GETTING READY FOR SCHOOL: A CHILD-TO-CHILD APPROACH

Programme Evaluation for Year One

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Getting Ready for School: A Child-to-Child Approach, Programme Evaluation for Year One
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Preface

The Evaluation Office working closely with the Education Section commissioned American Institutes for Research (AIR) to conduct an evaluation of UNICEF's Getting Ready for School pilot programme in 2007. The Getting Ready for School pilot programme was implemented in Bangladesh, China, the Democratic Republic of Congo, Ethiopia, Tajikistan and Yemen. This programme model was unique in its child-to-child approach whereby older children (Young Facilitators) worked with younger peers to increase their academic and non-academic school readiness skills. The purpose of the evaluation was to assess the extent to which the programme increased children's successful transitions into primary school, and achieved secondary goals such as increased family support for children's education.

The evaluation methodology consisted of randomized controlled trials in five of the countries, and a matched-subjects design in the sixth. The evaluation included direct assessments of children's acquisition of academic and non-academic school readiness skills, interviews with caregivers, surveys conducted with Young Facilitators and with teachers, and interviews with school heads and community leaders. Teachers implementing the programme also kept session notes regarding children's attendance and how well the programme materials worked. Countries also monitored the costs associated with launching the programme and implementing it during this pilot year.

This report presents in-depth analyses and results of the evaluation at the country level, with general conclusions based on the findings across all six countries. We hope that readers from both the Education sector and the Evaluation discipline will be satisfied with the rigor of the methodologies and clarity of the analyses.

Our appreciation for the effort and professionalism that was demonstrated in this evaluation goes to Jeff Davis, the lead evaluator from AIR, and the AIR evaluation team consisting of Elizabeth Spier, Olivia Padilla, and Nitika Tolani-Brown. Support was also provided by Miguel Socias, Corbrett Hodson, David Seidenfeld and Kathryn Brand, and expert guidance was provided by Pia Britto of Yale University. We also extend thanks to the national research teams that carried out each country-level evaluation.

We thank Tashmin Khamis, Christiana Brown and the rest of the team at the Child-to-Child Trust for their invaluable guidance and practical support in the design and implementation of the Getting Ready for School programme.

The project would not have been possible without the initiative and ongoing work of Abhiyan Rana. We would also like to express gratitude to our colleagues in the Evaluation Office – Kathleen Letshabo and Samuel Bickel – for recognizing the need for an independent evaluation, for insightful contributions at every stage. Likewise, we appreciate the efforts made in all participating UNICEF country offices, especially in the six countries where the Getting Ready for School programme was launched in this pilot year.

Readers of this report inspired to learn more about the Getting Ready for School programme are invited to visit the UNICEF website (www.unicef.org). Readers interested in UNICEF's evaluation priorities and strategies will also find important information there.

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Acronyms Used in this Report

AIR	American Institutes for Research
BRAC	Bangladesh Rural Advancement Committee
DEO	Taiz Governorate Education Office, District Education Offices Yemen
DPE	Directorate of Primary Education Bangladesh.
DRC	Democratic Republic of the Congo
GDP	Gross Domestic Product
MoE	Ministry of Education
NGO	Non-governmental Organization
RCT	Randomized Control Trial
UNESCO	United National Educational, Scientific and Cultural Organization
UNICEF	United Nations Children's Fund

Executive Summary

The purpose of UNICEF's *Getting Ready for School* programme is to facilitate the successful transition of young children into primary school through the use of older school children (Young Facilitators) as providers of early childhood education support to younger children in their communities. Programme goals include improved school readiness and on-time enrolment among young children, as well as increased family, community and teacher support for young children's learning. This pilot program was implemented in six countries during the 2008-2009 school year: Bangladesh, China, the Democratic Republic of Congo, Ethiopia, Tajikistan and Yemen. UNICEF contracted with the American Institutes for Research (AIR) to provide UNICEF with an independent assessment of whether and to what extent the *Getting Ready for School* programme achieved its desired results based on programme implementation during this pilot year. The *Getting Ready for School* programme involves far fewer hours of direct support for young children's learning than most formal early childhood education programmes, and children require ongoing exposure and support to master needed information and skills. One of the main reasons for this impact evaluation was to determine whether this lower-cost programme structured with much less "programme time" could indeed make an impact on children's school readiness. The findings from this evaluation were intended to identify programme strengths, weaknesses, challenges and best practices to guide future implementation and expansion of this programme.

The evaluation was structured in the form of country-level randomised controlled trials. A mixed-methods approach was used whereby quantitative and qualitative data together provided measures of programme impacts as well as essential information regarding conditions that seem to have contributed to or detracted from the success of the programme. The use of a common evaluation framework and tools across countries enables us to draw conclusions about the success of this pilot programme overall and allows us to formulate general recommendations to guide future programme implementation and expansion within and across countries.

Across all six countries, there was a high degree of interest in and enthusiasm for the *Getting Ready for School* programme within communities where it was introduced. Challenges associated with programme implementation in this pilot year were mostly in the form of logistical concerns rather than issues with acceptance of the programme among stakeholders. There were at least some significant programme impacts on children's school readiness in all six countries, and there were significant programme impacts on children's beginning literacy and beginning mathematics in four countries. Impacts on non-academic skills, such as the ability to follow directions, were less consistent across countries. Programme impacts were most apparent in countries where children had a higher programme dosage (such as extra home- or community-based sessions). Children's on-time enrolment information has only become available from three countries, and all three provided information that points to positive programme impacts. Most notably, in Yemen the programme group had an on-time enrolment rate that was 32 percentage points higher than for children from a control group.

There is also evidence that Young Facilitators benefited from their participation in the programme, including recognition of their efforts by the community, and reported gains in self-confidence and enthusiasm for school. Overall, Young Facilitators took their work very seriously, having high attendance at the programme and spending a great deal of time helping the younger children learn. Young Facilitators from all countries were observed to use pedagogical methods that were familiar to them from their own teachers, but that were not always child-friendly or child-centred. It was hoped that through training and programme participation, teachers would make some gains in their belief in the value of child-centred pedagogy, belief in the importance of school readiness and (for first grade teachers) expectations for children's school readiness upon enrolment, but we found little programme impact in any of these areas.

The six participating countries varied widely in their views regarding the long-term sustainability of the programme – especially in the form of financial sustainability. Sustainability tended to be most assured in countries where government education officials had been involved in the programme and viewed it as a potential means to help meet the country's educational goals. At the community level, a significant challenge to programme sustainability included difficulty securing ongoing teacher involvement in the absence of incentives. Several countries also had difficulty finding classrooms or other appropriate space to implement the programme.

Based on the evaluation findings, the following recommendations are presented for the future development, sustainability and expansion of *Getting Ready for School*:

- Young learners need to have repeated and ongoing experiences and support to acquire school readiness learning and skills. Every effort should be made to ensure that the *Getting Ready for School* programme is provided to children as often as possible – preferable twice a week or more, supplemented by extra practice at home or in the community.
- Countries should follow through on current plans to make programme materials more child-friendly and (in some cases) more culturally relevant.
- Where children's school readiness outcomes were not at the desired level based on a country's own expectations or goals for early learning, programme developers should examine programme session notes, lesson plans and materials to identify where improvements could be made. Likewise, where programme sessions cover skills that children seem to acquire in their homes and communities anyway, programme developers may wish to increase the level of programme lessons to teach new skills and/or may wish to focus more efforts on skills not typically acquired.
- Selection of Young Facilitators should be done in a more inclusive manner so that students who are not selected do not feel rejected by school staff. The inclusion of a more diverse group of Young Facilitators may also provide an opportunity for students who are not already "stars" to build their skills and confidence.
- Future development of training and support for Young Facilitators should include building their skills in the use of more child-centred pedagogy and positive methods to manage young children's behaviour.
- Programme staff should explore creative ways to increase the availability of suitable places and times for children to participate in the programme where classroom space and teacher time are limited.
- Programme staff should meet with parents and community members to explore how to build on their enthusiasm for the programme to help meet programme needs (e.g., provision of some supplies or snacks, volunteer time to help organize additional sessions in the community).
- Further expansion of *Getting Ready for School* into new regions within countries or into new countries should wherever possible include early advocacy with government educational officials to situate the programme within the country's early childhood education goals and/or country goals to increase on-time enrolment in primary school. This course of action up front will increase the chances of long-term programme sustainability and may increase more immediate practical support for the programme.

