mixed order and asked to name each letter (recognition). The letters used in Harari and Oromia were in Oromiffaa and the letters (fidals) used in Tigray were in Tigrinya. If a child could not name a letter, the research assistant would say each unnamed letter and ask the child to point to it (recall).

Figure 3.7 shows that, on average, children in the CtCSR group recognized 63 percent of letters compared to 42 percent of children in the control group, indicating a medium positive programme effect on children’s ability to recognize letters (see Appendix 3D). Fourteen percent of children in the CtCSR group and 7 percent of children in the control group could recognize all the letters. Two percent of children in the CtCSR group and 7 percent of children in the control group could not recognize a single letter. On average, children in the CtCSR group recalled 29 percent of letters compared to 17 percent of children in the control group, indicating a medium positive programme effect on children’s ability to recall letters (see Appendix 3D).

*Figure 3.7 Percent of Letters Recognized and Recalled by Children*

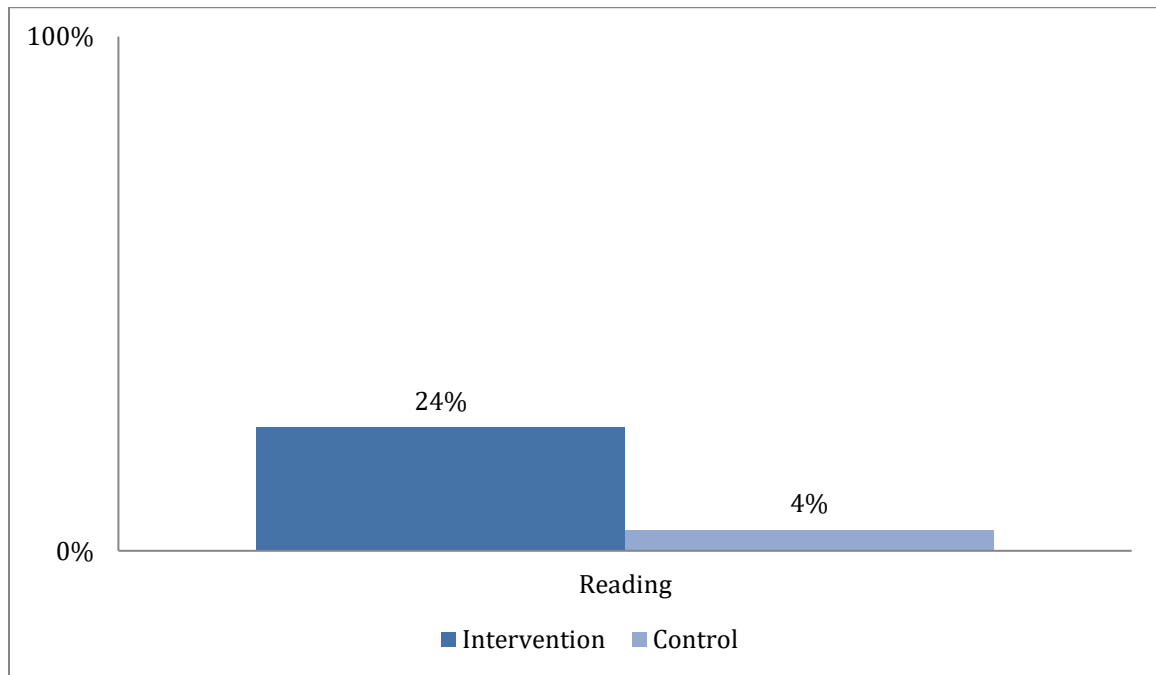


## Reading

There were a total of ten words, presented one at a time, and the child was asked to read each word aloud. The words used in Harari and Oromia were in Oromiffaa and the words used in Tigray were in Tigrinya. The words were selected by local language experts as being age-appropriate for this task. The first five words were considered to be easy beginning reading words for the children, and the second five were more “difficult”. If a child was unable to read any of the five easy words, the research assistant ended the task after showing the child the fifth word.

Figure 3.8 shows that, on average, children in the CtCSR group recognized 24 percent of the words compared to 4 percent of children in the control group, indicating a medium positive programme effect on children’s ability to read (see Appendix 3D). Seven percent of children in the CtCSR group and one percent of children in the control group could recognize all ten words. Fifty-six percent of children in the CtCSR group and 85 percent of children in the control group could not read a single word.

*Figure 3.8 Percent of Words Read by Children*

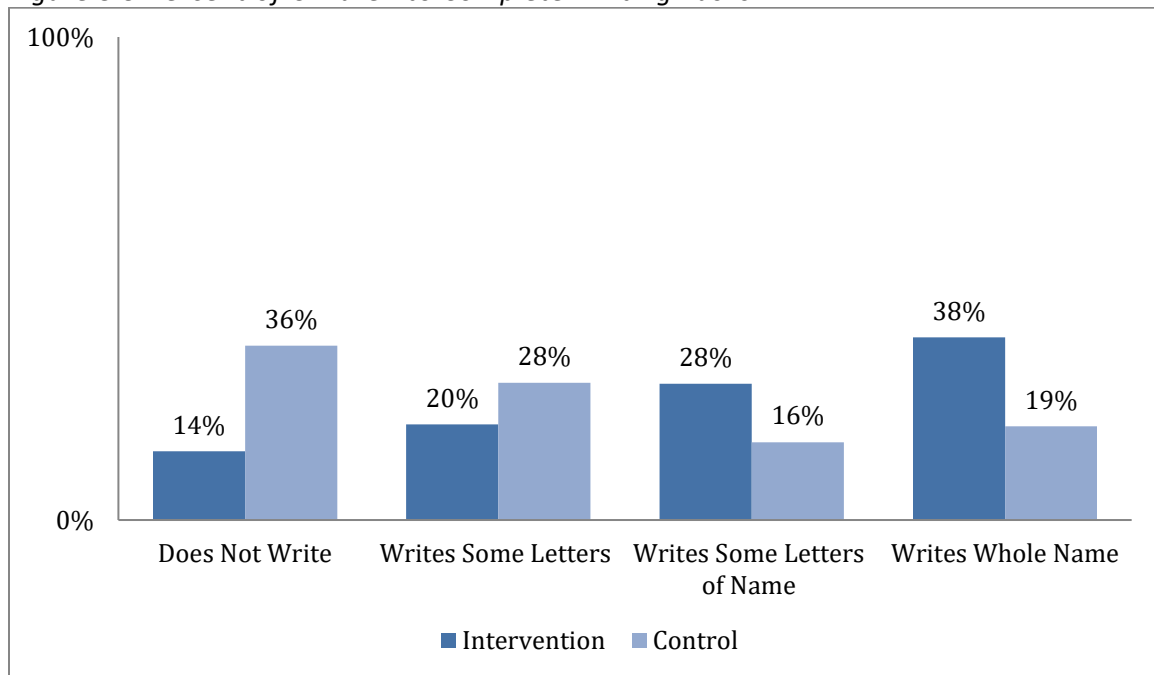


## Writing

A blank piece of paper with a line drawn on it and a pencil was placed in front each child. The child was asked to write his/her name. A child's score was based on whether he/she could write any letters (whether or not these letters were in their name), whether he/she could write at least half of the letters in their name, and whether he/she could write all of the letters of their name in the correct order. A child was given full credit if he/she wrote his/her name accurately even if some letters were written in reverse or were poorly formed.

Figure 3.9 shows 38 percent of children in the CtCSR group could write their own name compared to 19 percent of children in the control group, indicating a medium positive programme effect on children's ability to write their name (see Appendix 3D). Fourteen percent of children in the CtCSR group could not write any letters in their name compared to 36 percent of children in the control group.

Figure 3.9 Percent of Children to Complete Writing Tasks



## Social and Emotional Skills for Learning

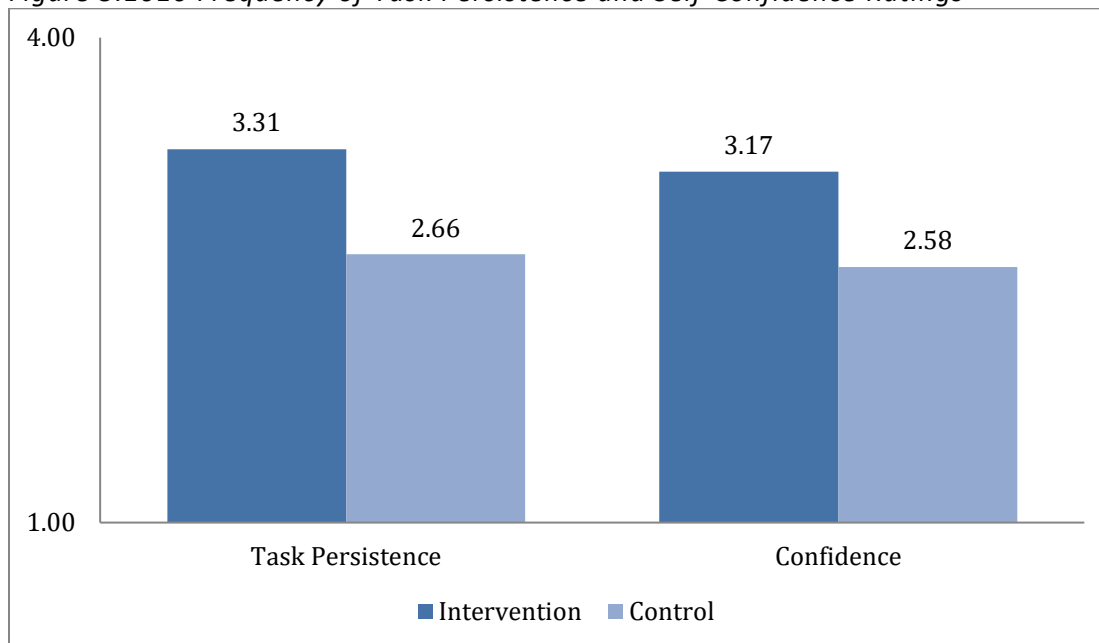
When a child completed all the tasks of the assessment, the child was assessed on five aspects of learning: (i) his/her task persistence, (ii) his/her level of confidence, (iii) his/her attention to directions, (iv) his/her ability to understand directions, (v) his/her attention span, and (vi) his/her body movement. This assessment was based on the research assistant's observations of the child's behaviour throughout all the tasks. **Children who attended the CtCSRP had significantly better scores on social and emotional skills for learning, which included task persistence, confidence, and attention to directions.** Given the better performance of the CtCSRP children on the numeracy and literacy tasks compared to control children, the positive results reported might be reflective of a halo effect and research assistants' positive impressions of children who performed well on previous tasks.

### Task Persistence and Self-Confidence

In regards to task persistence, the research assistant rated the child's behaviour as follows: *Persists with task; Attempts task briefly; Attempts task after much encouragement; or Refuses*. In regards to self-confidence, the research assistant rated the child's behaviour as follows: *Very sure of self, Confident with things known, Attempts new things with encouragement; Reluctant to try new or difficult things; or Very uncertain, needs much encouragement*. A Likert-type scale was used that ranged from 1 to 4.

Figure 3.10 shows that more children in the CtCSRP group were rated as persisting with tasks compared to percent of children in the control group, and more children in the CtCSRP group were rated as being confident compared to children in the control group. The results indicate a medium positive programme effect on children's task persistence and self-confidence (see Appendix 3E).

Figure 3.1010 Frequency of Task Persistence and Self-Confidence Ratings

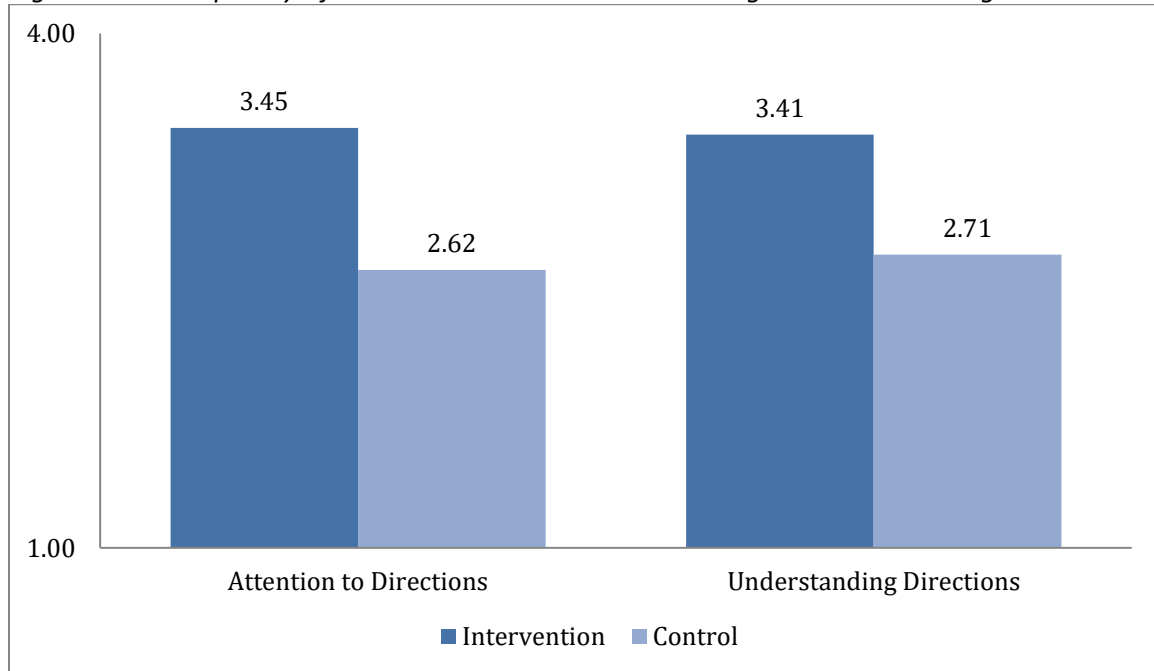


### Ability to Follow Directions

Each child was rated on the extent to which he/she paid attention to and comprehended directions throughout the assessment. Comprehension of directions involved the child understanding what he or she was supposed to do, such as point to something or give a verbal response, regardless of whether he or she gave the correct answer. In regards to attention to directions, the research assistant rated the child's behavior as follows: *Listens to entire directions; Attends only to brief directions; Starts activity after only hearing a portion of directions; or Starts activity immediately without waiting for directions.* In regards to comprehension of directions, the research assistant rated the child's behavior as follows: *Rapid comprehension of directions, given age expectations; Understands after several repetitions; Partial comprehension of directions; or Does not appear to comprehend most directions.*

Figure 3.11 shows that children in the CtCSR group were rated by research assistants as more likely to attend to directions compared to children in the control group, and children in the CtCSR group were rated by research assistants as more likely to comprehend directions compared children in the control group. These results indicate a medium positive programme effect on children's attention to direction and understanding of directions (see Appendix 3E).