In conclusion, the *Getting Ready for School* programme enjoyed a highly successful pilot implementation in several countries. The programme was extremely well received by stakeholders and achieved key goals. Continued development and expansion of the programme, combined with efforts at securing sustainability, can make *Getting Ready for School* a valuable resource for countries and communities seeking to increase opportunities for their young children to have better educational outcomes.

Getting Ready for School – A Child-to-Child Approach is an early childhood development programme that was implemented as a pilot programme in six countries during the 2008-2009 academic year. These countries were Bangladesh, China, Democratic Republic of Congo, Ethiopia, Tajikistan and Yemen. In 2008, UNICEF Headquarters contracted with the American Institutes for Research (AIR) to conduct an independent evaluation of the pilot programme and its impacts. The purpose of this report is to present findings from this evaluation of the first year pilot of *Getting Ready for School*. In the first chapter, we present a description of the evaluation design. In following chapters, we present an in-depth description of the evaluation and findings for each of the six participating countries. We conclude with a cross-country summary of findings, and a discussion of evaluation results and recommendations.

CHAPTER 1   EVALUATION DESIGN

In this chapter, we present a description of the *Getting Ready for School* programme model, identify the guiding research questions for this evaluation, and describe the evaluation design – including the sampling framework, evaluation instruments, data collection and analytic approach. In chapters 2 through 7, we present more specific information for each country regarding its evaluation, sample and findings.

1.1   Programme Description

The *Getting Ready for School* programme is intended to facilitate the successful transition of young children into primary school by providing them with school readiness skills (both academic and social), engaging families and others in the community as capable partners in children's development, and improving the ability of schools to successfully engage their youngest learners. The programme is not intended to replace comprehensive early childhood development programmes, such as kindergartens or preschools, but rather to provide a low-cost alternative for supporting young children's school readiness in communities where formal early childhood development programmes are unavailable to most families. *Getting Ready for School* is based on a successful child-to-child model originally developed in the area of health, and consists of an older child (a "Young Facilitator") being provided with guidance and information that he or she then shares with peers or younger children in the community through formal and informal means.

The *Getting Ready for School* pilot programme involved the training of teachers to provide guidance and supervision to Young Facilitators, the Young Facilitators themselves (students, typically in grades 4-8), and young children in the community who were one year away from expected on-time school entry at the start of the programme. Young Facilitators and young children met in sessions that were typically held twice weekly at a school. In some countries, Young Facilitators and young children also met in the community for some sessions. Young Facilitators worked through a series of planned activities with the young children. These activities were designed to support child development through play.

As a secondary programme benefit, the introduction of *Getting Ready for School* into a community was also intended to increase the level of support that families, schools and communities provided to further children's school readiness and successful transition to primary school. Figure 1 shows the model of change for this programme.

Figure 1 Model of Change
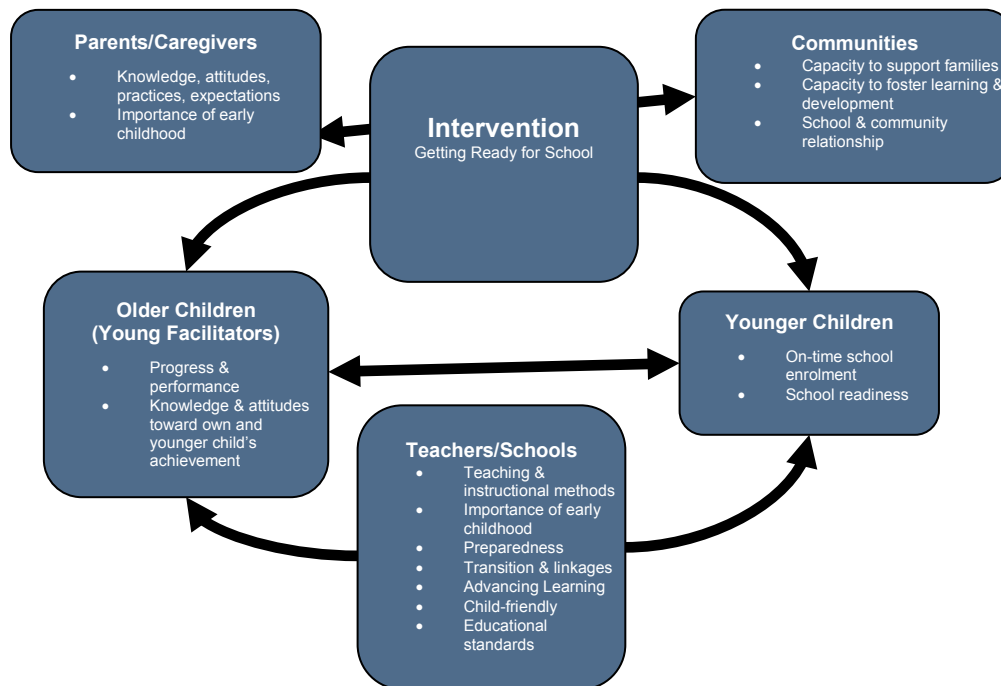
Note that of the six countries participating in this pilot evaluation, China decided to implement the *Getting Ready for School* programme using a parent-to-child model because older children often lived away from the community for better educational opportunities, and the parents of the few older children who did live in the community were reluctant to allow their children to act as Young Facilitators due to concerns about them losing study time.

Specific programme goals were as follows:

For young children: To increase their school readiness, and to increase their on-time enrolment in primary school.

For families whose young children participated: To improve their understanding of the importance of school readiness, and to increase their active support for their young children's learning. This was a secondary goal in most countries because parents were not directly involved in the programme.

For Young Facilitators: To improve their educational engagement and performance, to increase their positive attitudes toward learning, and to increase their belief in the importance of supporting young children's learning.

For teachers: To increase their belief in the use of child-centred pedagogy, to increase their understanding of the importance of school readiness, and – for first grade teachers – to raise their expectations regarding the level of school readiness of incoming first grade students at their school. Achieving change in teacher attitudes toward child-centred pedagogy typically takes an extended period of time and a high level of support, so this outcome was considered a secondary goal of the intervention.

Because *Getting Ready for School* is being implemented as a pilot programme, community-level change was not expected during this first year.

1.2 Research Questions

Based on the model and programme goals identified above, the following research questions were addressed in this evaluation:

Programme Implementation
- What was the level of participation (attendance) at the *Getting Ready for School* programme sessions among young children and Young Facilitators?
- To what extent did the planned programme sessions work as intended, with teachers and Young Facilitators understanding instructions, children enjoying the sessions, and activities meeting children's developmental needs?
- Did children participate in other early childhood development programmes in their communities?
- How well did *Getting Ready for School* programme communications inform families about the programme and convey intended messages to them?

Impacts on Young Children
- To what extent did implementation of the *Getting Ready for School* programme have an impact on young children's school readiness?
- To what extent did implementation of the *Getting Ready for School* programme have an impact on young children's on-time enrolment in primary school?

Impacts on Families
- To what extent did implementation of the *Getting Ready for School* programme have an impact on families' understanding of the importance of school readiness for young children?
- To what extent did implementation of the *Getting Ready for School* programme have an impact on families' active support for young children's learning?

Outcomes for Young Facilitators
- To what extent did implementation of the *Getting Ready for School* programme improve Young Facilitators' academic engagement and progress?
- To what extent did implementation of the *Getting Ready for School* programme improve Young Facilitators' positive attitudes toward their own learning?
- To what extent did implementation of the *Getting Ready for School* programme improve Young Facilitators' understanding of the importance of school readiness for young children?

Impacts on Teachers
- To what extent did implementation of the *Getting Ready for School* programme have an impact on teachers' belief in the use of child-centred pedagogy?
- To what extent did implementation of the *Getting Ready for School* programme have an impact on teachers' understanding of the importance of school readiness for young children?
- To what extent did implementation of the *Getting Ready for School* programme have an impact on first grade teachers' expectations of school readiness among incoming first grade children?

Programme Costs
- What were the costs to introduce and to implement the *Getting Ready for School* programme in each country?

In the remainder of this report, each of these questions will be addressed at the country level. In Chapter 8 we will provide a summary of cross-site findings, and in Chapter 9 we will provide a discussion of the evaluation results and our recommendations for further programme development and expansion.

1.3   Evaluation Design

The most powerful evaluation design is the randomised controlled trial (RCT). Random assignment of communities or schools to intervention and control groups allows us to be confident that differences in outcomes between the two groups are indeed the result of the intervention rather than other factors. Our goal for this evaluation was to support each of the six countries participating in the pilot of *Getting Ready for School* in conducting an RCT, with intervention and control groups drawn from multiple communities within each country.

This evaluation used an intent-to-treat model, meaning that we examined impacts based on availability of *Getting Ready for School* in a community rather than confining our analyses to just those participants who attended or completed the programme. The intent-to-treat model provides us with information about how communities benefit from the availability of *Getting Ready for School* – critical information for UNICEF in determining whether future expansion of this pilot programme is likely to achieve the desired outcomes.

In the remainder of this section, we present the sampling framework used in each country, evaluation instruments, approach to data collection, and analytic strategy.

1.3.1   Sampling framework

AIR worked with each country to design a sampling framework and methodology that would balance representation, practicality and cost-effectiveness. Focusing implementation efforts and resources in a smaller number of defined areas allowed for a more in-depth understanding of programme impacts, minimized challenges associated with implementation, and enhanced the efficiency of data collection. The Intervention group was made up of the schools, teachers, families and children that had the *Getting Ready for School* programme available to them. The Control group was made up of schools, teachers, families and children that did not have the *Getting Ready for School* programme available to them but were otherwise as similar as possible to the Intervention group. See Table 1 for a description of the specific strategy used to create Intervention and Control groups in each participating country, along with notes regarding any potential sources of bias that should be taken into account when drawing conclusions about the effectiveness of the intervention. Four of the six participating countries were able to successfully implement an RCT, although the specific strategy varied somewhat across countries. See each country section for more details on sampling at the country level.

Table 1 Sampling Strategy by Country

Country	Group Assignment Strategy	Issues
Bangladesh	RCT with assignment at the district level	None
China	Communities assigned to treatment and control in a *non*-random manner	Outcomes must be interpreted with caution because we cannot be certain that assignment to the Intervention or Control group is the only between-group difference
DR Congo	RCT with assignment at the school level	Pre-existing differences between some characteristics of Intervention and Control groups mean that results should be interpreted with caution
Ethiopia	Intervention schools selected to represent a mix of high-, medium- and low-performing schools. Matched control group schools were then selected.	Outcomes must be interpreted with caution because we cannot be certain that assignment to the Intervention or Control group is the only between-group difference
Tajikistan	RCT with assignment at the school level	None
Yemen	RCT with random assignment of matched pairs of schools	None

1.3.2 Instruments

A variety of evaluation tools were created to address the research questions outlined above. These included a school record form, child assessment, two caregiver interviews, teacher survey, Young Facilitator survey, community stakeholder interviews, session records, cost record form, and primary school enrolment record form. Staff from UNICEF offices and other evaluation team members at the country level conducted a desk review of proposed tools, and pilot tested child assessment and caregiver interviews prior to their final implementation.

The baseline data collection included a school records form, child assessment, the first caregiver interview (caregiver interview one), teacher survey, and Young Facilitator survey (see copies of instruments in appendices A-1 through A-8). Throughout the programme implementation, evaluation team staff and programme implementers completed session records and cost records. The outcome data collection included repeat administrations of the child assessment, caregiver interview one, teacher survey, and Young Facilitator survey. Feedback about the programme was obtained through a supplemental caregiver interview and additional questions on the Young Facilitator outcome survey. Interviews were completed with community leaders at the conclusion of the programme. School enrolment information was gathered approximately four months after the start of the school year. Each of these tools will be described in detail below.

School Records Form: This form was designed to capture basic school characteristics, such as number of teachers, number of students, absenteeism and drop-out rates, among both Intervention and Control schools. This tool was identical across countries.

Child Assessment: This assessment provided a direct measure of children's school readiness across several domains: colour identification, pattern recognition, beginning mathematics, beginning literacy, perceptual motor skills, attention, mastery motivation, and the ability to follow directions. The assessment was *not* intended to serve as a means to measure overall intelligence or aptitude, but rather to determine whether the child had acquired specific skills. The assessment was administered on an individual basis by a trained assessor during a visit to the child's home, and usually took about 30 minutes. Feedback from the field confirmed that most children enjoyed participating in the assessment. This tool was administered to both Intervention and Control group children. This assessment was identical across countries with the exception of China, where items regarding letter recognition were dropped because individual letters are not used in Chinese languages.

Caregiver Interview: During the home visit, a trained assessor administered the caregiver interview, an in-person survey conducted with the identified child's primary caregiver living with and responsible for the child (usually the mother). This interview covered a range of topics, such as the caregiver's belief in the importance of school readiness and the family's support for the young child's early learning. Information was also collected regarding household characteristics. This tool was administered to both Intervention and Control group caregivers at both the baseline and outcome assessments, and generally took about 30-45 minutes to complete. This tool was identical across countries, but each country had its own list of household resources that would distinguish higher- versus lower-resource homes in that country.

Supplemental Caregiver Interview: Upon completion of caregiver interview one, caregivers from both the Intervention and Control groups completed a short supplemental interview that provided information regarding the young child's attendance at other early childhood development programmes, and – for Intervention group caregivers only – provided information regarding any reason for non-participation in the *Getting Ready for School* programme, caregivers' evaluation of the programme, and the effectiveness of programme communications efforts. This tool was administered at the outcome evaluation only. This tool was identical across countries.

Teacher Survey: This survey was composed of a series of questions regarding teachers' attitudes toward child-centred pedagogy, their beliefs in the importance of school readiness, and – among first grade teachers – their expectations for school readiness among young children newly enrolling at their school. This survey was completed by both Intervention and Control group teachers at both the baseline and outcome assessments. This tool was identical across countries, but was not completed in China (because few teachers were involved in the programme model used in China).

Young Facilitator Survey: This instrument contained a series of questions related to Young Facilitators' academic engagement and progress, attitudes toward learning, and belief in the importance of school readiness for young children. During the outcome evaluation, Young Facilitators also responded to questions regarding their evaluation of the *Getting Ready for School* programme. There was no Control group for Young Facilitators, so this tool was administered to Intervention group participants only. This tool was identical across all countries except China. In China, questions from this survey were adapted for caregivers because they had acted as the facilitators.

Community Stakeholder Interviews: These instruments included an interview for school heads from *Getting Ready for School* Intervention schools and an interview for community leaders in Intervention communities, and were completed at the time of the outcome assessment. The interview for school heads included questions regarding the current state of early childhood education opportunities in the community, school-community relationships, their assessment of how well the *Getting Ready for School* programme worked in their school, programme successes and challenges, and what additional supports would be needed to make the programme sustainable in their community. The interview for community leaders included questions regarding the current state of early childhood education policies and opportunities in the community, school-community relationships, community resources available to support early childhood development programmes, and what additional supports would be needed to make the programme sustainable in their community. These tools were identical across countries.

Session Records: Teachers implementing the *Getting Ready for School* programme completed this record form after each programme session to provide their feedback regarding the extent to which session instructions were clear for teachers and young facilitators, to what extent the session activities were fun for the children, and whether the activities were at the right level for the children (not too easy, not too difficult). This tool was identical across countries, but was not completed by teachers in China (because few were involved in the programme model used in China).

Cost Records: In-country research team staff maintained records regarding the start-up costs of the programme, and costs associated with implementing the programme throughout the intervention. Cost record forms included direct costs for both the county UNICEF office (such as programme oversight; teacher training; adaptation, translation, printing and delivery of materials; and communications) and for the schools (such as teacher compensation, extra materials and snacks for participants). Record forms also included indirect costs such as staff time for both the county UNICEF office and school staff. This tool was identical across countries.

Primary School Enrolment Records: In-country research team staff completed a primary school enrolment record form approximately four months after the start of the school year to identify whether children had enrolled in school on time (within the first week of school), and whether children were (still) enrolled approximately three months after the beginning of the school year (as of December 31, 2009 for all countries except Bangladesh, which follows a different academic calendar). This tool was identical across countries, and was completed for both Intervention and Control group children.

1.3.3 Data collection

A training workshop held in January 2008 in England provided countries with an overview of the evaluation design and their roles and responsibilities in the evaluation. Country UNICEF offices were then responsible for assembling an evaluation team to carry out the evaluation according to the standards established by UNICEF, and for communicating with AIR and UNICEF headquarters throughout the evaluation. Within each country, an Evaluation Focal Point person was identified to manage the process. Three countries (Bangladesh, Tajikistan and Yemen) contracted with local data collection firms to complete baseline data collection activities. AIR conducted intensive trainings with the Evaluation Focal Point and data collection teams (or a trainer for the data collection team) prior to baseline data collection for all participating countries (except China). Note that evaluation teams for both Yemen and Bangladesh adopted a "training of trainers" approach wherein the representatives attending the training returned to their respective countries to train the data collectors regarding correct procedures.