Figure 3.11 Frequency of Attention To and Understanding Directions Ratings

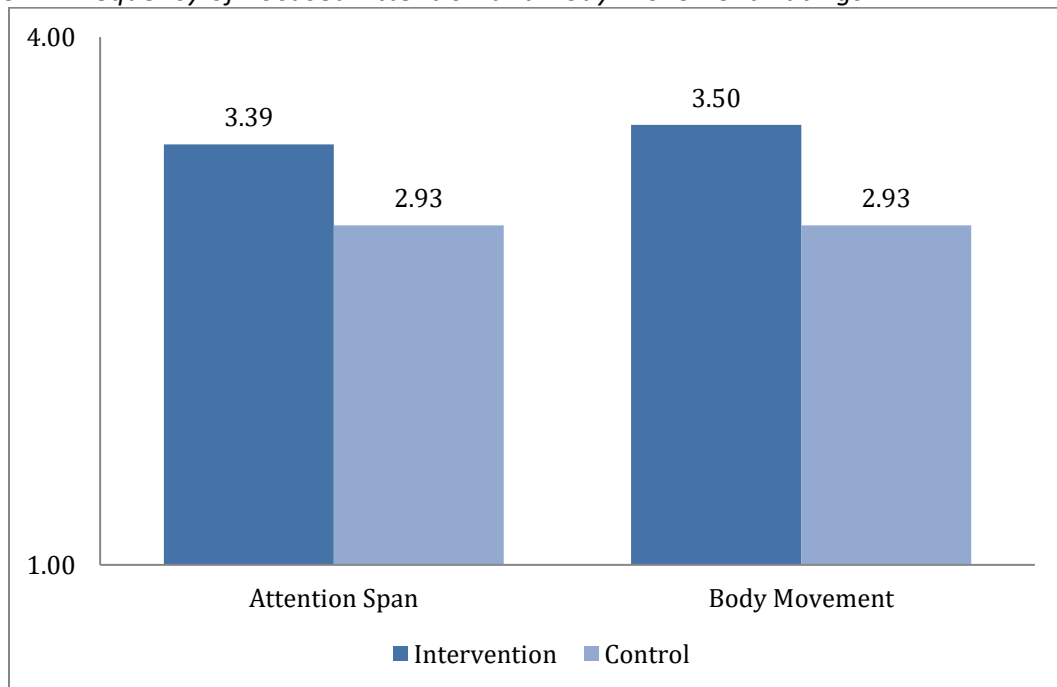


## Focused Attention and Body Movement

The attention span and body movement of each child was rated by the research assistant based on his/her observations of the child's behavior throughout the assessment. In regards to attention span, the research assistant rated the child's behavior as follows: *Focuses attention voluntarily; Attends with research assistant direction; Some distraction with noise or movement of others; or Easily distracted*. In regards to body movement, the research assistant rated the child's behavior as follows: *Sits quietly; Some squirming; Much movement; or Out of seat, body in constant motion*.

Figure 3.12 shows that children in the CtCSR group were rated by research assistants as having more focused attention compared to children in the control group, and children in the CtCSR group were rated by research assistants as being more able to sit quietly while completing tasks compared to children in the control group. These results indicate a medium positive programme effect on children's focused attentions and ability to sit still (see Appendix 3E).

Figure 3.12 Frequency of Focused Attention and Body Movement Ratings



## Regional Variation

Across the two regions, the findings consistently showed that children in the CtCSR group had significantly higher scores on early numeracy, early literacy, and social and emotional skills for learning, indicating that the programme had a positive impact on children’s school readiness across regions (see Table 3.3).

CtCSR children in Oromia, on average, scored 17 percentage points higher and CtCSR children in Harari scored 20 percentage points higher than control children on the test of early numeracy (refers to consolidated scores). CtCSR children in Oromia, on average, scored 24 percentage points higher and CtCSR children in Harari scored 24 percentage points higher than control children in these regions on the test of early literacy. This suggests that in both regions the programme effects on children’s numeracy and literacy are fairly equal, and in both regions the programme effects are consistent in that they are slightly larger for early literacy compared to early numeracy.

CtCSR children’s scores on the tests of early numeracy and literacy were lower in Harari compared to Oromia. Even though the CtCSR impacts were similar across regions, this finding suggests that children in Harari had, on average, lower school readiness skills than children in Oromia. CtCSR children in Tigray scored 6 to 10 percentage points higher than CtCSR children in Oromia and Harari on the test of early numeracy. However, it is not known whether this is a stronger CtCSR effect in this region given the lack of control group. On the other hand, CtCSR children in Tigray scored 5 to 14 percentage points lower than CtCSR children in Harari and Oromia on early literacy. It is not clear from the available data why the literacy scores are lower in Tigray.

*Table 3.3 Regional Variations in Total School Readiness Scores*

	Total		Oromia		Harari		Tigray
	CtCSR (N = 415)	Control (N = 300)	CtCSR (N = 235)	Control (N = 240)	CtCSR (N = 60)	Control (N = 60)	CtCSR (N = 120)
Numeracy	82%	65%	82%	65%	78%	58%	88%
Literacy	65%	43%	65%	41%	74%	50%	60%
Social- Emotional	83%	68%	82%	65%	86%	79%	86%



## **Key Stakeholder Perceptions of Impacts on Children**

This study used data gathered from parents, teachers, school directors, and key stakeholders such as officials from Woreda Education Offices and REBs to gain further insights about the CtCSRPs impacts on children.

### **Perceptions of CtCSRPs Impact on Children's Learning**

#### *Parents*

Through the supplemental parent interview ( $n = 415$ ), we assessed parents' perceptions of the benefits of the CtCSRPs for their children. Research assistants asked parents the extent to which their child had acquired knowledge and learning skills to help him/her in school as a result of participating in the CtCSRPs. Seventy percent of parents reported that their children acquired "a lot" of knowledge and skills to help them at school through the CtCSRPs, while 28 percent of parents reported that their children acquired "a little", and 2 percent of parents reported that their child did not acquire through the CtCSRPs any knowledge or skills to help them at school.

#### *Teachers*

Through the teacher survey ( $n = 82$ ), we assessed teacher perceptions of the benefits children received from participating in the CtCSRPs. Fifty-six percent of teachers reported that children's early learning skills improved "a lot" as a result of the CtCSRPs, while 37 percent of teachers reported that children's early learning skills improved "a little", and 5 percent of teachers reported that children's early learning skills did not improve at all as a result of the CtCSRPs.

#### *Key Stakeholders*

Key stakeholders believe that the CtCSRPs enhanced children's school readiness skills in academic areas; they referred to skills such as learning to hold a pencil, reciting the alphabet, and knowing how to count. In addition to academic skills, key stakeholders noted that children who participated in the CtCSRPs had improved social skills: they learned to communicate, express themselves and ask questions, they were less afraid of school, had friends when they started school, were familiar with school rules, were more disciplined and motivated, and more likely to be active and "fast learners". Key stakeholders also reported that children who participated in the CtCSRPs were more interested in starting primary school and were relaxed and confident.

When asked to describe differences noticed between Grade 1 students who had participated in the CtCSRП compared and students who had not, all key stakeholders in all regions responded by saying that there were “very big” or “great” differences. Here are a few of their quotes:

- “CtCSRП children are relaxed when learning. CtCSRП children are interested to start school. CtCSRП children have seen pictures in books and are expecting to use books when they go to school. CtCSRП children are not new to schooling. CtCSRП children aren’t afraid at school because they can see their Young Facilitator at school”(Woreda Education Officer, Oromia).
- “CtCSRП children have more interest in school and have better results than children who have not done CTCSRП. CtCSRП children are not confused when they start school”(School Director, Benishangul-Gumuz).
- CtCSRП children have “better performance and are more disciplined. They feel free. They are not afraid. They are the best performers. They are the most self-confident” (a teacher, Harari.) When describing children who had not participated in CTCSRП this teacher continued by saying “they fear the teachers. They have low self-confidence. They see the white coats that teachers wear and they are afraid because they think the teachers are doctors.”
- “We compared CtCSRП students with non-CTCSRП students. CtCSRП students experience how to talk together, how to handle a pencil and write, how to attend to learning. They were more disciplined. Before CtCSRП, it was very difficult for a child to start Grade 1 who hadn’t gone to kindergarten. It was very difficult for them to join together with other children.” (Woreda Education Officer, Tigray).

## **Key Stakeholder Perceptions of Medium-Term Impacts**

The second and third of the CtCSRП goals related to child outcomes are to increase on-time enrolment (children enrolling in Grade 1 when they are 7), to decrease dropout rates, and to enhance children’s overall school performance in the early years of primary school. It was not possible to rigorously evaluate the medium impact on the programme in this evaluation because no longitudinal data was available for tracking cohorts of CtCSRП graduates, their on-time enrolment, how they progressed through school, and their academic achievement over time. As a result, we took an exploratory approach, investigating parents’ and key stakeholders’ perceptions of whether the CtCSRП has had an impact related to on-time enrolment, decreased dropout, and improved student performance in primary school.

## **On-time Enrolment**

Findings from parental and key stakeholders interviews suggest that on-time enrolment has improved as a result of the CtCSR.

### *Key Stakeholders*

Key stakeholders, including school directors, report that the CtCSR increased the number of children going to school on-time in their regions, noting that in the past children in these areas might be 8 to 10 years old before they started Grade 1.

- An REB Official in Oromia noted, “In [CtCSR] schools there is no need to convince parents to send their kids to school. The children ask their parents to send them to school. In the past, the school had to convince parents to send their children: before we had to pull them, now they come on their own.”
- All 14 school directors interviewed reported an increase of on-time enrolment since the CtCSR was introduced at their school.

Stakeholders noted that since the CtCSR takes place close to home, parent concerns and uncertainties about sending their young children to school have been reduced; parents were more likely to allow their child to start school on-time after the CtCSR; and it took less convincing on the part of the school officials to encourage parents to send their children to school.

### *Parents*

Parents whose children were enrolled in the CtCSR reported an increased awareness of the importance of on-time enrolment. Eighty-seven percent of the parents interviewed ( $n = 356$ ) reported that their understanding of the importance of on-time enrolment improved “a lot” as a result of the CtCSR. Twelve percent of parents ( $n = 50$ ) reported that their understanding improved “a little” and one percent ( $n = 3$ ) reported that their understanding of the importance of on-time enrolment did not improve at all as a result of the CtCSR.

## **Ongoing Academic Achievement of CtCSR Students**

### *Teachers*

Through the teacher survey, we assessed teachers’ perceptions of the medium-term benefits children receive by participating in the CtCSR. Forty-eight percent of teachers reported that children’s achievement in primary school improved “a lot” as a result of the CtCSR. Forty-three percent of teachers reported that children’s achievement improved “a little”, and nine percent reported that children’s achievement did not improve at all. One in two primary school teachers reported that student achievement and dropout rate in lower primary grades reduced “a lot” as a result of the CtCSR. These findings should be treated with caution as they rely on anecdotal reporting.

### *Key Stakeholders*

Similarly, school directors reported improvements in the academic performance and reduced dropout rates among CtCSRPs students. When asked, all 14 school directors interviewed reported a reduction in student dropout in lower primary grades since the CtCSRPs was introduced at their school. Key stakeholders reported that children who participated in the CtCSRPs tend to perform well in the early years of primary school. The reasons for the improved performance, as perceived by key stakeholders, included that CtCSRPs graduates have acquired basic numeracy and language skills, have improved self-confidence, “feel free”, and are less confused and afraid than children with no pre-school experiences because they are familiar with the school environment and more ready to meet the demands of the formal school environment and curriculum. Key stakeholders commonly reported that CtCSRPs graduates rarely or never drop out of Grade 1. The reasons for reduced dropout rates, as perceived by key stakeholders, included that CtCSRPs graduates like school, have friends, know what is expected of them, and have a positive attitude towards learning.

## **Summary and Discussion**

This chapter addresses the primary question of this evaluation: Do children who participated in the CtCSRPs have better school readiness and early learning skills compared to children who have not participated in the programme? The overarching findings from this evaluation show that children who participated in the CtCSRPs had higher scores in the areas of early numeracy, literacy, and social and emotional skills for learning when compared to children in the control group. As shown in Table 3.3, the positive outcomes related to students’ school readiness were found across all three regions where the child assessment was conducted.

With respect to numeracy skills, the largest improvements were found for number recognition, making patterns, and shape identification. When comparing these findings to findings from the 2009 evaluation of the pilot programme, we note that there continues to be a medium-sized positive programme effect on children’s ability to recognize numbers, count from 1 to 10, count using one-to-one correspondence, recognize letters, and write their name. There appear to be improvements since 2009 in the programme effects on children’s ability to recognize colours, make patterns, solve simple addition and subtraction problems, and read simple words.

Literacy is one challenging area for the programme that deserves further attention. In comparison with control children, children who attended the CtCSRPs had better school readiness skills related to early literacy across all tasks, including letter recognition, reading simple words, and ability to write their names. However, scores for writing and especially reading were low across the sample in both the CtCSRPs and control group; 14 percent of CtCSRPs graduates could not write any letters in their name while 56 percent could not read any of the simple words they were shown. Since basic literacy skills related to reading and writing are critical foundational skills for future learning and success in school, future attention and investments should focus on helping children acquire these skills more effectively.

Based on reports from parents, teachers and key stakeholders, the CtCSRП appeared to have an impact on children’s success in school, in both the short and medium term, including in the areas of on-time enrolment, academic achievement, and primary school dropout. However, because of the absence of longitudinal data on cohorts of intervention and non-intervention children, these findings should be treated cautiously. To assert a strong medium-term programme impact would require subsequent collection of individual data on on-time enrolment, primary school dropout, academic achievement, and primary school completion rates for children enrolled in the CtCSRП and for those who do not. Only with this information will we know if the school readiness skills gained in CtCSRП translate into skills and attitudes needed for success in primary school and beyond. It will also enable making more nuanced connection between student achievement and the quality of training provided to teachers and Young Facilitators.

# Chapter 4 Secondary Outcomes: Young Facilitators, Parents and Teachers

The CtCSR goal is not only to improve young children’s early learning skills and attitudes, but also to create “ready schools” by enhancing the links between schools and their new students and families, and increasing the awareness of school directors and teachers of early childhood learning needs, including the importance of child-centred instruction). Moreover, the CtCSR also aims to foster “ready families” by increasing parental awareness of the importance of child development, timely enrolment at school, as well as by helping parents acquire skills to enhance their child’s early learning. Finally, the CtCSR also aims to improve Young Facilitators’ skills and attitudes towards academic achievement and long-term life plans.

This chapter presents findings on these secondary CtCSR objectives, utilizing data from the Young Facilitator survey, parent interviews, teacher surveys and key stakeholder interviews.

This chapter answers the following three key questions:

- Does the CtCSR help Young Facilitators develop new skills that not only enhance the early learning of pre-school children but also improves Young Facilitators’ self-esteem, confidence, and positive attitude towards learning?
- Does the CtCSR improve family awareness of the importance of child development, improve family skills targeting the promotion of early learning opportunities, and improve family understanding of the importance of on-time school enrolment?
- Does the CtCSR improve teacher understanding and use of child-centred teaching and learning methods and awareness of how early childhood experiences influence later learning?

To answer these questions, we drew upon survey data collected from Young Facilitators, parents and teachers. These data were complemented with data from key stakeholder interviews with school directors and officials from Woreda Education Offices and REBs.

## Programme Benefits for Young Facilitators

### Involvement and Perceptions of CtCSR

According to the Young Facilitator survey ( $n = 283$ ), Young Facilitators attended Grades 5 to 8, and the majority was in Grade 6. Results suggest that boys were more likely than girls to be Young Facilitators (58 percent male compared to 42 percent female). Interviews with school directors and key stakeholders indicated that Young Facilitators were selected based on the strength of their academic achievements as well as their motivation and reputation in school; they were considered to be the students most able to take on the responsibilities of a Young Facilitator.

Most Young Facilitators who completed the survey had participated in the CtCSR for less than one year (31 percent). Twenty-two percent had been a Young Facilitator for at least one year while 29 percent had been a Young Facilitator for two years. Eighteen percent had been Young Facilitators for three or more years. Young Facilitators—both girls and boys—were fairly evenly divided with respect to their reports on how much time participating in CtCSR took away from their schoolwork: 37 percent reported “not at all”, 30 percent reported “a little” while 33 percent reported it took away “a lot” of time from their schoolwork. As can be seen in Table 4.1, despite this variability, the overwhelming majority of Young Facilitators reported that they liked being a Young Facilitator, were interested in the CtCSR activities, liked doing the activities with young children, and wanted to continue being a Young Facilitator in the following year.