AIR developed an Assessors' Guide that focused on instrument implementation and data collection techniques and an Evaluation Operations Manual that focused on evaluation management strategies, data collection planning, translation of instruments and quality control in data collection. The Evaluation Operations Manual laid out the steps to guide the Evaluation Focal Point in each country through the data collection process. Part of the training was also devoted to critical topics such as introducing the study and gaining informed consent, building rapport with young children and their caregivers, maintaining participant confidentiality, and maximizing the ease of data collection and validity of data. Continuous communication and distance-training by AIR and, to the extent feasible, country site visits by AIR provided countries with technical support as they implemented the evaluation.

Access- or Excel-based data entry templates were developed by AIR for all instruments. A separate document containing data entry instructions was also sent to countries. To minimize data entry errors, the templates were set up to only allow the entry of valid values.

1.3.4 Analytic approach

Our analytic approach was based on an intent-to-treat model. We wanted to know whether introducing *Getting Ready for School* into a community had an impact on young children, their families and others within that community. Therefore all children, caregivers, teachers and Young Facilitators assigned to the Intervention group were included in the analyses, whether or not they took part in *Getting Ready for School*. So we are examining the impact of having the programme *made available* in the community to provide us with a more accurate picture of how much a community benefited from the programme (rather than how just those individuals who chose to participate in the programme may have benefited).

Repeated-measures analyses were used wherever both baseline and outcome data were collected. General linear models were used to determine whether group assignment (Intervention versus Control) played a significant role in changes observed from baseline to outcome for young children, caregivers, and teachers. Additional factors were introduced into the models to identify any differential programme effects – that is, we were able to determine whether having a certain characteristic meant that someone benefited more or less than others from the intervention. For example, one could find that the programme has a stronger impact in one region of a country than in another. Effect size calculations were based on partial eta-squared (η^2).[1] When we look at changes in scores or responses from baseline to outcome, this measure tells us *how much* of the difference between the Intervention and the Control groups can be attributed to the intervention.

Young Facilitators did not have a control group, so their data were analyzed using paired-sample t-tests, allowing us to examine whether changes from baseline to outcome were statistically significant. Note that the lack of a control group for Young Facilitators, however, means that we cannot be sure whether

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[1] Note that partial eta-squared tends to be a generous measure of effect sizes, and may over-estimate programme effects – especially with a small sample.

students who did not have the programme made available to them would have shown similar changes in academic engagement or attitudes over the course of a school year.

Qualitative information from interviews with school heads and community leaders was systematically reviewed for themes related to successes, challenges, and sustainability of the programme within their communities.

Programme cost information was calculated based on information provided by each country on the cost record form and information provided by teachers from each session regarding any other programme costs that were incurred. There are two aspects of cost in the implementation of a pilot programme or any new programme – the cost of developing and launching the programme in the country or region, and the cost of implementing the programme. The cost of launching a programme is generally expected to be the most costly in the first year as there may be start-up costs involving advocacy for the program, the development of the programme design and materials, the establishment of systems to meet the programme's need (such as printing and distributing materials), and the training of key staff. These costs may be incurred again on a smaller scale within a country if the programme expands to a new region or significant changes are made in programme design. For each country where cost information is available (Bangladesh, Ethiopia, Tajikistan and Yemen), we present start-up and ongoing cost information, describing the assumptions and types of costs that were incorporated into that country's cost analysis.

1.4   Presentation of Findings

In the remainder of this report, we present evaluation findings at the country level for each of the six countries, summarize results across countries, and include a final chapter that discusses the results of this pilot programme evaluation and provides recommendations for further developing and scaling up the programme within the current pilot countries and into new countries.

For each country, we provide information about the need for *Getting Ready for School* in that country or in communities within that country, programme design, evaluation sample and programme implementation – including programme attendance, information about programme sessions such as whether instructions were clear, whether children attended other early childhood development programmes, programme communications, and information from stakeholders such as challenges in programme implementation and what would be needed for the programme to be sustainable in their community. We then present findings for programme impacts on young children, caregivers, Young Facilitators and teachers, and (where information is available) the costs associated with the programme in that country. We conclude each country chapter with a summary of findings and recommendations.

CHAPTER 2   BANGLADESH: COUNTRY-LEVEL IMPACTS

In this chapter, we present country-level results for Bangladesh, including the reason for the intervention; the implementation of the *Getting Ready for School* programme in Bangladesh; programme impacts for young children, families, Young Facilitators and teachers; and programme costs. We conclude the chapter with a discussion of the findings and list of recommendations for the future success of the *Getting Ready for School* programme in Bangladesh.

2.1   Need for the Intervention

In 1990 the government of Bangladesh instituted the Primary Education Compulsory Act, which mandated free and compulsory education for the first five years of school. This policy has greatly increased the number of children enrolled in primary school, but the nation is struggling to meet the demand for quality education. The majority of families with infants and young children in Bangladesh have limited access to services that can help them to nurture their child's cognitive and psychosocial development. Similarly, service providers in the health and education sectors receive little training to acquire skills and resources for providing services related to early childhood development. In combination, these circumstances create an environment where the vast majority of young children do not receive the type of supports that can best prepare them for enrolment in primary school at age six, contributing to high drop-out and repetition rates and compromised learning outcomes.

In 2001, the Ministry of Women and Children's Affairs, with financial and technical assistance from UNICEF, started an early childhood development project to support advocacy, mobilization, caregivers' education, school readiness, and networking and capacity building of partners. This project resulted in an increased awareness of the benefits of supporting early childhood development, and most notably, an increased number of communities initiating preschools attached to primary schools with support from local NGOs. The Bangladesh Rural Advancement Committee (BRAC), an indigenous NGO, took part in a UNICEF-supported early childhood development project from 2001 to 2005 that resulted in an increase in knowledge about care needed for proper physical growth and mental development of children. BRAC has now initiated its own pre-primary school system. With support from UNICEF, the Bangladesh government and other local NGOs, the Bangladesh Shishu Academy is implementing an Early Learning for Child Development project that aims to empower caregivers to promote the cognitive, emotional and social development of children from birth to age five.

While numerous local NGOs are now running small early childhood development centres throughout the country, on average, less than 15 percent of children receive formal education prior to primary school (World Bank, 2005). In response to the inaccessibility of pre-primary education, the Ministry of Primary and Mass Education has identified pre-primary education as a policy priority and is currently developing a national curriculum and formal structure for early education. The Ministry has also proposed training of teachers for pre-primary classes, providing pre-primary classroom space inside the primary schools, supply of teaching materials and other necessary support. Early childhood development programmes will be implemented in two tracks: pre-school classes in primary schools for five-year-olds and an alternative family-based programme for three- to five-year-old children from historically marginalized families. These

early education programs will be linked with health, nutrition and other complementary services. The *Getting Ready for School* programme fits well within the goals of the current administration to expand access to early educational opportunities.

2.2   Nature of the Intervention

The *Getting Ready for School* programme in Bangladesh was implemented in collaboration with the Directorate of Primary Education (DPE). The DPE team piloted *Getting Ready for School* in 30 schools. From each of the six administrative divisions of the country, the DPE selected one district and two upazilas (sub-districts) based on high drop-out and low school completion rates. DPE then randomly selected five schools from each upazila. The districts that were chosen are geographically representative of the country. UNICEF and DPE decided to randomly select Intervention and Control schools from different upazilas in order to prevent cross-group contamination. Altogether, the pilot project included 30 Intervention group schools, with 450 Young Facilitators and 2,000 young children.

A Young Facilitator from the fifth grade was paired with one or two eligible five-year-old children. The 35-week programme was designed to be implemented during a school year, with one session per week. Young Facilitators and young children participating in the project received early learning kits filled with materials intended to foster early literacy and numeracy. The activities were divided into sets, and activities within and between the sets become progressively more complex. The activities included pictures, games, rhymes and songs that encouraged children to experiment with common everyday objects, solve problems and draw conclusions. The *Getting Ready for School* intervention was envisaged as a one-year programme to be implemented with children the year before they were eligible to enrol in primary schools.