*Table 4.1 Young Facilitators' Self-Reported Attitudes Towards CtCSR*

	A lot	A little	Not at all
Do you like being a Young Facilitator?	85%	11%	4%
Are you interested in CtCSR activities?	90%	8%	1%
Do you like doing CtCSR activities with young children?	87%	12%	1%
Do you want to continue being a Young Facilitator next year?	87%	9%	4%

*Note:* Percentages have been rounded to the nearest one which is why they may not add to 100.

## Improvement in Attitudes Towards Learning

The CtCSRP aims to increase Young Facilitators' self-esteem, confidence and their positive attitudes towards learning. Through the survey, Young Facilitators were presented with five statements and were asked to indicate to what extent their attitudes towards learning have changed as a result of participating in the CtCSRP. The response choices were as follows: *Not at all*, *A little*, and *A lot*. Young Facilitators' responses are presented in Table 4.2. The vast majority of Young Facilitators who completed the survey reported that they were happier at school, felt more confident, and had more positive attitudes towards learning as a result of participating in the CtCSRP.

*Table 4.2 Young Facilitators' Self-Reported Improvement in Attitudes Towards Learning as a Result of CtCSRP*

	A lot	A little	Not at all
Have you made new friends at school as a result of the CtCSRP?	70%	20%	11%
Are you happier at school as a result of the CtCSRP?	87%	12%	1%
Do you feel more confident that you can do well in school as a result of the CtCSRP?	83%	15%	3%
Do you have a more positive attitude towards learning as a result of the CtCSRP?	80%	15%	5%

*Note.* Percentages are rounded to the nearest one and may not add to 100.

The findings from the Young Facilitators surveys were corroborated in our interviews with key stakeholders, including teachers and school directors. Students who are Young Facilitators were described as having increased self-confidence and motivation, better time management skills, and a positive work ethic. They also described how the programme made Young Facilitators feel proud and provided an opportunity for them to develop leadership and pro-social skills such as responsibility, commitment, and honesty. For example, an REB official in Oromia reported that the programme increased Young Facilitators' interpersonal and teamwork skills: "Young Facilitators become interested to ask teachers questions and to help friends in class." A Woreda Education Official in Tigray noted how the programme increased Young Facilitators' active learning: "Young Facilitators develop confidence. They become active learners and they take responsibility to teach the young children." An REB official in Oromia noted: "Community and family respect Young Facilitators and appreciate their work. They are seen as a great person in the community."



Young Facilitators serve as role models for other students and are recognized and respected by the community for their efforts in the CtCSR. For example, a school representative in Oromia noted, “People in the community call them “teacher” and they are respected by the community. Other students want to be good achievers like the Young Facilitators. They are role models for other students.” It was also noted that some Young Facilitators feel “powerful”, “selected”, and better than other students as a result of participation in the CtCSR. Young Facilitators were active member of Teachers of Tomorrow school clubs and key stakeholders suggested that participation in CtCSR encouraged students to think about being a teacher in the future. “Young Facilitators are eager to be a teacher,” reported an REB official in Oromia, “They hope to be teachers in the future.”

Key stakeholder data raised some important questions and considerations in regards to the Young Facilitators. First, given the selection process for Young Facilitators, not all students had the opportunity to be a Young Facilitator. Only the best performing students who had the best conduct were selected to be Young Facilitators. Second, one-third of Young Facilitators reported that their participation in the programme took away “a lot” of time from their schoolwork. Third, our findings indicated that boys are more likely to be Young Facilitators than girls. Some key stakeholders mentioned that some parents of female students were less likely to allow their child to participate as a Young Facilitator than parents of male students due to the need for the girls’ domestic labour at home. Some key stakeholders also reported that during the first year of the programme some parents refused to allow their children to be Young Facilitators but this resistance was significantly reduced after the first few months that the programme was running, as parents understood better the goals and benefits of the programme.

These findings suggest there is a need for greater attention to fairness in the selection process and the impact of time demands on the Young Facilitators, especially in relation to girls. Being a Young Facilitator appears to enhance future life chances and therefore it is worth considering whether it is an opportunity that could be offered to a wider number of Grade 5 and 6 students.

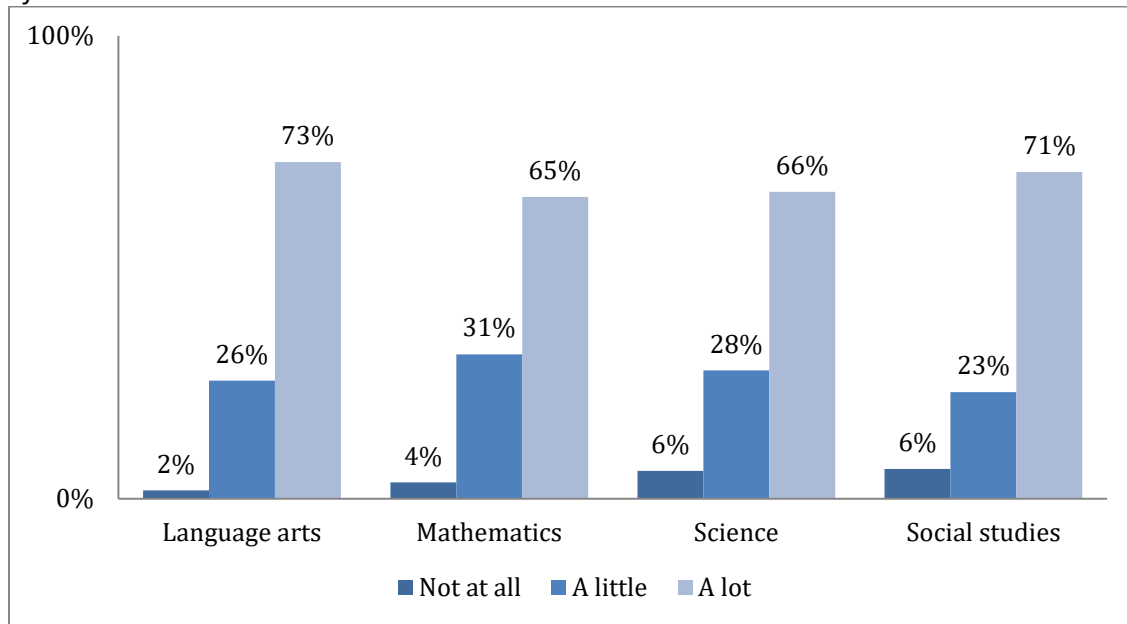
### **Improvement in Academic Achievement**

In the survey, Young Facilitators were asked their perceptions of the benefits of the CtCSR for their academic performance. Young Facilitators were asked to indicate the extent to which they have become a better student as well as the extent to which their grades in language arts, mathematics, science and social studies have improved as a result of participating in the CtCSR. The survey response choices were as follows: *Not at all*, *A little*, and *A lot*.

Seventy-five percent of the Young Facilitators reported that participating in the CtCSR helped them “a lot” to become better students at school. Twenty-percent reported that participating in the CtCSR helped them “a little” to become better students while five percent reported that it did not help them at all to become better students. Figure 4.1 shows the percentage of Young Facilitators who indicated that their school grades have improved as a result of participating in the CtCSR. Young Facilitators reported that their grades improved across all four subjects as a result of the CtCSR, particularly their grades in language arts and social studies.

Young Facilitators’ responses were corroborated by findings from key stakeholder interviews. Several key stakeholders noted that Young Facilitators’ had developed strong reading skills. They read the Young Facilitator’s guide and have opportunities to practice and reinforce their own literacy skills when doing literacy activities with the young children. Key stakeholders also reported that Young Facilitators have good relationships with teachers and are less afraid of teachers than other students.

*Figure 4.2 Young Facilitators' Self-Reported Improvements in School Grades as a Result of CtCSR*



### Regional Variation

Young Facilitator survey results suggested that Young Facilitators are recruited from different grades in different regions: for example, most Young Facilitators were in Grade 6 in Harari and Tigray whereas most Young Facilitators were in Grade 8 in Oromia. The results also suggest that females are more likely to be involved as Young Facilitators in Oromia (47 percent) compared to Harari (40 percent) and Tigray (38 percent). Young Facilitators in some regions were more likely to report that participating in the CtCSR took away “a lot” of time from their schoolwork: 59 percent in Tigray compared to 23 percent in Harari and 15 percent in Oromia. Young Facilitators in some regions were more likely to report that their positive attitudes towards learning improved “a lot” as a result of participating in the CtCSR: 89 percent in Tigray and 84 percent in Oromia compared to 43 percent in Harari. Overall, Young Facilitators’ satisfaction with the CtCSR was high across the regions, with 99 percent of Young Facilitators in Tigray, 94 percent in Oromia, and 95 percent in Harari reporting that they liked being a Young Facilitator.

## Programme Benefits for Parents

### Improved Understanding of Early Childhood Development

A second CtCSR goal for parents is to increase their awareness of the importance of child development. In the parent interview ( $n = 715$ ), parents in both the CtCSR and control group were provided with a list of child development questions and were given the following Likert scale type response options: *Not at all*, *A little*, or *A lot*.

Table 4.3 shows the percentage of parents who agreed – either a little or a lot - that young children learn through play; that early childhood experiences help children’s brains to develop; that everyday activities help children to learn; that singing a new song, looking at a book, or playing a new game helps children to learn; and that children learn best when family members take an interest in their games/activities. As can be seen in Table 4.3 parents in the CtCSR group were more likely than parents in the control group to agree with statements concerning child development (Appendix 4A). In other words, parents who have a child in the CtCSR have better awareness of the importance of early childhood development than parents whose child has not participated in the programme. Care is needed when generalizing these results because, in the absence of a baseline, it is not possible to identify parents’ perceptions of the importance of early childhood development and activities for promoting early learning in the home prior to the introduction of CtCSR and it is possible that parents who held these beliefs at the onset were more likely to allow their children to take part in the CtCSR.

*Table 4.3 Parent Awareness of Early Childhood Development*

	CtCSR	Control
Children learn through play	93%	73%
Children’s early experiences help their brains develop	99%	81%
Everyday activities help children to learn	94%	75%
Singing a new song, looking at a book, or playing a new game helps children to learn	95%	81%
Children learn best when family members take an interest in their games/activities	96%	79%

### Early Learning Activities in the Home

A third CtCSR goal for parents is to help them acquire skills for promoting children’s early learning. In the parent interview ( $n = 715$ ), parents in both the CtCSR and control group were asked to indicate the amount of time they or someone else in the household participated in various early learning activities. They were given the following 3-point Likert-type scale response options: *Not at all*, *A little*, or *A lot*.

Table 4.4 shows the percentage of parents in the CtCSR and control groups who agreed - either *a little* or *a lot* - that, in the past week, they or someone else in their household participated in early learning activities with their young children including story-telling with children; singing songs with children; reading books with children or looking at pictures; playing with children; and naming, counting or drawing. Parents in the CtCSR group were significantly more likely to agree with these statements than parents in the control group (see Appendix 5B for additional analysis). In other words, families of CtCSR children were more likely to engage in home-based activities that promote early learning than parents in the control group.

*Table 4.4 Engagement in Home Activities that Promote Early Learning*

	CtCSR	Control
Story-telling to children	80%	62%
Singing songs with children	89%	66%
Read books or look at pictures with children	94%	67%
Play with children	89%	69%
Naming things, counting or drawing	93%	66%

## Programme Benefits for Teachers and Schools

### Involvement In and Perceptions of the CtCSR

According to the teacher survey ( $n = 82$ ), teachers involved in the CtCSR had between one and 32 years of teaching experience, with an average of nine years' experience. Teachers generally taught multiple grades: 42 percent taught Grades 1 to 3 (25 percent taught Grade 1) while 50 percent taught Grades 5 to 8. Fifty-six percent of teachers reported that they attended all or most of the training sessions for CtCSR. Teachers of upper primary grades were slightly more likely than teachers of lower primary grades to report that they attended all or most of the training sessions for CtCSR (64 percent compared to 53 percent). Nearly all teachers reported that they understood the purpose of CtCSR (99 percent) and most agreed that grouping older children (Young Facilitators) with younger children worked well in their school (91 percent).

Teachers were fairly evenly divided with respect to whether the amount of time required to participate in CtCSR posed a problem: 35 percent reported "not at all", 29 percent reported "a little", and 35 percent reported "a lot". The amount of time required was more of a problem for teachers of the upper primary grades than lower primary grades (45 percent compared to 21 percent). The demands on time are greater for teachers of upper grades possibly because they are responsible for conducting the weekly sessions with the Young Facilitators as well as supervising them. Nevertheless, the overwhelming majority of teachers reported that they would like to participate in the CtCSR again the following year (96 percent).

## Child-Centred Teaching

A CtCSR goal for teachers is to enhance teachers' understanding and use of child-centred teaching methods and to create child-friendly learning environments. In the teacher survey, teachers were presented with five statements regarding the use of child-centred teaching and were asked to indicate to what extent their teaching practices changed as a result of participating in the CtCSR. The teacher survey response choices were as follows: *Not at all*, *A little*, and *A lot*.

Teachers reported that their child-centred teaching methods improved as a result of participating in the CtCSR. Table 4.5 displays the percentages of teachers who agreed that their child-centred teaching methods in five different teaching areas. The largest improvement was related to the way teachers ask children questions in class: 74 percent of teachers reported that the way they asked questions improved "a lot" as a result of participating in the CtCSR. The second largest improvements were related to the ways that teachers motivate and assess students: 68 percent of teachers reported that the way they motivate students improved "a lot" as a result of participating in the CtCSR, and 67 percent of teachers reported that the way they assess students improved "a lot" as a result of participating in the CtCSR.

*Table 4.5 Teacher Perception of Improvements in Child-Centred Teaching Methods as a Result of CtCSR*

	<b>A lot</b>	<b>A little</b>	<b>Not at all</b>
As a result of participating in the CtCSR, have you:			
...improved the way you plan lessons?	45%	42%	13%
...improved how you motivate students?	68%	25%	7%
...improved how you ask students questions in class?	74%	16%	10%
...improved how you conduct group work with students?	63%	28%	9%
...improved how you assess students?	67%	24%	9%

Note: Percentages are rounded to the nearest one, which is why they may not add to 100.

These findings were corroborated in our interviews with school directors and key stakeholders, who noted that teachers who participated in the CtCSR experience firsthand the positive impact that child-centred teaching methods had on the early learning skills and achievement of young children and, as a result, they were encouraged to adopt such teaching methods for their regular classes and share what they know with other teachers in the school. For example, a school director in the Southern Nations, Nationalities and People's Region (SNNPR) reported that teachers have improved class management and treat students more equally as a result of participating in the CtCSR, "After their [CtCSR] training, teachers' class management and teaching has improved as they apply what they learn to their teaching. For example, they gain practical aspects from the training such as producing materials. Also, they teach students more equally." Key stakeholders reported that teacher participation in the CtCSR is recorded in their performance evaluations, which was beneficial for their teaching record. They also noted that, in general, teachers were interested in participating in the programme, and that further, in some communities, there was competition amongst teachers to participate in the programme.

While the majority of teachers interviewed engaged in the CtCSR were teaching older children, key stakeholders mentioned important spillover effects for the programme for early grade teaching. For example, they noted that Grade 1 teachers with students who have participated in the CtCSR found it less burdensome to teach than a class of students without any CtCSR students. Key stakeholders also noted that teachers are more willing to teach Grade 1 when they are teaching children who have participated in the CtCSR. For example, a Woreda Education Officer in Tigray noted how, "[the CtCSR] is very important to teachers because child-to-child children never have a challenge to write, read or know the alphabet. They are disciplined. It is easy for teachers to teach them." Similarly, a UNICEF representative reported, "[the CtCSR] lessens the burden on the Grade 1 teacher because child-to-child children know how to hold a pen, know the alphabet, and know the school rules."

### **Regional Variation**

Results from the Young Facilitator survey suggest that teachers who participated in the programme in Tigray had more teaching experience, on average nine years, compared to teachers who participated in the programme in Oromia and Harari, who had, on average, five years and four years of teaching experience, respectively. As noted earlier, there was variance across the regions in the frequency of teachers attending the CtCSR training sessions: in Harari, 89 percent of teachers reported that they attended all or most of the training sessions compared to 55 percent in Oromia and 48 percent in Tigray. We also found variance across the regions with respect to those who agreed that grouping older children (Young Facilitators) with younger children worked well in their school: 100 percent in Oromia and 87 percent in Tigray compared to 67 percent in Harari. This was something we could not explain but that deserves further investigation. Overall, teachers across the regions generally reported that they would like to participate in the CtCSR again next year: 100 percent in Tigray, 93 percent in Oromia, and 83 percent in Harari.

## Summary and Discussion

The results presented in this chapter suggest that, based primarily on recall data from Young Facilitators, parents and teachers, and triangulation with key stakeholders, the CtCSR had a positive impact on Young Facilitators, parents, and teachers.

**Young Facilitators** felt happier at school, felt more confident, and had more positive attitudes towards learning as a result of participating in the CtCSR. The results also suggest that Young Facilitators became better students and their performance in school improved as a result of participating in the CtCSR. They were respected by the community for their contribution to young children's learning and were role models to other children in their schools and communities. However, these findings should be interpreted with caution: strong impact findings would require comparing baseline (pretest) data with post-participation data on student achievement and attitudes in both control and intervention areas, as well as including more information on the process used to identify and select Young Facilitators. In contrast to the limited findings of the 2009 evaluation of the CtCSR pilot in Ethiopia, our findings suggest that the CtCSR had a potentially significant impact on the Young Facilitators. Tracking the long-term impact on Young Facilitators is a question worth pursuing in future evaluations.

An area in which we found a potential challenge to the engagement of the Young Facilitators in the CtCSR relates to the selection process used in recruitment and the time the programme takes away from their other academic activities. The idea of recruiting older children in a child-to-child approach, or cross-age tutoring, is based on a well-proven model, but the constraint on older children's time must be investigated, especially in the context of Ethiopia, where students need to balance competing pressures including responsibilities in the household or farming, long journeys to school, battling to maintain a good academic standing, and working outside the home. Furthermore, our findings pointed to potential issues of equity and fairness in the selection of Young Facilitators. Given the enormous importance of school completion and success for this age group in Ethiopia, collecting further data about the long-term impact of the programme on leadership and academic success among young adolescents, and especially among young adolescent girls, is very important.

**For parents**, the results suggest that their understanding of the importance of on-time school enrolment improved as a result of the CtCSR and, furthermore, that parents in the CtCSR showed higher awareness of the importance of child development and activities in the home that promote children's early learning. In contrast, in the 2009 evaluation of the CtCSR pilot there was no significant programme impact on activities in the home for promoting early learning and no information was included on parents' understanding of on-time enrolment or the importance of child development. Again, these results must be treated with caution given that they rely on self-reporting. For example, it was not clear to us from our review of programme documents and interviews with key stakeholders whether parenting information was being circulated in an ongoing or uniform way as part of the programme. Future research is needed to understand how the programme can produce changes in parenting knowledge, and attitudes and behaviours concerning the development and learning of their children.

**For teachers and schools,** our findings suggest that teacher' understanding and use of child-centred teaching methods have improved as a result of teachers' participation in the CtCSR and more child-friendly learning environments have been created. While few of the teachers involved in the CtCSR are early grade teachers, there was some indication of potential indirect spillovers into Grade 1 classrooms, where teaching became easier and, as a result, teachers' willingness to teach Grade 1 has been enhanced. It was not possible to discern impact on teachers in the 2009 evaluation of the CtCSR pilot due to sampling issues and high attrition. Our findings in this area, likewise, must be treated with caution as they rely primarily on self-reported outcomes. However, they indicate a clear need to better understand the effects the programme has on schools so that these effects are maximized.



# Chapter 5 Discussion and Recommendations

## Impact on Children

The first and primary question for this evaluation was

**Do children who participated in the CtCSRП have better school readiness and early learning skills compared to children who have not participated in the Programme?**

To answer this question within the time period requested (October 2013-January 2014), two groups of children were assessed: an intervention groups that received the CtCSRП in UNICEF-supported *woredas*, and a control group that did not receive the programme. The overarching finding is that children who participated in the CtCSRП had higher scores in the areas of early numeracy, literacy, and social and emotional skills for learning when compared to children in the control group. Positive outcomes were found across all geographical regions in the study, and there is some evidence that the programme effects are larger now than during the pilot phase of the programme. These findings were all the more impressive given that the children in the CtCSRП were, on average, 3 months younger than the children in the control group.

### Learning Skills

In particular, evaluation findings suggest that children who attended the CtCSRП had better school readiness skills related to early literacy across all tasks, including letter recognition, reading simple words, and writing their names, as compared to children not enrolled in the CtCSRП.

However, it is important to note that, even though the CtCSRП group outperformed the control group, scores for writing and especially reading were still quite low with fourteen percent of CtCSRП graduates unable to write any of the letters in their name, and 56 percent unable to read any of the simple, high frequency words they were shown. The importance of vocabulary for success at school cannot be overestimated (Biemiller, 2005). Vocabulary, essential for academic learning, is a key area that correlates with understanding spoken language, reading, and writing and is the best predictor of reading comprehension. An examination of the skills listed in Table 3.1 helps to appreciate the importance of developing a broad vocabulary base. Children who have limited vocabulary (e.g., having difficulty with naming colours and shapes when they are 6-7 years old) will continue to experience difficulties with listening comprehension, reading comprehension, and writing in the years to come. As shown from the evaluation of children's familiarity with simple vocabulary such as names of colours or shapes, there are differences already at this early stage between intervention and control students. Developing academic vocabulary should become an important objective that should be fostered through CtCSRП and be evaluated in future research.

With respect to numeracy skills, the largest improvements were found for number recognition, making patterns, and shape identification. When comparing these findings to findings from the 2009 evaluation of the pilot programme, we note that there continued to be a medium-sized positive programme effect on children's ability to recognize numbers, count from 1 to 10, count using one-to-one correspondence, recognize letters, and write their name. Furthermore, there appears to be improvements since 2009 in the programme effects on children's ability to recognize colours, make patterns, solve simple addition and subtraction problems, and read simple words.

Children were also assessed on five aspects of social and emotional skills for learning: (i) his/her task persistence, (ii) his/her level of confidence, (iii) his/her attention to directions, (iv) his/her ability to understand directions, (v) his/her attention span, and (vi) his/her body movement. This assessment was based on the research assistant's observations of the child's behaviour throughout all the tasks, and children who attended the CtCSRП showed significantly higher scores on all tasks.

### **Social Skills**

Furthermore, based on reports from parents, teachers and key stakeholders, the CtCSRП appears to have an impact not only on children's academic skills but on their social skills as well. Through the programme, children learned to communicate, express themselves and ask questions, were less afraid of school, had friends when they started school, knew the school rules, were more disciplined and motivated, and were more interested in starting primary school. The socialization experiences with positive peer role models (Young Facilitators), gained through a supportive learning environment in the home community, can help children to develop skills and motivation needed to succeed in school.

### **Outcomes in Primary School**

In addition, based on reports from parents, teachers and key stakeholders, the CtCSRП appears to have an impact on children's success in school, in the both the short and medium-term, including in the areas of on-time enrolment, academic achievement and dropout. However, because of the absence of longitudinal data on cohorts of intervention and non-intervention children (including their on-time enrolment and academic achievement in school), these findings should be treated cautiously. Only with this information will we know whether the momentum of school readiness skills translates into the skills and attitudes needed for medium and longer- term success in primary school and beyond.

Overall, the findings presented in this evaluation suggest that the model of peer tutoring used in the CtCSRП provides a significant positive impact on children's school readiness, with moderate gains in all learning outcomes assessed in this evaluation. These impacts are particularly remarkable when one remembers that the CtCSRП is volunteer-based, delivered by primarily children, and offered over no more than 36 sessions of a few hours each.

## Impact on Young Facilitators, Teachers and Parents

A secondary set of questions, answered in this report, addressed the perceived effects of the programme on Young Facilitators, families, and teachers/schools:

- Does participating in the CtCSRП help Young Facilitators develop new skills that enhance the early learning of pre-school children and improve Young Facilitators' self-esteem, confidence, and positive attitude towards learning?
- Does participating in the CtCSRП improve families' awareness of the importance of child development, improve families' skills for promoting early learning opportunities, and improve families' understanding of the importance of on-time school enrolment?
- Does participating in the CtCSRП improve teachers' understanding and use of child-centred teaching and learning methods and awareness of how early childhood experiences influence later learning?

The findings from this evaluation, based on self-reports and triangulated by interviews with key stakeholder and parent surveys, indicate that Young Facilitators felt happier at school, were more confident, and had more positive attitudes towards learning as a result of participating in the CtCSRП. The results also suggest that Young Facilitators became better students and their performance in school improved as a result of participating in the CtCSRП. Both teachers and key stakeholders remarked upon the improvement of literacy skills among Young Facilitators and noted that the programme enhanced their leadership skills, their interest in becoming teachers, and increased their sense of belonging in the community. As previously noted however, these findings should be treated with caution because Young Facilitators are selected because they are better students in the first place.

For parents, the results suggest that their understanding of the importance of on-time school enrolment improved as a result of the CtCSRП and, furthermore, parents in the CtCSRП showed higher scores on awareness of the importance of child development and activities in the home for promoting children's early learning than parents of children in the control group. Again, these findings should be treated with caution because parents who choose to enroll their children in the CtCSRП may have started with higher levels of awareness even before engagement with the programme.

Finally, the results suggest that teacher understanding and use of child-centred teaching methods improved as a result of their participation in the CtCSRП and more child-friendly and cooperative learning environments have been created. While few of the teachers involved in the CtCSRП are early grade teachers, there was some indication of indirect spillovers into Grade 1 classrooms, where teaching became easier, and, as a result, teachers' willingness to teach Grade 1 has been enhanced. As mentioned in Chapter 3, the absence of stronger involvement of early grade teachers in the programme may be a missed opportunity.

## **Programme Implementation, Relevance and Sustainability**

This evaluation also reviewed the implementation of the CtCSR in order to understand fidelity to programme design, variation in delivery, and the benefits and challenges of the programme as experienced by key stakeholders. The relevance, sustainability, and cost-effectiveness of the programme were also explored.

This evaluation has shown that the CtCSR has expanded very rapidly from an initial three pilot schools in three regions in 2008. A conservative estimate suggests that by 2014 the CtCSR was offered in more than 1500 UNICEF supported schools in seven regions. Reports from Regional Education Bureaus would nearly double this estimate, in particular by including the commitment by Tigray to extend the programme to all 1800 schools in the region. The programme is also offered in 10 languages (having grown from the three initial languages of the pilot). No reliable data exist regarding the total number of children reached each year through the programme in each region, but a rough calculation based on the notion that there are 20 Young facilitators per school, each serving five children, would suggest that between 150,000 and 300,000 young children are enrolled in the programme each year.

Our findings suggest that parents, teachers and key stakeholders (including school directors and Regional Education officials) find the programme relevant to the needs of Ethiopian communities. This is reflected in the considerable enthusiasm for further expansion of the programme shown in interviews in all of the five regions addressed in this study. While key stakeholders in some regions (for example Harari) were more cautious about expansion due to resource constraints, in other regions rapid expansion continued regardless of the availability of funds. Tigray stood out in this regard for its commitment to universalization, but it is not alone. In other regions we were told that whole communities were adopting the programme and implementing it themselves, using copies of programme materials from neighboring schools. The only area where stakeholders raised questions about programme relevance was in relation to plans to ensure materials had sufficient reference to local context and culture.

As might be expected, our findings also suggest that in the course of bringing the CtCSR to scale, there have been significant challenges to programme fidelity. In particular, materials needed to deliver the programme are unevenly distributed, and all reports suggested that young children rarely received the early learning kit of books and materials proposed in the original CtCSR design. The child kits are a critical component of the early learning activities that have been developed and, in particular, are essential for the literacy activities related to enhancing young children's reading, and writing skills. An important aspect of the model is that each child can take their kit home and practice what they have learned with siblings or other children, outside of the weekly sessions. It is well known that children learn best through repetition; if children have access to their own kits, as intended, this increases the programme dose because children can practice activities implemented during each group session at home.

Not all teachers and Young Facilitators have guides. Training of teachers has not happened as regularly as envisioned in the programme design, often with gaps as long as three years between training. Since our data were collected primarily from CtCSRPs schools in UNICEF supported *woredas*, we suspect that materials and training are even scarcer in *woredas* that introduced CtCSRPs without UNICEF support. This suggests that, at least under current funding parameters, the programme model and its quality are being eroded. Further research is needed to understand whether such variables in resourcing impact the levels of school readiness achieved through the programme and what levels of resources are necessary to achieve strong school readiness outcomes.

The evaluation points out four other areas of programme delivery where further attention is needed. First, our findings suggest that there is the potential for selection bias both in the procedures used for the selection of young children, and in the recruitment of Young Facilitators. The demographic characteristics of children in the randomized intervention group selected for evaluation were on the whole younger than control group children and from families with higher levels of maternal education, something that may be the result of selection bias. We know that children with lower levels of maternal education had lower scores on the child assessment for school readiness, in both the intervention and control groups, which suggests that these children are more vulnerable with respect to not being prepared for Grade 1. These findings speak to a need for greater attention to the processes for enrolling children in CtCSRPs to ensure that children of mothers with low education are encouraged to join the programme.

Furthermore, the selection of high-achieving Young Facilitators may limit the participation and therefore the benefits of the programme for other children in the Young Facilitators age groups. The idea of recruiting older children in a child-to-child approach, or cross-age tutoring, is based on a well-proven model, but the constraint on older children's time must be recognized, especially in the context of Ethiopia where students need to balance competing pressures including responsibilities in the household or farming, long journeys to school, battling to maintain a good academic standing, and working outside the home. Furthermore, our findings pointed to potential issues of equity and fairness in the selection of Young Facilitators. Given the enormous importance of school completion and success for this age group in Ethiopia, collecting further data about the programme's impact on leadership and academic success among young adolescents, and especially among young adolescent girls, is very important.

The evaluation also points out that teachers from early grades are rarely engaged as programme facilitators, who tend to be drawn from teachers in the senior grades. This may present a missed opportunity, as engagement of early grade teachers in the programme not only reinforces the friendly arrival of young children to the school and the schools' readiness to receive children, but also limits their exposure to the child-centred and play-based learning methodologies supported by the programme.

During this evaluation, data were not available from UNICEF to allow a comprehensive evaluation of programme costs, and therefore of cost effectiveness and value for money. However, existing

estimated put recurrent per child costs of the CtCSRП somewhere between USD \$12 to USD \$53 per child.<sup>5</sup> While these costs can be compared to the recurrent costs estimates, there has been no research on the level of school readiness achieved through zero class, making such comparisons mute to the question of overall value for money. It must be emphasized again that current funding—even in *woredas* supported by UNICEF—does not presently provide for all the materials needed for a high quality programme delivery.