2.3   The Evaluation

In this section, we present information on data collection procedures and the evaluation sample in Bangladesh, noting any areas of concern that could influence the interpretation of findings.

2.3.1   Data collection

Baseline data were collected in January of 2009; outcome data for teachers, Young Facilitators and community stakeholders were collected in November of 2009; and outcome data for children and their caregivers were collected in December of 2009. Data were collected by trained, certified assessors. Data collection quality monitoring was conducted by UNICEF and the contracting NGO. No significant issues arose during the course of data collection.

2.3.2   Sample

In this section, we present information about the schools, children and caregivers, Young Facilitators, and teachers who took part in the evaluation. Of the 450 Young Facilitators and 2,000 young children who participated in the programme, a random sub-sample was selected for inclusion in the evaluation.

Table 2 shows the characteristics of the 30 participating Intervention group schools and 30 Control group schools at the time of the baseline evaluation.

Table 2 School Characteristics at Baseline

	Intervention	Control
Number of students enrolled	M = 281 (Range 94 – 1,043)	M = 281 (Range 70 – 890)
Number of teachers and educational assistants	M = 8 (Range 3 – 21)	M = 6 (Range 1 - 13)
Student/teacher ratio	M = 40:1 (Range 11:1 – 84:1)	M = 58:1 (Range 17:1 – 135:1)
Daily absence rate as of 2007/2008 school year	M = 19% (Range 7% – 43%)	M = 24% (Range 6% – 65%)
Dropout rate as of 2007/2008 school year	M = 3% (Range 0% – 25%)	M = 5% (Range 0% – 17%)

At the baseline evaluation, 53 of the 60 Intervention group teachers took part in the evaluation, along with 49 in the Control group. Of those, 49 of the Intervention group teachers and 41 of the Control group also participated in the outcome evaluation. So we do not have concerns about differential attrition among teachers.[2] Table 3 shows the characteristics of teachers in the Intervention and Control groups (as reported at baseline). Teachers in the Intervention and Control groups did not significantly differ with regard to their years of experience teaching, educational level or whether they lived in the community where their school was located.

Table 3 Teacher Characteristics at Baseline

	Intervention	Control
Gender (% female)	51%	42%
Years teaching	M = 9.1 (SD = 8.6)	M = 9.5 (SD = 9.2)
Live in school community? (% yes)	59%	65%

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[2] Differential attrition is typically defined as a 10 percent or greater difference in attrition between one group and another (in this case, between the Intervention and the Control group). When differential attrition has occurred, there can be concern that groups are no longer equivalent and adjustments must be made in the course of data analysis.

Of the 883 children who took part in the baseline evaluation in Bangladesh, 814 also took part in the outcome assessment – an overall attrition rate of 7.8 percent. Within the Intervention group, 432 children completed the baseline assessment and 399 completed the outcome assessment (an attrition rate of 7.6 percent). Within the Control group, 451 children completed the baseline assessment and 419 completed the outcome assessment (an attrition rate of 7.1 percent). So we do not have concerns about differential attrition among children and families. Note that an additional three Intervention group children and one Control group child completed the outcome assessment but did not participate in the baseline, for a final sample of 887 children. See Table 4 for a summary of child and family characteristics at baseline.

Table 4 Child and Family Characteristics at Baseline

	Intervention	Control
Gender of participating child (% female)	53%	46%
Number of household members	M = 5.5 (SD = 2.3)	M = 5.5 (SD = 1.7)
Number of household members under age 12	M = 1.5 (SD = 1.2)	M = 1.6 (SD = 1.2)
Two-parent households	90%	95%
Families with out-of-school children[3]	13%	10%
Responding caregiver literacy (% literate)	51%	50%
Family resource level[4] (% low)	65%	69%

A total of 410 Young Facilitators were in the Intervention group. Of those, 397 were retained for the outcome evaluation – a low 3 percent attrition rate. There was no control group for Young Facilitators. Table 5 shows the characteristics of the Young Facilitators.

Table 5 Young Facilitator Characteristics at Baseline

Gender (% female)	46%
Grade	
Four	< 1%
Five	18%
Six	82%

Community leader interviews were completed with school heads and with school management committee members from each of the 30 Intervention group schools.

2.4   Programme Implementation

In this section, we provide information regarding the level of participation in the *Getting Ready for School* programme among children assigned to the Intervention group and among the Young Facilitators; programme implementation; the extent to which children in both the Intervention and Control groups participated in other early childhood development programmes; the success of programme

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[3] Among households with one or more older children aged 7-13, percentage of households where at least one of those children was not enrolled in school at the time of the baseline evaluation
[4] Low resource level based on the presence of three or fewer of the following items in the household: Bed, radio, living room, television, satellite receiver, mobile telephone, gas cooker, refrigerator or washing machine, car

communications in conveying key messages to the community; and stakeholder perceptions of programme strengths, challenges and sustainability.

2.4.1 Participation in *Getting Ready for School* among Intervention group children

There were 35 programme sessions offered. A total of 435 young children were assigned to the Intervention group, and attendance records were available for 390 of those children. According to programme records, young children attended an average of 31.5 sessions (SD = 4.33) – an attendance rate of 90 percent. One hundred and three children (26 percent) had perfect attendance. Only one child did not attend any sessions (according to programme records), and three children did not attend any sessions according to their caregivers (of those, two had no attendance information from the programme, but one child had attended 33 sessions according to programme records). We did not find significant differences in child attendance rates based on children's gender, household resource level, whether older children in the household were in school or out of school, or whether the caregiver who completed the baseline interview self-identified as literate or illiterate.[5]

Session attendance information was available for 215 of the 397 Young Facilitators with both baseline and outcome information. Among the Young Facilitators for whom attendance information was unavailable, it appears to be a case of missing records rather than non-attendance because records tended to be missing for whole schools rather than for individuals within schools. The 215 Young Facilitators for whom information was available attended an average of 94 percent of sessions, with 46 percent (n = 99) having perfect attendance. We did not find significant differences in Young Facilitator attendance based on their gender.

2.4.2 Implementation of the *Getting Ready for School* programme

As intended, the *Getting Ready for School* programme was implemented across 35 sessions, with each session lasting approximately two to three hours. At the conclusion of each session, the teacher completed a session record where he or she indicated whether the instructions in the teacher's guide were clear, whether the teacher felt that literacy and numeracy activities were fun for most of the children, whether the Young Facilitators felt that activities were fun, whether the lessons were at the right level of difficulty for the young children, and whether the Young Facilitators found it easy or difficult to implement the activities. Teachers also provided information about resources they had purchased for the sessions, preparation time, and their recommendations for any needed improvements in the programme.

Teachers found their instructions to be *Very clear* 78 percent of the time, *Somewhat clear* 22 percent of the time, and *Not clear* less than 1 percent of the time. Young Facilitators found their instructions to be easy to follow 83 percent of the time.

Teachers and Young Facilitators gave similar ratings for how fun the activities were for the young children. Teachers rated the activities *Very fun* 77 percent of the time, *Somewhat fun* 22 percent of the time, and *Not fun* just 1 percent of the time. Young Facilitators rated the activities as *Very fun* 76 percent of the time, *Somewhat fun* 24 percent of the time, and *Not fun* less than 1 percent of the time. Just 38 percent of activities were rated by teachers as being at the right level of difficulty for children, with a much higher 60 percent rated *very easy* and less than 3 percent *Too difficult*.

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[5] With $t(387) = 0.83$, *ns* for gender; $t(387) = -1.19$, *ns* for resource level; $t(182) = -0.45$, *ns* for older child in school or out of school; $t(387) = -1.55$, *ns* for caregiver literacy

2.4.3   Participation in other early childhood development programmes

There were substantial differences between the Intervention group and the Control group with regard to their participation in other early childhood development programmes. While only 11 percent of the intervention group (n = 44) participated in another programme, 69 percent of the Control group did (n = 287). Among the Intervention group children that attended another programme, 64 percent (n = 27) attended a private preschool, 21 percent (n = 9) attended a public (government-run) preschool, 10 percent (n = 4) attended a private kindergarten, and 5 percent (n = 2) attended a grade zero programme at a public or private school. Among the Control group children who attended a programme, 42 percent (n = 120) attended a public preschool, 34 percent (n = 97) attended a private preschool, 12 percent (n = 33) attended grade zero at a public or private school, 11 percent (n = 32) attended a private kindergarten, 1 percent (n = 2) participated in educational sessions run once or twice per week by a local community organization or NGO, and one child attended public kindergarten.