Another area where questions were raised in this evaluation relate to the alignment of the CtCSRП with other early childhood education offerings, including the planned expansion of zero class for children age 6 to all primary schools in Ethiopia. Though these questions were beyond the scope of this study, we note that such alignment is essential to the development and integration of the four pillars set out in the Ethiopian government’s ECCE strategy. For the CtCSRП, this may imply a need to targeting the programme to a specific and younger age group (4 to 5 year olds). By carefully sequencing the learning objectives of the CtCSRП with offerings of zero class and kindergarten, Ethiopia will be able to provide linked up ECCE for children aged 4 to 7, ensuring the strongest possible start to formal schooling.

Finally, the process based portion of this evaluation has noted that monitoring and evaluation of the CtCSRП and its impact on children has not been strong enough to allow a complete understanding of the programme and how it affects the medium and longer-term success of children in school. Simple data on programme costs and resourcing by school and region, on the number of schools implementing the programme, and on the number of children enrolled and their ongoing school pathways, would greatly aid in the ability to understand the impact the programme has on school completion and learning achievements over the medium and longer terms.

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<sup>5</sup> These estimates do not appear to appropriately reflect such costs as upgrading of materials, provision of materials to each young child, UNICEF management costs, and costs related to evaluation and monitoring of the medium and longer term effects of the programme on the school success of young children in the programme.

## Recommendations

Based on our findings, this evaluation proposes the following recommendations for the Child-to-Child School Readiness Programme in Ethiopia.

6. **Expand Resources to Ensure Quality and Sustainability:** Although further research is needed to understand CtCSR costs and value for money, this evaluation suggests that the programme has a significant impact on school readiness, is easy to scale, and is enthusiastically supported by key stakeholders, parents and teachers. Yet on a per child basis, programme resources are deteriorating. To be implemented effectively and equitably, this programme requires that sufficient relevant materials be in place for children, Young Facilitators, and teachers. Training for teachers and Young Facilitators must be conducted in regular cycles, and materials must be updated to reflect local language, cultural background and needs. More must be done to ensure that the quality of the programme is consistently high across regions, not only in UNICEF-supported *woredas* but also in areas where the programme is spreading and scaling without direct UNICEF support. There is an urgent need for new funding that supports training, materials and institutionalized leadership in regions and *woredas* that lead to maximum quality in programme design, materials, monitoring and assessment, training and supervision.
  
7. **Enhance Access for Vulnerable and Disadvantaged Children, both Young Participants and Young Facilitators:** Our findings suggest that more can be done to ensure that most vulnerable and disadvantaged children participate both as students in the CtCSR and as Young Facilitators. In particular, we note that the recruitment of Young Facilitators could be better targeted to ensure enhanced life-chances of girls and other vulnerable groups. Our findings suggest that there may be some self-selection into the programme by parents from families with higher maternal education levels. This suggests that school directors and community leaders have an important role to play in identifying and recruiting the most vulnerable young children for the programme, including those children from families with low levels of maternal education. Further institutionalized supports from Regional Education Bureau and *woreda* level officials are very important.
  
8. **Focus on Literacy as one important piece of a holistic approach to early childhood development.** The CtCSR takes an appropriately holistic approach to early childhood development, and it is important to recognize its contributions not only to literacy but to numeracy and broader psycho-social development. However, the broader findings of this evaluation suggest that while the CtCSR enhances literacy, children who attend the CtCSR still have surprisingly low scores in early writing and reading. Furthermore, it was notable that Young Facilitators report that they were less likely to engage young children in literacy

activities as compared to CtCSRPs numeracy activities when delivering the programme, a problem which can be linked to insufficient provision of CtCSRPs materials for reading and writing activities to young children in the programme. Basic reading and writing skills are critical foundational skills for future learning and success in school, and thus we strongly recommend that future attention and investments be made to ensure that early literacy acquisition remains a central part of the CtCSRPs.

9. **Ensure Alignment and Integration with National Plan for ECCE:** To maximize the benefits of the CtCSRPs, it must be aligned with the other three pillars of ECCE in Ethiopia including parent education, health and stimulation, and formal school readiness programs offered through pre-school education. In this way, children and families will have access to comprehensive ECCE from birth to age 6, as outlined in the first goal of *Education for All*. More specifically, our research raised questions about the alignment of the CtCSRPs with national and regional plans for introducing universal access to a “0” (zero) class in Ethiopian primary schools. As access to such classes expands, it will be important to ensure that the CtCSRPs, including its materials and training, complement this new offering and form a developmental sequence where one programme builds on the other. One way of achieving this may be to target CtCSRPs to 4 to 5 year olds, and concentrate enrolment in 0 class to children aged 6, so that there is a sequenced approach to ECCE that covers the different developmental needs of children from ages 4 to 7.
10. **Future Research, Monitoring and Evaluation:** Future research is needed to assess the relative effectiveness of not only of different programme delivery models for the CtCSRPs, but also to decide how to align the CtCSRPs can best be aligned with the Ethiopian government’s plans to expand zero class. As noted in this evaluation, further research is needed to understand the medium and longer-term impacts of the CtCSRPs (for example on school completion and primary school learning outcomes), and to explore the cost effectiveness of the CtCSRPs as compared to other ECCE interventions. Smaller scale studies could provide useful information on how the programme could benefit children with disabilities or those in pastoralist communities, and provide more evidence on whether and how the CtCSRPs enhances the life chances of Young Facilitators. The considerable momentum in national plans for expanded access to ECCE suggests that this is an appropriate time for a rigorous, larger-scale comparative study of the impact of different packages of ECCE interventions on learning and other childhood outcomes in Ethiopia.



# References

- Aboud, F. E., & Hossain, K. (2011). The impact of preprimary school on primary school achievement in Bangladesh. *Early Childhood Research Quarterly, 26*, 237-24
- Berlinski, S., Galiani, S., & Manacorda, M. (2008). Giving children a better start: Pre-school attendance and school-age profiles. *Journal of Public Economics, 92*, 1416–40.
- Biemiller, A. (2005). Size and Sequence in Vocabulary Development: Implications for Choosing Words for Primary Grade Vocabulary Instruction. In E. Hiebert and M. Kamil (Eds.) *Bringing Scientific Research to Practice: Vocabulary*. NJ: Erlbaum.
- Engel, J. (2010). *Ethiopia's progress in education: A rapid and equitable expansion of access*. (Development Progress Stories). London: Overseas Development Institute.
- Engle, P. L, Fernald, L. C., Alderman, H., Behrman, J., O'Gara, C., Yousafzai, A., Cabral de Mello, M., Hidrobo, M., Ulkuer, N., Ertem, I. & Iltus, S. (2011). Strategies for reducing inequalities and improving developmental outcomes for young children in low-income and middle-income countries. *The Lancet, 378*, 1339-1353.
- Ginsburg-Block, M. D., Rohrbeck, C. A., & Fantuzzo, J. W. (2006). A meta- analytic review of social, self-concept, and behavioral outcomes of peer-assisted learning. *Journal of Educational Psychology, 98*, 732-749.
- Grantham-McGregor, S., Cheung, Y. B., Cueto, S., Glewwe, P., Richter, L., & Strupp, B. (2007). Developmental potential in the first 5 years for children in developing countries. *The Lancet, 369*, 60-70.
- Malmberg, L. E., Mwaura, P., & Sylva, K. (2011). Effects of a pre-school intervention on cognitive development among East-African pre-school children: A flexibly time-coded growth model. *Early Childhood Research Quarterly, 26*, 124–33.
- Mwaura, P., Sylva, K., & Malmberg, L. E. (2008). Evaluating the Madrasa pre-school programme in east Africa: a quasi-experimental study. *International Journal of Early Years Education, 16*, 237–55.
- Ministry of Education. (2012). *Education Statistics Annual Abstract 2011/12*. Addis Ababa: Government of Ethiopia.
- Ministry of Education. (2010a). *Education Sector Development Plan IV 2010/11 - 2014/15*. Addis Ababa: Government of Ethiopia.
- Ministry of Education. (2010b). *National policy framework for early childhood care and education*. Addis Ababa: Government of Ethiopia.

- Orkin, K., Yadete, W. A., & Woodhead, M. (2012). *Delivering quality early learning in low resource settings: Progress and challenges in Ethiopia*. The Hague, Netherlands: Bernard van Leer Foundation.
- Rao, N., Sun, J., Pearson, V., Pearson, E., Liu, H., Conostas, M. A., & Engle, P. L. (2012). Is something better than nothing? An evaluation of early childhood programme in Cambodia. *Child Development, 83*, 864–876.
- Rohrbeck, C. A., Ginsburg-Block, M. D., Fantuzzo, J. W., & Miller, T. R. (2003). Peer-assisted learning interventions with elementary school students: A meta-analytic review. *Journal of Educational Psychology, 95*, 240-257.
- RTI International. (2010). *Ethiopia early grade reading assessment* (Data Analysis Report: Language and Early Learning). Report prepared for Office of Education, United States Agency for International Development, Addis Ababa, Ethiopia.
- Tymms, P., Merrell, C., Thurston, A., Andor, J., Topping, K., & Miller, D. (2011). Improving attainment across a whole district: school reform through peer tutoring in a randomized controlled trial. *School Effectiveness and School Improvement, 22*, 265-289.
- Topping, K. J., Miller, D., Murray, P., Henderson, S., Fortuna, C., & Conlin, N. (2011). Outcomes in a randomised controlled trial of mathematics tutoring. *Educational Research, 53*, 51-63.
- UNESCO. (2014). *Teaching and learning: Achieving quality for all* (Education for All Global Monitoring Report, 2014). Paris: United Nations Educational, Scientific and Cultural Organization.
- UNESCO. (2006). *Strong foundations: Early childhood care and education* (Education for All Global Monitoring Report, 2007). Paris: United Nations Educational, Scientific and Cultural Organization.
- UNICEF. (2012). *School readiness: A conceptual framework*. New York: United Nations Children's Fund.
- UNICEF. (2010). *Getting ready for school: A child-to-child approach, programme evaluation for year one* (Evaluation Report). New York: United Nations Children's Fund.
- UNICEF. (2008). *Strategic framework: Getting ready for school, a child-to-child approach*. New York: United Nations Children's Fund.
- Woldehanna, T., & Gebremedhin, L. (2012). *The effects of pre-school attendance on the cognitive development of urban children aged 5 years and 8 years: Evidence from Ethiopia* (Young Lives Working Paper 89). Oxford: Young Lives.
- Woldehanna, T., & Gebremedhin, L. (2011, July). *Early childhood stunting and children's cognitive and school outcomes at the age of eight years*. Paper presented at the 9<sup>th</sup> International Conference on the Ethiopian Economy, Addis Ababa, Ethiopia.

# Appendices

## Appendix 1A: Research Design and Sampling Strategy

**Research Design:** The purpose of the impact evaluation was to determine if there were differences in specific areas of children’s knowledge, skills and abilities between the total CtCSRPs and control groups. A quasi-experimental design was used in which children who received the CtCSRPs were compared with those who did not, and other factors that might explain differences in outcomes were controlled for.

**Sample Size Calculation:** The sample size of 300 young children per group (intervention and control) was computed using statistical software and was based on the reported proportions of the child assessment results from Ethiopia in the 2009 pilot evaluation. An additional group of intervention children were sampled in Tigray but not control data was collected in this region. The conventional cut-off for the power of the study (80 percent) ensured the probability of observing a significant treatment effect when one actually exists. It is generally considered unethical to run a study with less than 80 percent Power (as it would be a waste of time) or more than 90 percent Power (as it would have an unnecessarily large number of participants and be more costly). We set the significance level at the standard 5 percent (corresponding to 95 percent confidence) and decided on a one-sided alternative in light of the 2009 results which indicated that the CtCSRPs group consistently performed better than the control group. A continuity correction was applied to all calculations.

**Sampling Strategy:** The sampling strategy involved stratifying by region, then draw a cluster sample of schools within each region and then draw a simple random sample in each school. Sampling was done proportional to the size of each region, which was determined by the number of UNICEF-supported CtCSRPs schools in each region. A randomized list of schools was generated and the evaluation team started at the first school and moved down the list. The maximum number of students per school was capped at 30 to guarantee that the entire sample did not come from one or two schools only.

**Statistical Analysis:** Experimental control is difficult (if not impossible) in real world research settings; for this reason, statistical controls were used to control for the effects of extraneous variables or covariates that were not the focal point of the study. The extraneous variable that had effects on the dependent variables included child’s age, family assets and maternal level of education. Analysis of covariance (ANCOVA), which combines regression analysis and analysis of variance, was used to control for the effects of covariates. In this way, we could investigate the effects of the primary independent variable (participation in the CtCSRPs). The ANCOVA F tests are reported in the appendices and these evaluate the extent to which means of the dependent variables differ between the groups after adjusting for differences in the covariate. ANCOVA therefore provides the best estimates of how the two groups would have performed if they had possessed statistically equivalent means on the control variables.

## Appendix 1B: Evaluation Instruments

**Parent Interview:** This instrument contained 25 questions designed to obtain information on parents' understanding of child development and early learning activities in the home. Information on the child's age, family assets and maternal level of education was collected. The supplemental parent interview included questions about parents' understanding of the importance of on-time enrolment, children's participation in the CtCSR and programme satisfaction. This interview was conducted with parents/caregivers during the home visit and took less than 20 minutes. It was conducted by a trained research assistant.

**Young Facilitator Survey:** This instrument contained 30 questions related to Young Facilitators' acquisition of skills related to supporting the early learning of young children, changes in their attitudes towards learning as a result of the CtCSR and changes in their achievement at school as a result of the CtCSR. A trained research assistant administered the survey to Young Facilitators in a group setting at their respective schools. The Field Research Assistant explained the purpose and nature of the survey to the Young Facilitators and how completion of the survey was voluntary. Young Facilitators who wanted to complete the survey were given a survey and a pencil. The Field Research Assistant read the survey aloud, item by item, to ensure that Young Facilitators understood each item. Each Young Facilitator completed her/his own survey. The survey took less than 30 minutes to complete.

**Teacher Survey:** This survey contained 25 questions regarding changes in teachers' child-centred teaching methods as a result of the CtCSR and their perceptions of improvements in children's academic achievement and reductions in drop-out as a result of the CtCSR. A trained research assistant administered the survey to teachers at each school. Teachers completed the survey in their own time.

**School Director Interview:** This instrument consisted of 50 questions related to the CtCSR implementation at each school. During this interview, the school director was also asked to provide sex-disaggregated enrolment statistics from 2009/10 for CtCSR, 0 class, Grades 1 to 4, Young Facilitators as well as the number of CtCSR teachers. The trained research assistant conducted the interview with the school director at a time that was convenient for the school director. The interview took approximately two hours to complete.

**Key Stakeholder Interviews:** These instruments were used to collect process information from three levels: (1) local community leaders and school directors, (2) regional programme managers and evaluators, and (3) national organizational leadership team. The interview protocol included questions related to the CtCSR design, operations and integrity of service, planned programme design, programme outcomes, quality of service, and cost effectiveness. The research consultants conducted these interviews, which took approximately one hour to complete.

## Appendix 1C: Child School Readiness Assessment and Parent Interview

## Informed Parental Consent Information Sheet

### Child School Readiness Assessment and Parent Interview

I am [Data Collector Name]. I work for [country-specific affiliation]. We are conducting a research study on education for young children. The study is sponsored by UNICEF. UNICEF is trying to improve education for families like yours. It is important for us to talk directly with families to get a better understanding of education in your community. We are inviting you to take part in this study because your child is in the age group we are studying [For Intervention Group only: and your child participated in the Child-to-Child Programme]. Please take whatever time you need to discuss the study with your family and friends, or anyone else you wish to. The decision to let you child join, or not to join, is up to you. You can ask as many questions as you like and we take the time to answer them.

In this research study, we are asking children to do activities such as identifying colors, counting, and reading simple words. It will take approximately 20-25 minutes. This will take place in your presence and in your home. Your child should find the activities fun and interesting. It is not a school test and will not be part of your child's school record.

We are also asking parents a few questions about their child's education (For Intervention Group: and their experiences with the Child-to-Child Programme). This will take approximately 15 minutes.

You will not receive payment for participating in this research. The information collected through this study is intended to improve educational opportunities for young children in the future.

We will not be sharing information about you or your child with anyone outside the research team. Your names will not be collected or used when data from this study are published.

Participation in this study is voluntary. You and your child have the right not to participate at all or to leave the study at any time. If you or your child decide not to participate or choose to leave the study at any time, there will be no penalty or loss of benefits to you or your child. It will not harm your relationship with the school or UNICEF.

## Child School Readiness Assessment

### Instructions for Data Collectors

Before we start, I want to tell you my name. I'm \_\_\_\_\_. I have some activities I will ask you to do like naming colors, counting numbers and reading short words. This is not a test. There are no right or wrong answers. Please listen carefully. Some things I will ask you to do are difficult even for older children so don't worry if you can't do them. Just give it your best try. You can ask me to stop at any time if you do not want to finish doing these activities.

#### **Write start time on scoring form.**

Reminders for Data Collectors:

\*Administer all the items in the exact order they appear. Never assume that a child knows or does not know an answer.

\*Read the instructions to the child exactly as they are written. Do not add any additional information. Do not repeat the instructions unless the child asks you to or you have a reason to believe the child did not hear you the first time (for example, child was distracted by a noise while you were speaking).

\*Keep children engaged in the testing with neutral praise – that is, smiling and using positive words that do not indicate to the child whether their answers are correct. Examples of neutral praise are: “You are working very hard.” “Thank you for helping me.”

\*Be careful not to give the child any hints. For example, if the child needs to choose the correct response on a page, do not look at the correct response yourself because the child could follow where you are looking. When the child has to give a spoken answer, be careful you don't to shape your mouth into the correct response.

\*If child says they do not know the answer, always encourage him/her to guess or to give it his/her best try. Then if the child still insists that he/she do not know, score the item and move on to the next question.

\*If the child gives more than one answer, ask him/her to tell you which answer they think it is. If the child changes his/her answer, accept the child's final answer to be their answer *even if they changed their answer from a correct to an incorrect response.*

\*Have fun with the child!

<b>1. Colour Naming</b>	
	<b>Materials:</b> Coloured squares (red, blue, yellow, green, orange, purple, grey, pink, black)
<p><b>1a.</b></p> <p>Place the coloured squares in front of the child.</p> <p>Say, <i>“Here are some coloured squares. Do you know the names of any of these colours?”</i></p> <p>If the child answers “Yes”, say, <i>“Point to all of the colours that you know and tell me the name of each one. Point to the colour you are naming.”</i></p> <p>When child stops naming colours, say, <i>“Look carefully at all of them. Do you know any others?”</i></p> <p>Keep asking until all have been named correctly <u>or</u> the child does not know the names of any more colours.</p>	
	<p><b>Scoring 1a</b></p> <p><b>For each colour the child correctly names,</b> circle “1” in the “Child says name” column <u>and</u> cross out “0” and “1” in the “Child points to” column.</p> <p><b>For each colour the child does not name correctly or does not name at all,</b> circle “0” in the “Child says name”.</p>
<p><b>If the child names all the colours correctly, proceed to task B.</b></p>	
<p><b>1b. For each colour the child does not name correctly or does not name at all,</b> say the name in the order it appears on the scoring form and ask the child to point to the colour. For example, say to the child, <i>“Now point to the ___ square.”</i></p>	
	<p><b>Scoring 1b</b></p> <p><b>For each colour the child correctly points to,</b> circle “1” in the “Child points to” column. <b>For each colour the child does not point to correctly or does not point to at all,</b> circle “0” in the “Child says name”.</p>





<b>2. Naming numbers</b>	
	<b>Materials:</b> Number Page (numerals 0-9)
<p><b>2a</b></p> <p>Place Number Page in front of the child.</p> <p>Say to the child, <b><i>“Here are some numbers. Do you know the names of any of these numbers?”</i></b></p> <p>If the child answers “Yes”, say, <b><i>“Point to all of the numbers that you know and tell me the name of each one.”</i></b></p> <p>When child stops naming numbers, say, <b><i>“Look carefully at all of them. Do you know any others?”</i></b></p> <p>Keep asking until the child has named them all correctly <u>or</u> does not know the names of any more numbers.</p>	
	<p><b>Scoring 2a</b></p> <p><b>For each number the child correctly names,</b> circle “1” in the “Child says name” column <u>and</u> cross out “0” and “1” in the “Child points to” column.</p> <p><b>For each number the child does not name correctly or does not name at all,</b> circle “0” in the “Child says name”.</p>
<b>If the child names all the numbers correctly, proceed to task C.</b>	
<p><b>2b. For each number the child does not name correctly or does not name at all,</b> say the name in the order it appears on the scoring form and ask the child to point to the number. For example, say to the child, <b><i>“Now point to the number ___.”</i></b></p>	
	<p><b>Scoring 2b</b></p> <p><b>For each number the child correctly points to,</b> circle “1” in the “Child points to” column.</p> <p><b>For each number the child does not point to correctly or does not point to at all,</b> circle “0” in the “Child says name”.</p>

<p><b>3. Makes Patterns</b></p>	
	<p><b>Materials:</b> 10 bottle caps (4 red, 3 green, 3 orange).</p>
<p><b>3a.</b></p> <p>Hold 7 bottle caps in your hand. (4 red, 3 green, 1 orange)</p> <p>Say to the child, <b><i>“Watch, I’m going to make a pattern.”</i></b> Place the bottle caps in a line in front of the child as you say: <b><i>“I’m putting a red bottle cap, then a green bottle cap, then a red bottle cap, then a green bottle cap, then a red bottle cap.”</i></b></p> <p>Hand the remaining 3 bottle caps (1 red, 1 green, 1 orange) to the child. Point to the space after the last bottle cap you placed and say, <b><i>“Now show me which bottle cap comes next.”</i></b></p>	
	<p><b>Scoring 3a</b></p> <p>If the child indicates that the green bottle cap comes next, circle “1”. If the child does not indicate that the green bottle cap comes next or does not answer, circle “0”.</p>
<p><b>3b</b></p> <p>Pick up all the bottle caps (and take back any the child is holding) while saying, <b><i>“Great! Let’s make another pattern.”</i></b> Hold 8 bottle caps in your hand (2 red, 3 green, 3 orange). Place the bottle caps in a line in front of the child as you say: <b><i>“Now I’m putting a green bottle cap, then a orange bottle cap, then a red bottle cap, then a green bottle cap, then a orange bottle cap.”</i></b>Hand the remaining 3 bottle caps (1 red, 1 green, 1 orange) to the child. Point to the space after the last bottle cap you placed and say, <b><i>“Now show me which bottle cap comes next.”</i></b></p>	
	<p><b>Scoring 3b</b></p> <p>If the child indicates that the red bottle cap comes next, circle “1”. If the child does not indicate that the red bottle cap comes next or does not answer, circle “0”.</p>

<p><b>4. Beginning Mathematics 1</b></p>	
	<p><b>Materials:</b> 10 Bottle caps (all the same colour)</p>
<p>4a</p> <p>Say to the child, <b><i>“Can you count?”</i></b></p> <p>If the child answers “Yes”, say, <b><i>“Count for me.”</i></b> When the child gets to ten or stops counting, say, <b><i>“Thank you. You can stop now?”</i></b></p>	
	<p><b>Scoring 4a</b></p> <p>If the child says the numbers 1 through 10 in the correct order, circle “1”. If the child cannot count to ten, circle “0”.</p>
<p>4b</p> <p>Place 10 small bottle caps (all the same colour) in a row in front of the child.</p> <p>Say to the child, <b><i>“I want you to count these bottle caps. Start with this one,”</i></b> point to the bottle cap at the beginning of the row,* <b><i>“and go all the way to the end.”</i></b> Sweep your finger down the rest of the row.</p> <p>If the child says he/she does not know how to count say, <b><i>“Do the best you can.”</i></b></p> <p>Do <u>not</u> assist the child in any way.</p>	
	<p><b>Scoring 4b</b></p> <p>If the child counts the ten bottle caps while saying the correct numbers, circle “1”. If the child does not count all ten bottle caps correctly, circle “0”.</p>

<b>5. Beginning Mathematics 2</b>	
	Materials: 8 Bottle caps (all the same colour)
<b>5a</b> Place one bottle cap in front of the child and say, <b><i>“Here is one bottle cap. If I add one more bottle cap, how many bottle caps would I have then?”</i></b> Do <u>not</u> assist the child in any way. Do not put another bottle cap in front of the child.	
	<b>Scoring 5a.</b> If the child says “two” or “two bottle caps” or if the child responds by showing you the correct number of fingers instead of saying the number name, circle “1”. If the child does not answer correctly, circle “0”.
<b>5b.</b> Place a second bottle cap in front of the child and say, <b><i>“Here are two bottle caps. If I add three more bottle caps, how many bottle caps would I have?”</i></b>	
	<b>Scoring 5b.</b> If the child says “five” or “five bottle caps” or if the child responds by showing you the correct number of fingers instead of saying the number name, circle “1”. If the child does not answer correctly, circle “0”.
<b>5c.</b> Place three bottle caps in front of the child and say, <b><i>“Here are three bottle caps. If I took one away, how many bottle caps would I have then?”</i></b>	
	<b>Scoring 5c.</b> If the child says “two” or “two bottle caps” or if the child responds by showing you the correct number of fingers instead of saying the number name, circle “1”. If the child does not answer correctly, circle “0”.
<b>5d.</b> Place five bottle caps in front of the child and say, <b><i>“Here are five bottle caps. If I took two away, how many bottle caps would I have then?”</i></b>	
	<b>Scoring 5d.</b> If the child responds “three” or “three bottle caps” or if the child responds by showing you the correct number of fingers instead of saying the number name, circle

"1". If the child does not answer correctly, circle "0".

**6. Letter Identification Task 1**

**Materials:** Letter Page 1 (8 letters)

**6a**

Place Letter Page 1 in front of the child.

Say to the child, ***"Here are some letters of the alphabet. Do you know the names of any of these letters?"***

If the child answers "Yes", say, ***"Point to all of the letters that you know and tell me the name of each one. Show me which letter you're naming."***

When child stops naming letters, say, ***"Look carefully at all of them. Do you know any others?"*** Keep asking until the child has named all of the letters on the plate or does not know the names of any more letters.

**Scoring 6a**

**For each letter the child correctly names, circle "1" in the "Child says name" column and cross out "0" and "1" in the "Child points to" column.**

**For each letter the child does not name correctly or does not name at all, circle "0" in the "Child says name".**

**If the child names all letters correctly, proceed to task #7 on the next page.**

**6b. For each letter the child does not name correctly or does not name at all, say the name in the order it appears on the scoring form and ask the child to point to the letter. For example, say to the child, "Now point to the letter \_\_\_\_."**

**Scoring 6b**

**For each letter the child correctly points to, circle "1" in the "Child points to" column.**

**For each letter the child does not point to correctly or does not point to at all, circle "0" in the "Child says name".**

<p><b>7. Letter Identification Task 1</b></p>	
	<p><b>Materials:</b> Letter Page 1 (9 letters)</p>
<p><b>7a</b></p> <p>Place Letter Page 1 in front of the child.</p> <p>Say to the child, <b><i>“Here are some letters of the alphabet. Do you know the names of any of these letters?”</i></b></p> <p>If the child answers “Yes”, say, <b><i>“Point to all of the letters that you know and tell me the name of each one. Show me which letter you’re naming.”</i></b></p> <p>When child stops naming letters, say, <b><i>“Look carefully at all of them. Do you know any others?”</i></b> Keep asking until the child has named all of the letters on the plate <u>or</u> does not know the names of any more letters.</p>	
	<p><b>Scoring 7a</b></p> <p><b>For each letter the child correctly names, circle “1” in the “Child says name” column and cross out “0” and “1” in the “Child points to” column.</b></p> <p><b>For each letter the child does not name correctly or does not name at all, circle “0” in the “Child says name”.</b></p>
<p><b>If the child names all letters, proceed to task #8 on the next page.</b></p>	
<p><b>7b. For each letter the child does not name correctly or does not name at all, say the name in the order it appears on the scoring form and ask the child to point to the letter. For example, say to the child, <b><i>“Now point to the letter ____.”</i></b></b></p>	
	<p><b>Scoring 7b</b></p> <p><b>For each letter the child correctly points to, circle “1” in the “Child points to” column.</b></p> <p><b>For each letter the child does not point to correctly or does not point to at all, circle “0” in the “Child says name”.</b></p>

<p><b>8. Letter Identification Task 1</b></p>	
	<p><b>Materials:</b> Letter Page 1 (9 letters)</p>
<p><b>8a</b></p> <p>Place Letter Page 1 in front of the child.</p> <p>Say to the child, <b><i>“Here are some letters of the alphabet. Do you know the names of any of these letters?”</i></b></p> <p>If the child answers “Yes”, say, <b><i>“Point to all of the letters that you know and tell me the name of each one. Show me which letter you’re naming.”</i></b></p> <p>When child stops naming letters, say, <b><i>“Look carefully at all of them. Do you know any others?”</i></b> Keep asking until the child has named all of the letters on the plate <u>or</u> does not know the names of any more letters.</p>	
	<p><b>Scoring 8a</b></p> <p><b>For each letter the child correctly names, circle “1” in the “Child says name” column and cross out “0” and “1” in the “Child points to” column.</b></p> <p><b>For each letter the child does not name correctly or does not name at all, circle “0” in the “Child says name”.</b></p>
<p><b>If the child names all letters correctly, proceed to task #9 the next page.</b></p>	
<p><b>8b. For each letter the child does not name correctly or does not name at all, say the name in the order it appears on the scoring form and ask the child to point to the letter. For example, say to the child, <b><i>“Now point to the letter ____.”</i></b></b></p>	
	<p><b>Scoring 8b</b></p> <p><b>For each letter the child correctly points to, circle “1” in the “Child points to” column.</b></p> <p><b>For each letter the child does not point to correctly or does not point to at all, circle “0” in the “Child says name”.</b></p>

<p><b>9. Beginning Reading</b></p>	
	<p>Materials: Word Cards 1 through 10</p>
<p><b>9</b></p> <p>Place Word 1 in front of the child.</p> <p>Say, <b><i>“Read this word for me.”</i></b></p> <p>If child says he/she does not know how to read, say, <b><i>“Just go ahead and try. Do the best you can.”</i></b></p> <p>Repeat the instructions for Words 2 through 5.</p> <p>If child does <u>not</u> read <u>any</u> of the first five words, stop and say, <b><i>“A lot of these words are for older kids. You’re doing a great job!”</i></b></p> <p>If child reads <u>any</u> of the first five words, continue and show the child words cards 6-10. When child is finished say, <b><i>“A lot of these words are for older kids. You did a great job!”</i></b></p>	
	<p><b>Scoring 9</b></p> <p>For each word the child reads correctly, circle “1”. For each work not read correctly, circle “0”.</p> <p>If words cards 6 through 10 were not shown to the child, circle “0” for each item.</p>