Because of the high rate of participation in other early childhood education programmes, and due to the differences between the Intervention and Control group in rates of participation, we will examine whether and to what extent participation in another early childhood development programme influences the impact of the *Getting Ready for School* programme on young children's development.

2.4.4   Programme communications

Through the caregiver supplemental interview, we were also able to evaluate how successfully the *Getting Ready for School* programme communicated with Intervention group families. Four questions were asked, including how well parents understood what the *Getting Ready for School* programme was about, whether other parents in their community knew about *Getting Ready for School*, which methods of advertisement were used in their community and what messages *Getting Ready for School* conveyed about children's development and school readiness.

Forty-seven percent of caregivers (n = 180) reported that they understood the *Getting Ready for School* programme very well, while 43 percent (n = 164) reported that they only knew a little bit about the program, and 10 percent (n = 37) reported that they did not understand what the programme was about. Ninety-five percent of caregivers (n = 360) thought that other parents in their community were familiar with the programme. The most common forms of communication that caregivers reported observing were announcements in local community organizations (87 percent, n = 331). The programme used leaflets to provide information about the programme, but had not undertaken any distribution of posters in public places. UNICEF staff reported that there was another early learning initiative that was happening simultaneously in these communities that made use of posters, and families could have confused the two programmes. Fifty-six percent of caregivers (n = 215) reported hearing about *Getting Ready for School* through word of mouth (e.g., personal communication with family members, neighbours and friends). Fewer than 1 percent reported learning about *Getting Ready for School* through radio or television.

Nearly all caregivers reported that they felt the *Getting Ready for School* programme conveyed at least two messages, the most common of which included: *Children learn through play*; *Children can learn a lot/you help your child learn through everyday activities such as eating and going to the market*; *Older children can help younger children learn/get ready for school*; and *Learning can help improve a child's future*.

2.4.5   *Getting Ready for School* programme strengths and challenges

There were several areas of strength in this pilot programme. First, there was a high level of buy-in from communities, the Ministry of Education, local school staff, families and children. Second, School Management Committees and/or a school chairperson played a significant role in programme implementation in many communities. These groups or individuals provided ongoing oversight and support to the teachers and families involved in the programme, even though this support had not been formally planned. Third, *Getting Ready for School* seems to have already gained a high level of family

involvement in many communities. Many families contributed materials and snacks to the programme, and accompanied their children to sessions. Anecdotal evidence suggests that families have incorporated some of the *Getting Ready for School* activities such as songs and rhymes into everyday living at home. For example, one mother said,

> My daughter has learned a lot during this project. She has become more confident and makes contact with other children. She knows the days of the week. She counts and writes her own name. I like the songs, too, and we sing them together sometimes. I will enrol my daughter in primary school next year and I hope she will complete her Masters one day. I studied only up to class six.

Most school heads (83 percent, n = 25) believed that as a result of the programme, parents had become more likely to visit the school outside of regular meeting times and were more active in their support for their child's education. Forty percent (n = 8) expressed the opinion that this increased school-home communication had also resulted in better retention in school among the Young Learners. Reports from school heads suggest that Young Facilitators have become more serious about their school work, and have developed their communication and social skills through participation in the programme.

Stakeholders identified some challenges to successful programme implementation, and issues that may have limited the programme's positive impact. First, there have been challenges associated with getting teachers to volunteer to take part in the programme in the absence of extra pay or an honorarium. Second, UNICEF Bangladesh staff reported that quality monitoring of the programme implementation in the field was weak, with some monitors focusing more on completing paperwork than on active programme oversight. Third, teachers were observed to speak about the programme participants in ways that may have undermined self-esteem and positive feelings about the project. For example, some teachers reportedly told their classes that the most talented students would be chosen to be Young Facilitators (implying that the students who were not selected were inferior), and making negative comments about the Young Learners' capabilities. A fourth area of concern is that in sessions with young children, some Young Facilitators imitated negative characteristics of their own teachers, such as speaking in a loud voice, engaging in rote repetition, and using corporal punishment.

2.5   Programme Impacts on Children

In this section, we present programme impact findings for young children in the areas of school readiness and on-time enrolment in primary school. We examined the data for any differential programme impacts for children based on their gender, their household resource level, and whether the caregiver who completed the baseline interview self-identified as literate or illiterate. Among young children who lived with an older school-age child, we looked for differential programme impacts based on whether that older child was enrolled in school or not. And among children in the Intervention group, we looked at whether there was any significant relationship between the number of *Getting Ready for School* sessions they participated in and their acquisition of school readiness skills and behaviours.

2.5.1   School readiness

We examined children's school readiness in the areas of academic skills, perceptual motor skills, attention, mastery motivation, and the ability to follow directions. Academic skills included colour naming, pattern recognition, beginning mathematics (including numeral identification, counting and applied addition and subtraction) and beginning literacy (including letter identification, beginning reading and beginning writing).

Colour naming

Children were shown a page with nine coloured flowers (red, blue, green, yellow, black, grey, orange, pink and purple). Children were asked to say the colour name for any colours they knew, and then for any colours they did not recall, children were provided with the name of the colour and then were asked to

point to the flower of that colour (recognition). Figure 2 shows the average percentage of colours recognised and recalled in each group. There was a small programme effect on children's ability to recognise colour names, and a medium effect on their ability to recall (spontaneously name) colours.[6]

Figure 2 Percentage of Colours Identified Correctly
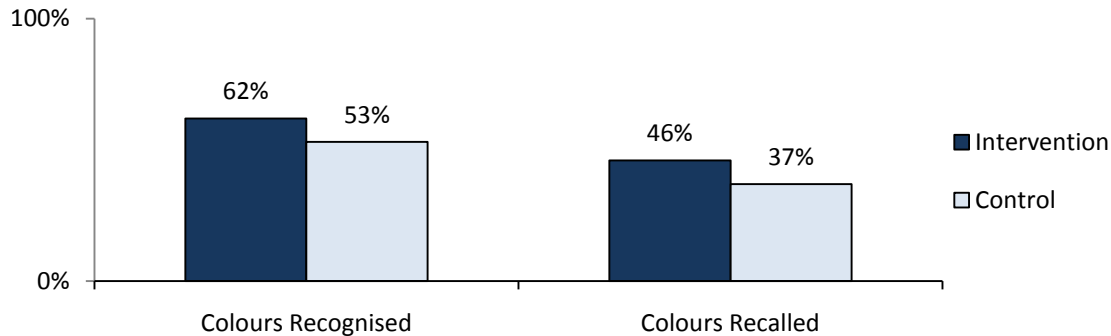
In the area of colour name recall (but not colour recognition), there was a greater programme benefit for children who were not enrolled in another early childhood development programme.[7] There were no significant differences in programme effects based on child gender, household resource level, whether older children in the household were in school or out of school, or whether the caregiver who completed the baseline interview self-identified as literate or illiterate. Among children in the Intervention group, the number of *Getting Ready for School* sessions attended did not have any significant effect on the percentage of colour names they could recognise or recall.

Pattern recognition

Children were first presented with a pattern of two alternating colours, then a pattern of three alternating colours. For each, the assessor placed coloured plastic bears one by one in sequence (e.g., red, blue, red, etc.). The child was then asked to choose which of three coloured bears came next. Figure 3 shows the percentage of children in each group who were able to correctly complete the two-colour and the three-colour patterns. There was a small programme effect on children's ability to complete a two-colour pattern, but no significant programme effect on children's ability to complete a three-colour pattern.[8]

Figure 3 Percentage of Children who Completed Patterns

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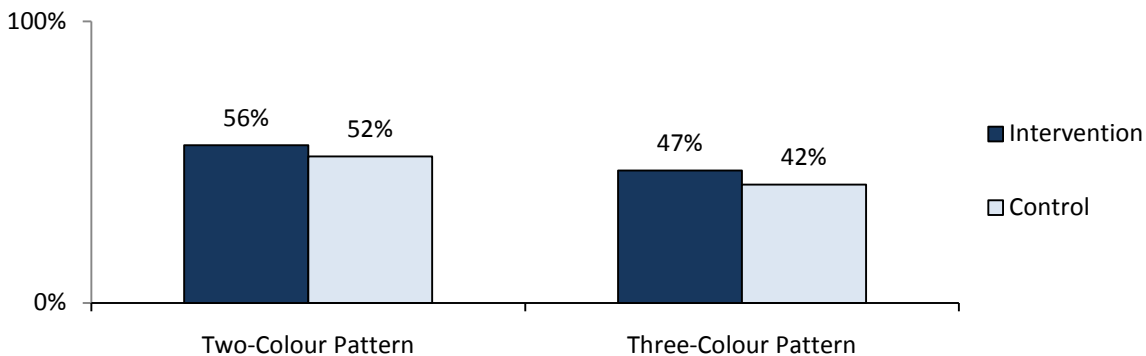
[6] With $F = 23.29$, $p < .001$, partial $\eta^2 = .028$ for recognition; $F = 39.36$, $p < .001$, partial $\eta^2 = .046$ for recall

[7] With $F = 4.92$, $p = .038$, partial $\eta^2 = .020$ for older child school enrolment; $F = 9.99$, $p = .002$, partial $\eta^2 = .013$ for attendance at another early childhood development programme

[8] With $F = 11.85$, $p = .001$, partial $\eta^2 = .014$ for two-colour pattern; $F = 0.10$, $p = .758$, partial $\eta^2 < .001$ for three-colour pattern

There were no significant differences in programme effects based on child gender, whether the child had participated in another early childhood development programme or not, household resource level, whether older children in the household were in school or out of school, or whether the caregiver who completed the baseline interview self-identified as literate or illiterate. Among children in the Intervention group, the number of *Getting Ready for School* sessions attended did not have any significant effect on their ability to complete a two-colour or a three-colour pattern.

Beginning mathematics

In the area of beginning mathematics, we assessed children's ability to name and recognise written numerals, to count to 10, to count objects with one-to-one correspondence (that is, assign one number name to each object), and to complete simple applied problems in addition and subtraction. Across tasks, there was a small positive programme effect on children's school readiness in the area of mathematics.[9,10]

There were no significant differences in programme effects based on child gender, household resource level, whether the child had attended another early childhood development programme or not, whether older children in the household were in school or out of school, or whether the caregiver who completed the baseline interview self-identified as literate or illiterate. Among children in the Intervention group, the number of *Getting Ready for School* sessions attended did not have any significant effect on their overall performance in beginning mathematics. Findings for each beginning mathematics task are presented in more detail below.

Numeral Recognition and Recall: Children were shown a page with pictures of numerals 0 through 9 and were asked to say the name of any numerals they knew (recall). Then for any numeral names they did not recall, children were provided with the name of the numeral and then were asked to point to the numeral (recognition). Figure 4 shows the average percentage of numerals recognised and recalled by children in each group. We found small programme effects on children's ability to both recognise and recall written numerals.[11]

Figure 4 Percentage of Numerals Identified Correctly
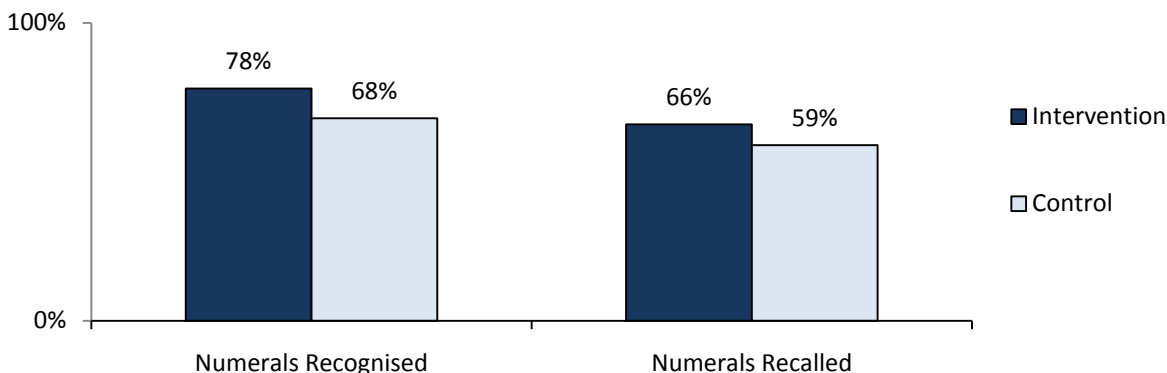
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[9] Cross-task mathematics performance was calculated for each child by summing correct number of responses for numeral recognition, counting to 10, counting with one-to-one correspondence, and the four addition and subtraction tasks

[10] $F = 22.58$, $p < .001$, partial $\eta^2 = .027$

[11] With $F = 20.85$, $p < .001$, partial $\eta^2 = .025$ for recognition; $F = 18.28$, $p < .001$, partial $\eta^2 = .022$ for recall

Counting: Children were presented with 10 plastic bears in a line and were asked to count them. Children were scored based on whether they counted to three, counted to 10, and counted with one-to-one correspondence. Figure 5 shows the percentage of children in each group who completed each counting task correctly. There was a small programme effect on children's ability to count to 10, but no significant effect on children's ability to count to three (nearly all children could) or on children's ability to count with one-to-one correspondence. [12]

Figure 5 Percentage of Children Counting Correctly
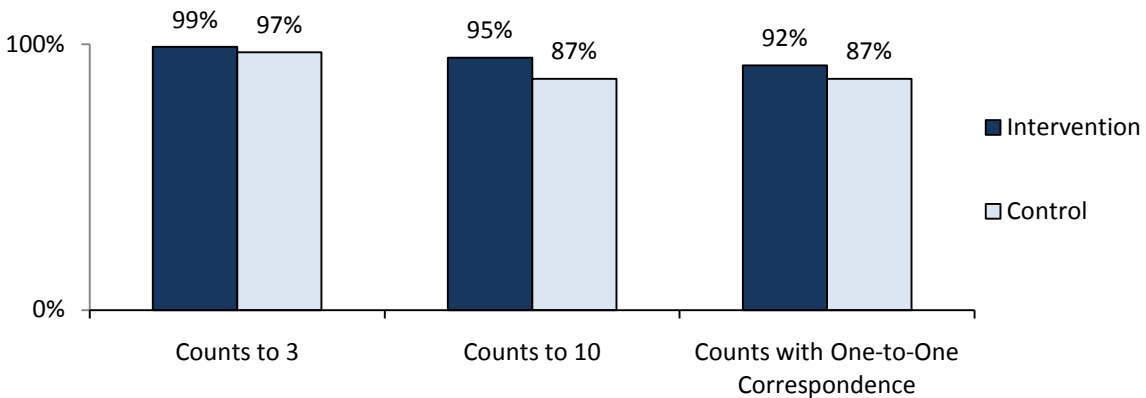
Addition and Subtraction: Children were presented with two problems in addition and two in subtraction. For each problem, the child was presented with plastic bears and asked to state how many bears there would be if a certain number were added or taken away. Children were given credit for either saying the name of the correct number, or showing the correct number with their fingers. Figure 6 shows the percentage of children in each group who completed each addition and subtraction task correctly. There was a small programme effect on children's ability to add three, but no significant effect on their ability to add one, subtract one or subtract three. [13]

Figure 6 Percentage of Children Solving Applied Problems in Addition and Subtraction

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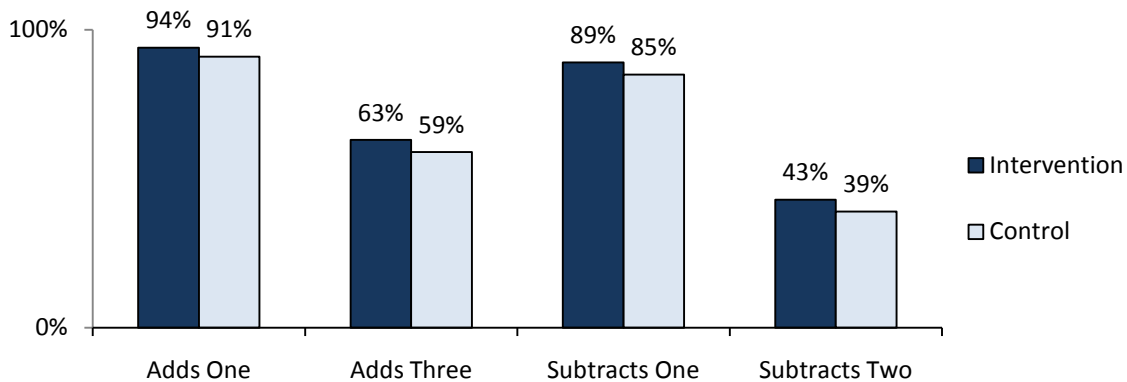
[12] With $F = 1.10$, $p = .30$, partial $\eta^2 = .001$ for counts to three; $F = 14.67$, $p < .001$, partial $\eta^2 = .018$ for counts to 10; $F = 1.20$, $p = .27$, partial $\eta^2 = .001$ for counts with one-to-one correspondence