<p><b>10. Beginning Writing</b></p>	
	<p>Materials: Sheet of paper with line drawn on it and pencil</p>
<p><b>10</b></p> <p>Place paper and pencil in front of child. Do <u>not</u> hand the pencil to the child.</p> <p>Point to the line on the sheet of paper and say, <b><i>“I want you to write your name here.”</i></b></p> <p>If child says he/she does not know how to write, say, <b><i>“Just go ahead and try. Do the best you can.”</i></b></p> <p>If child’s handwriting is unclear, ask the child to tell you the names of the letters he/she wrote.</p>	
	<p><b>Scoring 10</b></p> <p>If the child does not answer or does not write any letter, circle ‘0’.</p> <p>If child is able to write <u>any</u> letters, even if they are poorly formed, reversed, or not really part of his/her name, circle “1”.</p> <p>If child is able to write at least half of the letters in his/her name, even if they are poorly formed or reversed, circle “2”.</p> <p>If child is able to write all of the letters in his/her name in the correct order, even if they are poorly formed or reversed, circle “3”.</p>

<b>11. Shape Identification Task</b>	
	<b>Materials:</b> Shape Paper (circle, square, triangle drawn on it)
<p><b>11a</b></p> <p>Place Shape Paper in front of the child.</p> <p>Say to the child, <b><i>“Here are some shapes. Do you know the names of any of these shapes?”</i></b></p> <p>If the child answers “Yes”, say, <b><i>“Point to all of the shapes that you know and tell me the name of each one. Show me which shape you’re naming.”</i></b></p> <p>When child stops naming shapes, say, <b><i>“Look carefully at all of them. Do you know any others?”</i></b></p> <p>Keep asking until the child has named all of the shapes on the plate <u>or</u> does not know the names of any more letters.</p>	
	<p><b>Scoring #11a</b></p> <p><b>For each shape the child correctly names, circle “1” in the “Child says name” column and cross out “0” and “1” in the “Child points to” column.</b></p> <p><b>For each shape the child does not name correctly or does not name at all, circle “0” in the “Child says name”.</b></p>
<p><b>11b. For each shape the child does not name correctly or does not name at all, say the name in the order it appears on the scoring form and ask the child to point to the shape. For example, say to the child, <b><i>“Now point to the triangle.”</i></b></b></p>	
	<p><b>Scoring #12b</b></p> <p><b>For each shape the child correctly points to, circle “1” in the “Child points to” column.</b></p> <p><b>For each shape the child does not point to correctly or does not point to at all, circle “0” in the “Child says name”.</b></p>

Child School Readiness Assessment Scoring Sheet

Assessment Date: \_\_\_\_/\_\_\_\_/\_\_\_\_ Day/Month/Year

Start Time: \_\_\_\_\_ End Time: \_\_\_\_\_

School: \_\_\_\_\_

Sex: (Circle one) male – female

Child Date of Birth: \_\_\_\_/\_\_\_\_/\_\_\_\_ Day/Month/Year OR Child's Age: \_\_\_\_\_

ITEM	DESCRIPTION	SCORING	
<b>1. Naming colours</b>		<b>Child says name (1a)</b>	<b>Child points to (1b)</b>
	Red	1 0	1 0
	Blue	1 0	1 0
	Yellow	1 0	1 0
	Green	1 0	1 0
	Orange	1 0	1 0
	Purple	1 0	1 0
	Grey	1 0	1 0
	Pink	1 0	1 0
	Black	1 0	1 0
Total			
<b>2. Identifying numbers</b>		<b>Child says name (2a)</b>	<b>Child points to (2b)</b>
	One	1 0	1 0
	Two	1 0	1 0
	Three	1 0	1 0
	Four	1 0	1 0
	Nine	1 0	1 0
	Seven	1 0	1 0
	Zero	1 0	1 0
	Six	1 0	1 0
	Eight	1 0	1 0
	Five	1 0	1 0
Total			
<b>3. Makes patterns</b>			<b>Score</b>
	3a. Makes two colour pattern		1 0
	3b. Makes three colour pattern		1 0

<b>4. Beginning Mathematics 1</b>		<b>Score</b>
4a. Knows number order 1 through 10		1 0
4b. Counts with 1-to-1 correspondence		1 0
<b>5. Beginning Mathematics 2</b>		<b>Score</b>
5a. Adds 1		1 0
5b. Adds 3		1 0
5c. Subtracts 1		1 0
5d. Subtracts 2		1 0
<b>6. Letter Identification 1</b>		
	<b>Child says name (6a)</b>	<b>Child points to (6b)</b>
A (or equivalent)	1 0	1 0
C (or equivalent)	1 0	1 0
B (or equivalent)	1 0	1 0
S (or equivalent)	1 0	1 0
E (or equivalent)	1 0	1 0
O (or equivalent)	1 0	1 0
X (or equivalent)	1 0	1 0
D (or equivalent)	1 0	1 0
Total		
<b>7. Letter Identification 2</b>		
	<b>Child says name (7a)</b>	<b>Child points to (7b)</b>
F (or equivalent)	1 0	1 0
N (or equivalent)	1 0	1 0
L (or equivalent)	1 0	1 0
K (or equivalent)	1 0	1 0
T (or equivalent)	1 0	1 0
G (or equivalent)	1 0	1 0
Z (or equivalent)	1 0	1 0
R (or equivalent)	1 0	1 0
P (or equivalent)	1 0	1 0
Total		
<b>8. Letter Identification 3</b>		
	<b>Child says name (8a)</b>	<b>Child points to (8b)</b>
I (or equivalent)	1 0	1 0
H (or equivalent)	1 0	1 0
U (or equivalent)	1 0	1 0
M (or equivalent)	1 0	1 0
J (or equivalent)	1 0	1 0
W (or equivalent)	1 0	1 0

Q (or equivalent)	1 0	1 0
Y (or equivalent)	1 0	1 0
V (or equivalent)	1 0	1 0
Total		
<b>9. Beginning Reading</b>		<b>Score</b>
WORD 1 where are the words?		1 0
WORD 2		1 0
WORD 3		1 0
WORD 4		1 0
WORD 5		1 0
WORD 6		1 0
WORD 7		1 0
WORD 8		1 0
WORD 9		1 0
WORD 10		1 0
Total		
<b>10. Beginning Writing (circle one answer from 1-4)</b>		<b>Score</b>
Does not write any letters		0
Writes some letters (even if not name)		1
Writes some letters of name		2
Writes all letters of name in correct order		3
<b>11. Shape Identification</b>		
	<b>Child says name (9a)</b>	<b>Child points to (9b)</b>
Circle	1 0	1 0
Square	1 0	1 0
Triangle	1 0	1 0
Total		

**13. Circle a score for each of the following items:**

<b>13a. Task Persistence</b>	<b>Score</b>
Persisted with tasks	4
Attempted tasks briefly	3
Attempted tasks after much encouragement	2
Refused to do tasks	1
<b>13b. Attention Span</b>	
Focused attention throughout assessment	4
Attended with direction from the assessor	3
Somewhat distracted with noise or movement of others	2
Easily distracted	1
<b>13c. Body Movement</b>	
Sat quietly throughout assessment	4
Moved a little	3
Moved a lot	2
Out of seat, body in constant motion	1
<b>13d. Attention to Directions</b>	
Listened carefully to all directions	4
Attends only to brief directions	3
Started activities after hearing only a portion of the directions	2
Started activity immediately without waiting for directions	1
<b>13e. Understanding Directions</b>	
Understood most directions easily, given age expectations	4
Understood directions after directions were repeated	3
Partial understood directions	2
Did not appear to understand most directions	1
<b>13f. Confidence</b>	
Very confident with all tasks	4
Confident with things known, attempted new things with encouragement	3
Reluctant to try new or difficult things	2
Very uncertain, needed a lot of encouragement	1

Appendix 1D: Parent or Caregiver Interview

<b>14.</b>	<b>Not at all</b>	<b>A little</b>	<b>A lot</b>	<b>Don't know</b>
14a. Does your child learn through play?	1	2	3	88
14b. Do children's early experiences help their brains develop?	1	2	3	88
14c. Do everyday activities such as eating and going to the market help your child learn?	1	2	3	88
14d. Does singing a new song, looking at a book, or playing a new game help your child learn?	1	2	3	88
14e. Do children learn best when family members take an interest in their games and activities at home?	1	2	3	88

<b>15. In the past week, did anyone in your house do any of the following activities with [child's name]?</b>	<b>Not at all</b>	<b>A little (1 or 2 times)</b>	<b>A lot (3 times or more)</b>	<b>Don't know</b>
15a. told stories to [child's name ].	1	2	3	88
15b. sang songs with [child's name ].	1	2	3	88
15c. read books or looked at pictures with [child's name].	1	2	3	88
15d. played with [child's name ].	1	2	3	88
15e. spent time with [child's name] naming things, counting, or drawing.	1	2	3	88

**16a. Since Maskarram 2005 (Sept 2012), did your child participate in (Check all that apply)**

Child-to-child Programme	1
Preschool	2
Kindergarten	3
O class	4

**16a. Is your child going to school?**

No	1
In O class	2
In Kindergarten	3
Grade 1	4
Grade 2	5
No response	99

- 16b.** Will you enroll your child in school next year?
- No 1
  - Yes 2
  - Maybe 3
  - I don't know 4
  - No response 99
- 16c.** What is the mother's highest level of education?
- No school 1
  - Some primary school 2
  - Finished grade 8 3
  - Some secondary school 4
  - Finished grade 10 5
  - Finished TVET or grade 12 6
  - Some or finished University 7
  - I don't know 88
  - No response 99

<b>17. Skip these questions if the child is not going to school</b>	<b>Not at all</b>	<b>A little</b>	<b>A lot</b>	<b>Don't know</b>
17a. Does your child look forward to going to school?	1	2	3	88
17b. Does your child tell you what they did at school?	1	2	3	88
17c. Is your child making good progress at school?	1	2	3	88
17d. Does your child have friends at school?	1	2	3	88
17e. Is your child happy to go to school?	1	2	3	88
17f. Does your child know classroom and school rules?	1	2	3	88
17g. Does your child take care of their school materials when they are at home?	1	2	3	88
17h. Do you ask what your child is learning at school?	1	2	3	88
17g. Do you help your child with schoolwork?	1	2	3	88
17h. Do you talk to your child's teacher about your child?	1	2	3	88

<b>18. Does your household have</b>	<b>No</b>	<b>Yes</b>
bed	0	1
chair	0	1
table	0	1



watch/clock	0	1
radio/tv	0	1
phone/cell phone	0	1
lamp	0	1
latrine	0	1
waterpump	0	1
bicycle	0	1
boat	0	1
motor vehicle	0	1
Total		

Families at Intervention schools only

**19a. How often did your child participate in the Child-to-Child Programme?**

	Score
Every session or almost every session	1
Most sessions	2
About half of the sessions	3
Less than half of the sessions	4
Very rarely, or only once or twice	5
Don't know	88
No response	99

**If the child attended every session or almost every session (score 1) or most sessions (score 2), skip 19b and go to 19c.**

**19b. What was the main reason your child did not often participate in the Child-to-Child Programme?**

Circle the participant's response that most closely matches their answer. If the participant gives more than one reason, ask questions to find out the **main** reason.

	Score
Did not believe that this programme was benefiting the child	1
Child in a different school readiness programme, 0 class, or kindergarten	2
Child was not interest in the programme/did not wish to continue	3
Concern for child's safety (programme was in unsafe area, etc.)	4
Child and/or family was treated badly by others at the programme	5
No one was available (adult/older child) to take the child to the programme	6
Programme located too far from home/Lack of transport	7
Child was needed to help at home or in the field	8
Child was sick or had a disability	9
Child misbehaved too much	10
Don't know	88
No response	99

	<b>Not at all</b>	<b>A little</b>	<b>A lot</b>	<b>Don't know</b>	<b>No response</b>
<b>19c.</b> Did your child acquire skills to help them in school through the Child-to-Child Programme?	1	2	3	88	99
<b>19d.</b> Did you improve your understanding of the importance of children enrolling in grade 1 at the correct age, when they are 7, through the Child-to-Child Programme?	1	2	3	88	99
<b>19e.</b> Are you happy that your child participated in the Child-to-Child Programme?	1	2	3	88	99

## Appendix 1E: Young Facilitator Survey

Dear Young Facilitators,

We are doing a research study on the Child-to-Child Programme. A research study is when people collect a lot of information about a certain thing to find out more about it. This study is not part of your schoolwork. No one at your school or in your community will see your answers to any of the questions.

We are inviting you to take part in this study because you are a Young Facilitator for the Child-to-Child Programme. We want to know about your experiences in the programme. Your ideas will help to improve the programme in the future. There are no right or wrong answers to any of the questions. Thank you for your ideas!

BACKGROUND INFORMATION				
1. What grade are you in? (Please circle one answer).				
Grade 3	Grade 4	Grade 5	Grade 6	Other (please specify): _____
2. Are you a boy or a girl? (Please circle one answer). Boy      Girl				
3. How many years have you been a Young Facilitator? (Please circle one answer).				
Less than 1 year	1 year	2 years	3 years or more	
4. How often do you do Child-to-Child activities with young children outside of school? (Please circle one answer).				
Everyday				
2-3 times a week				
A few times a month				
A few times a term				
Never				

<b>SECTION A.</b> Please circle one answer for each question.	Not at all	A little	A lot
<b>A1.</b> Has participating in the Child-to-Child programme improved your school grades in language arts?	1	2	3
<b>A2.</b> Has participating in the Child-to-Child programme improved your school grades in mathematics?	1	2	3
<b>A3.</b> Has participating in the Child-to-Child programme improved your school grades in science?	1	2	3
<b>A4.</b> Has participating in the Child-to-Child programme improved your school grades in social studies?	1	2	3

<b>SECTION B. Please circle one answer for each question</b>	<b>Not at all</b>	<b>A little</b>	<b>A lot</b>
<b>B1.</b> Have you made new friends at school as a result of the Child-to-Child programme?	1	2	3
<b>B2.</b> Are you happier at school as a result of the Child-to-Child programme?	1	2	3
<b>B3.</b> Are you a better student as a result of the Child-to-Child programme?	1	2	3
<b>B4.</b> Do you feel more confident that you can do well in school as a result of the Child-to-Child programme?	1	2	3
<b>B5.</b> Do you have a more positive attitude towards learning as a result of the Child-to-Child programme?	1	2	3

<b>SECTION C. Please circle one answer for each question</b>	<b>Not at all</b>	<b>A little</b>	<b>A lot</b>
<b>C1.</b> Do you like being a Young Facilitator?	1	2	3
<b>C2.</b> Are you interested in the Child-to-Child activities?	1	2	3
<b>C3.</b> Do you like doing Child-to-Child activities with young children?	1	2	3
<b>C4.</b> Do the young children in the Child-to-Child programme listen to you?	1	2	3
<b>C5.</b> Does the teacher in the Child-to-Child programme give clear instructions on how to work with the young children?	1	2	3
<b>C6.</b> Is the Young Facilitator's guide easy for you to understand?	1	2	3
<b>C7.</b> Is the child's guide too difficult for the young children?	1	2	3
<b>C8.</b> Does being a Young Facilitator take too much time away from your schoolwork?	1	2	3
<b>C9.</b> Do you want to continue being a Young Facilitator next year?	1	2	3

<b>SECTION D. Please circle one answer for each question. In the Child-to-Child programme did you do the following</b>	<b>Not at all</b>	<b>A little</b>	<b>A lot</b>
<b>D1.</b> Did you help children to write their names?	1	2	3
<b>D2.</b> Did you help children to count 1 -10?	1	2	3
<b>D3.</b> Did you help children sort objects by size and shape?	1	2	3
<b>D4.</b> Did you help children make simple patterns?	1	2	3
<b>D5.</b> Did you help children add and subtract?	1	2	3

<b>D6.</b> Did you sing songs and say rhymes with children?	1	2	3
<b>D7.</b> Did you help children read?	1	2	3
<b>D8.</b> Did you help children recognize and name shapes?	1	2	3

## Appendix IF: Teacher Survey

The purpose of this research is to understand the experiences of teachers who participated in the Child-to-Child Programme. If you decide to participate, you will be asked to complete a survey. The survey includes questions about your teaching practices, the impact of the Child-to-Child Programme in your school, and your experiences with the programme.

This survey will take approximately 15-20 minutes to complete.

You will not receive any payment for completing this survey. While there are no direct benefits to you for participating, your responses will help to improve the Child-to-Child Programme in the future.

Your participation is voluntary. You may refuse to participate without penalty at any time. You may also skip any question. We will not ask for your name or any personal information. Your responses will be anonymous. Please answer as honestly as possible.

Background Information				
A. What grade or grades are you teaching this year?: (circle all grades that you teach)				
Grade 1	Grade 2	Grade 3	Grade 4	Grade 5
Grade 6	Grade 7	Grade 8	Other (please specify): _____	
B. How many years have you taught?: _____ years				
C. Did you attend all or almost all the training sessions for Child-to-Child Programme?				
(circle one answer)      YES      NO				

<b>Section A: Have you received the following as a result of participating in the Child-to-Child Programme?</b>	<b>Yes</b>	<b>No</b>
<b>A1.</b> Reading and picture books	1	2
<b>A2.</b> Teachers' Guide	1	2
<b>A3.</b> Number cards or other materials for counting	1	2
<b>A4.</b> Young Facilitator's Guide	1	2
<b>A5.</b> Children's Activity Sheets	1	2

<b>Section B.</b>	<b>Not at all</b>	<b>A little</b>	<b>A lot</b>
<b>B1.</b> As a result of participating in the Child-to-Child Programme, have you improved the way you plan lessons?	1	2	3
<b>B2.</b> As a result of participating in the Child-to-Child Programme, have you improved how you motivate students?	1	2	3
<b>B3.</b> As a result of participating in the Child-to-Child Programme, have you improved how you ask students questions in class?	1	2	3
<b>B4.</b> As a result of participating in the Child-to-Child Programme, have you improved how you conduct group work with students?	1	2	3
<b>B5.</b> As a result of participating in the Child-to-Child Programme, have you improved how you assess students?	1	2	3

<b>Section C.</b>	<b>Not at all</b>	<b>A little</b>	<b>A lot</b>
<b>C1.</b> Has the Child-to-Child Programme improved children's early learning skills?	1	2	3
<b>C2.</b> Has the Child-to-Child Programme improved student achievement?	1	2	3
<b>C3.</b> Has the Child-to-Child Programme reduced drop-out rates?	1	2	3

<b>Section D.</b>	<b>Not at all</b>	<b>A little</b>	<b>A lot</b>
<b>D1.</b> Do children learn through play?	1	2	3
<b>D2.</b> Do children's early experiences help their brains develop?	1	2	3
<b>D3.</b> Does talking to and listening to children help them learn?	1	2	3
<b>D4.</b> Can older children help younger children to learn?	1	2	3
<b>D5.</b> Do children feel good about themselves when they learn new things?	1	2	3

<b>Section E.</b>	<b>Not at all</b>	<b>A little</b>	<b>A lot</b>
<b>E1.</b> Do you understand the purpose of the Child-to-Child Programme?	1	2	3

<b>E2.</b> Does grouping older children (Young Facilitators) with younger children work well?	1	2	3
<b>E3.</b> Is the amount of time required for you to participate in the Child-to-Child Programme a problem for you?	1	2	3
<b>E4.</b> Do you want to participate in the Child-to-Child Programme next year?	1	2	3

## Appendix 1G: Key Stakeholder Interview Schedule

### Informed Consent Form

The purpose of this study is to understand the experiences of professionals who have been involved with the Child-to-Child Programme. If you decide to participate in this study, you will participate in one interview that will take approximately 1 hour. You will be asked several questions about the Child-to-Child Programme. The questions will be about the successful aspects of the programme, barriers to implementation, technical support received, and any recommendations for the programme you have. With your permission, I will tape record the interviews so I don't have to make so many notes. You will not be asked to state your name on the recording.

You will not receive payment for participating in this study. This is a chance for you to talk about your experiences concerning the Child-to-Child Programme. Your responses to the interview questions will be kept confidential. At no time will your name be used. You will be assigned a random numerical code. The recording of the interview will be destroyed as soon as it has been transcribed. The transcript, without your name, will be kept until the research is complete. Your response will be used for a UNICEF report on the Child-to-Child Programme. I will not use your name or any information that would identify you in any publications or presentations.

Your participation in this study is voluntary. You may refuse to participate or withdraw from the study without any penalty. You will not receive any payment for participating in the study. You may skip any question during the interview, but continue to participate in the rest of the study.

#### Agreement:

The nature and purpose of this research have been explained to me. I agree to participate in this study. I understand that I can withdraw from this study at any time without any penalty.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Name (print): \_\_\_\_\_



### Key Stakeholder Interview Guide: Community Leaders and School Directors (Local)

What is the purpose and main components of the Child-to-Child Programme? Why was the programme introduced into this community? What need did the programme fill?

Who is involved in implementing this programme? To what extent are schools, WEO, REB and MoE involved in the implementation? To what extent are families and communities involved in the implementation? What skills and abilities are required of the teachers to implement the programme? What are the roles and responsibilities of staff/teachers?

What successes you have experienced during and after the programme implementation? Please give some examples. *Possible prompts: Have you observed any positive attitude and/or behaviour changes in students and teachers towards early childhood education because of the programme? Did the older children (Young Facilitators) have more positive attitude or behaviours towards learning? Did you hear or observe any positive changes in teachers' classroom teaching as a result of the programme? Did community members increase their awareness of early childhood education?*

Have there been any challenges to implementing the programme at your school? Please give some examples. *Possible prompts: The barriers can include anything that made the programme implementation difficult, such as shortage of financial support, materials issues, lack of infrastructure to support activities, time constraints, safety issues, transportation problems, etc.* How does the programme identify and recruit participants? Are there unserved children and families that the programme is not reaching? If so, who are they?

Has the implementation of the programme changed the way your school interacts with parents and community members? *If the answer is yes, ask about what were the differences and ask for examples.*

Has the technical support you have received from UNICEF or its partners met the needs of your school and the community? Please give some examples. *Possible prompts: what additional support would you like to receive from UNICEF or its partners to make the programme successful? Is your school planning to involve more young children in the programme next year? If the answer is "Yes", ask why and if any modification of the programme will be made to support the bigger scale of the implementation? If the answer is "No", ask why not.*

Do you think that the programme is sustainable in this community? *Possible Prompts: If yes, what aspects of the programme make it sustainable in this community? If no, what aspects of the programme make it unsustainable in this community? What kind of changes (e.g., providing incentives to stakeholder such as families and teacher, providing standardized and nationwide teacher training, getting financial support from MoE or local government, etc) would you recommend to the programme to make it more sustainable?*

Is there anything more you would like to say?

### Key Stakeholder Interview Guide: REB Officials (Regional)

What is the purpose and main components of the Child-to-Child Programme? Why was the programme introduced into this region? What need did the programme fill?

What resources are required to deliver the programme? What people or organizations are involved with its implementation? To what extent are schools, WEO, REB and MoE involved in the implementation? To what extent are families and communities involved in the implementation?

Which children and families is the programme intending to reach? Is the programme serving the population it was intended to serve? If not, why not? What changes, if any, are planned to reach the target population?

Who are the staff? How are staff trained? How are they evaluated?

What effect, if any, do you feel the programme had on the community in which you work? What has worked well? Are there any unintended positive or negative consequences? Is there anything you would do differently in the future? Please give some examples and explain why.

Have you had any challenges when implementing the programme? How have you dealt with these challenges?

Has the programme been delivered as intended? What changes have been incorporated into the programme since inception? Why? What changes are planned for the future? Why? What design changes may be necessary to expand the programme or offer it to other sites?

Has the technical support you receive from UNICEF or its partners met the needs of your school and the community? Please give some examples. *Possible prompts: what additional support would you like from UNICEF or its partners to make the programme successful?*

Is your region planning to involve more young children in the programme next year? *If the answer is "Yes", ask why and if any modification of the programme will be made to support the bigger scale of the implementation? If the answer is "No", why not.*

How can the programme be improved (eg, training / materials)? Is the intervention of correct intensity? What recommendations do you have for future efforts such as these?

Has this programme had any impact on education policies and/or other programmes in your region?

Is there anything more you would like to say?



## Key Stakeholder Interview Guide: Ministry of Education Officials (National)

What is your understanding of the purpose of the child-to-child programme? What are the key components of the programme? Do they differ across regions?

Has the programme been implemented as intended? What changes have been incorporated into the programme since its inception? Why? What changes are planned for the future? Why? What design changes may be necessary to expand the programme?

Are there future plans for involving other organizations in the programme's implementation? *Possible prompts: Why? To what extent has the programme enabled system-wide coordination between all levels of the education structure, partners, and donors?*

Are you planning to involve more young children in the programme next year? *If the answer is "Yes", ask why and if the programme will need to be modified in order to be expanded? If the answer is "No", ask why not.*

Do different communities implement the programme differently? *Possible prompts: If so, why? Does the context of the community affect how the programme is implemented?*

What effect, if any, do you feel the programme had on children, their families, and schools? What has worked well? Are there any unintended positive consequences? Are there any unintended negative consequences? Is there anything you would do differently in the future? Please give some examples.

Have there been any challenges to implementing the programme? How did you deal with these challenges?

Do you think that the programme is sustainable? *Possible Prompts: If yes, what aspects of the programme make it sustainable? If no, what aspects of the programme make it unsustainable? What kind of changes (e.g., providing incentives to stakeholder such as families and teacher, providing standardized and nationwide teacher training, getting financial support from MoE or local government, etc.) would you recommend to make it more sustainable?*

Have any national education policies changed as a result of the programme?

How can the programme be improved?

Is there anything more you would like to say?

Appendix 3A: Demographic Characteristics of the CtCSR and Control Groups

	CtCSR		Control		<i>df</i>	<i>F</i>
	<i>(n = 415)</i>		<i>(n = 300)</i>			
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Age	7.41	.71	7.74	.98	704	-5.11***
Household Assets (0-12)	5.02	2.23	5.12	1.64	712	-.63
	<i>%</i>		<i>%</i>			<i>Chi-square</i>
Mother's Education (no education)	48.9		61.4		2	19.98***
Gender (female)	49.0		43.7		1	2.01

*Note.* \*\*\*  $p < .001$

Appendix 3B: Correlation Between Child Assessment for School Readiness, School Readiness, and Demographic Combined Groups (n = 715)

	1	2	3	4	5	6	7
1. Early Numeracy	-						
2. Early Literacy	.68**	-					
3. Social-emotional Skills	.55**	.58**	-				
4. Child's Gender	-.04	.02	.03	-			
5. Child's Age	.04	.09*	-.02	.05	-		
6. Mothers' Education	.14**	.19**	.14**	.03	-.04	-	
7. Household Assets	.14**	.20**	.11**	.02	-.08*	.32**	-

Note. \*  $p < .05$ , \*\*  $p < .01$

Appendix 3C: Comparing Numeracy Sub-Tests in the CtCSRP and Control Groups  
- ANCOVA Summary Table

	CtCSRP	Control	<i>df</i>	<i>F</i>	Effect Size
	( <i>n</i> = 415)	( <i>n</i> = 300)			
	<i>Adj. M</i>	<i>Adj. M</i>			
Colour Recognition (0-9) <sup>a</sup>	4.41	3.08	1, 697	76.26***	.10
Colour Recall (0-9)	1.77	1.49	1, 681	6.53**	.01
Number Recognition (0-10)	8.75	6.55	1, 697	108.96** *	.14
Number Recall (0-10)	1.54	1.43	1,345	.46	.00
Counting (0-10)	.99	.92	1,696	9.11***	.03
One-to-One Correspondence	.98	.91	1, 696	13.24***	.02
Adds One	.98	.92	1,696	15.32***	.02
Adds Three	.92	.76	1,696	33.56***	.05
Subtracts One	.96	.79	1,695	52.31***	.07
Subtracts Two	.86	.65	1,696	44.11***	.06
Two-Coloured Pattern	.80	.55	1,696	54.13***	.07
Three-Coloured Pattern	.61	.30	1,695	71.98***	.09
Shape Recognition (0-3)	1.42	.55	1,695	93.68***	.12
Shape Recall (0-3)	1.51	.76	1,529	59.59***	.10

*Note.* <sup>a</sup> range of scores in parentheses; Child's age, household assets and maternal education are covariates; \*  $p < .05$ , \*\*\*  $p < .001$ ; Effect sizes based on partial eta-squared.

Appendix 3D: Literacy Sub-Tests for CtCSR and Control Groups - ANCOVA Summary Table

	CtCSR ( <i>n</i> = 415)	Control ( <i>n</i> = 300)			
	<i>Adj. M</i>	<i>Adj. M</i>	<i>df</i>	<i>F</i>	Effect Size
Letter Recognition (0-26)	16.25	10.95	1,679	73.34***	.10
Letter Recall (0-26)	7.47	4.46	1,452	74.99***	.14
Reading (0-10)	2.43	.43	1,697	92.56***	.12
Writing (1-4)	1.93	1.10	1,696	104.22***	.13

*Note.* Child’s age, household assets and maternal education are covariates; \* *p* < .05, \*\*\* *p* < .001; Effect sizes based on partial eta-squared.



APPENDIX 3E: Social and Emotional Skills for Learning Evaluation Scales  
in the CtCSR and Control Groups – ANCOVA Summary Table

	CtCSR ( <i>n</i> = 415)	Control ( <i>n</i> = 300)			
	<i>Adj.</i> <i>M</i>	<i>Adj. M</i>	<i>df</i>	<i>F</i>	Effect size
Task Persistence (1-4)	3.31	2.66	1,696	109.67***	.14
Attention Span (1-4)	3.39	2.79	1,695	109.07***	.14
Body Movement (1-4)	3.50	2.93	1,694	80.06***	.10
Attention to Directions (1-4)	3.45	2.62	1,694	150.63***	.18
Understanding Directions (1-4)	3.41	2.71	1,695	131.56***	.16
Confidence (1-4)	3.17	2.58	1,697	107.63***	.13

*Note.* Child’s age, household assets and maternal education are covariates; \* *p* < .05, \*\*\* *p* < .001; Effect sizes based on partial eta-squared.

APPENDIX 4A: Parent Understanding of Early Childhood Development in the CtCSR and Control Groups – Chi-square Analysis Summary Table

	Pearson chi-square	<i>df</i>	Effect Size
Does your child learn through play?	63.59***	2	.31
Do children’s early experiences help their brains develop?	106.19***	2	.40
Do everyday activities such as eating and going to the market help your child learn?	84.70***	2	.35
Does singing a new song, looking at a book, or playing a new game help your child learn?	62.57***	2	.30
Do children learn best when family members take an interest in their games and activities at home?	129.86***	2	.43

*Note.* \*\*\*  $p < .001$ ; Effect sizes based on phi.

APPENDIX 4B: Parent Reports of Early Learning Activities in the Home between CtCSRPs and Control Groups - Chi-square Analysis Summary Table

	Pearson chi-square	<i>df</i>	Effect Size
Told stories to child	42.44***	2	.25
Sang songs with child	164.06***	2	.49
Read books or looked at pictures with child	137.04***	2	.44
Played with child	88.55***	2	.36
Spent time with child naming things, counting, or drawing.	122.10***	2	.42

*Note.* \*\*\*  $p < .001$ ; Effect sizes based on phi.