[13] With $F = 1.10$, $p = .30$, partial $\eta^2 = .001$ for adds one; $F = 14.67$, $p < .001$, partial $\eta^2 = .018$ for adds three; $F = 1.20$, $p = .27$, partial $\eta^2 = .001$ for subtracts one; $F = 1.10$, $p = .30$, partial $\eta^2 = .001$ for subtracts three

Beginning literacy

In the area of beginning literacy, we assessed children's ability to name and recognise written letters, to read simple words, to write any letters and to write their name. Across tasks, we found no significant programme effect on children's school readiness in the area of beginning literacy.[14,15]

We did not find any significant differences in programme effects based on child gender, whether the child had attended another early childhood development programme or not, household resource level, whether older children in the household were in school or out of school, or whether the caregiver who completed the baseline interview self-identified as literate or illiterate. Among children in the Intervention group, the number of *Getting Ready for School* sessions attended did not have a significant effect on their overall performance in beginning literacy. Findings for each beginning literacy task are presented in more detail below.

Letter Recognition and Recall: Children were asked to look at a page with approximately nine letters of the alphabet printed on it, and asked if they knew the names of any of those letters (recall). Then for any letter names they did not recall, children were provided with the name of the letter and then were asked to point to that letter on the page (recognition). This procedure was repeated for three pages of letters in Bangla (a total of 26 letters). Figure 7 shows the average percentage of letters recognised and recalled by children in each group. There were no significant programme effects on children's ability to recognise or to recall letter names.[16]

Figure 7 Percentage of Letters Identified Correctly
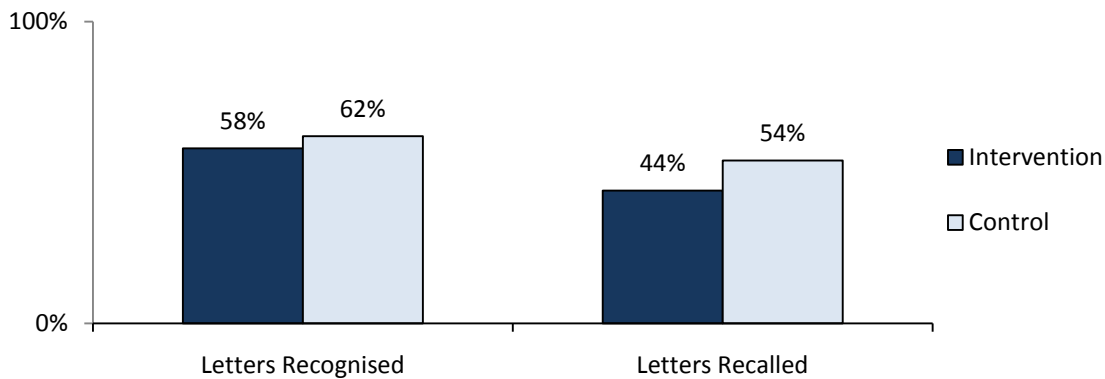
[14] Cross-task literacy performance was calculated for each child by summing correct number of responses for letter recognition, reading, writing any letters, and writing their whole name

[15] $F = 0.01$, $p = .927$, partial $\eta^2 < .001$

[16] With $F = 0.22$, $p = .642$, partial $\eta^2 < .001$ for recognition; $F = 1.91$, $p = .167$, partial $\eta^2 = .002$ for recall

Reading: Children were shown 10 words one by one and asked to read each word. Words were selected by project staff or others with expertise in beginning reading in Bangla. The first five words were considered easy beginning reading words, and the second five were more difficult. Children who were unable to read *any* of the five easy words were not asked to read the more difficult words. Figure 8 shows the average percentage of words read by children in each group. There was a small *negative* programme effect on children's ability to read words.[17]

Figure 8 Percentage of Words Read
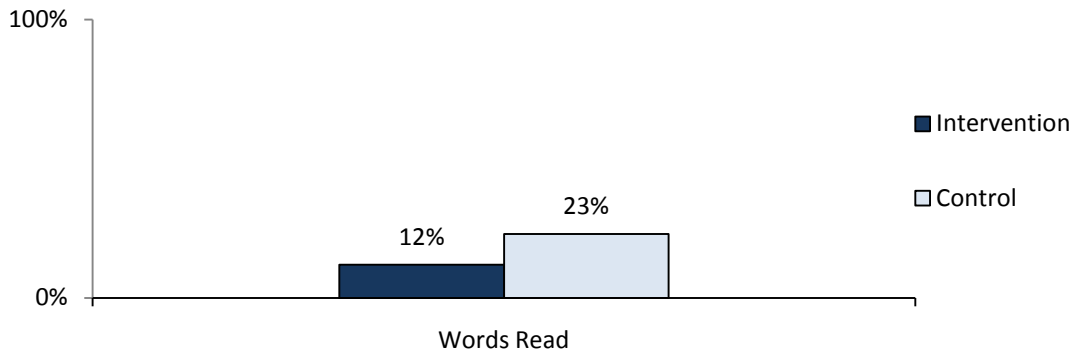
Writing: Children were provided with a sheet of paper with a line on it and a pencil, and asked to write their names. Children's responses were scored based on whether they could write any letters (whether or not these letters were part of their name), whether they could write at least half of the letters in their name, and whether they could write all of the letters of their name in the correct order. Letters were accepted even if they were reversed or poorly formed. Figure 9 shows the percentage of children in each group who performed each writing task correctly. There was a small-to-medium programme effect on children's ability to write any letters, a medium programme effect on children's ability to write at least half of the letters in their name, and a small-to-medium effect on children's ability to write their whole name.[18]

Figure 9 Percentage of Children Giving Correct Responses on Beginning Writing Tasks
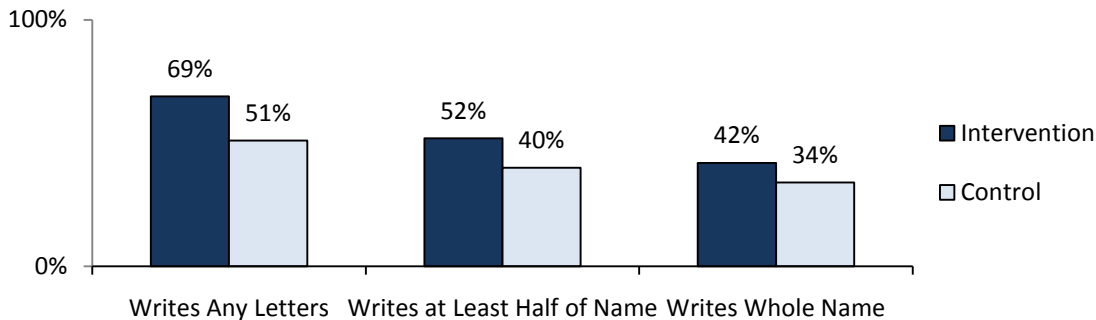
Perceptual motor skills

We measured children's perceptual motor skills with a series of four pencil-and-paper activities. Children were provided with a pencil and a sheet of paper with the dotted outlines of two straight lines, a circle, and a square. The assessor demonstrated how to trace a straight line, and asked the child to trace the remaining straight line, the circle and the square. Assessors noted whether the child knew how to hold a pencil correctly (based on local custom), and whether the child was able to trace each shape, staying on the dotted line at least 50 percent of the time.

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[17] $F = 13.69$, $p < .001$, partial $\eta^2 = .017$

[18] With $F = 25.08$, $p < .001$, partial $\eta^2 = .030$ for writing any letters; $F = 53.42$, $p < .001$, partial $\eta^2 = .062$ for writing at least half of the letters in their name; $F = 35.63$, $p < .001$, partial $\eta^2 = .042$ for writing all of the letters in their name

Figure 10 shows the percentage of children in each group who performed each perceptual motor task correctly. There was a small-to-medium programme effect on children's ability to hold a pencil correctly, a small effect on children's ability to trace a line, and a small effect on children's ability to trace a circle and to trace a square.[19]

Figure 10 Percentage of Children Correctly Completing Perceptual Motor Tasks
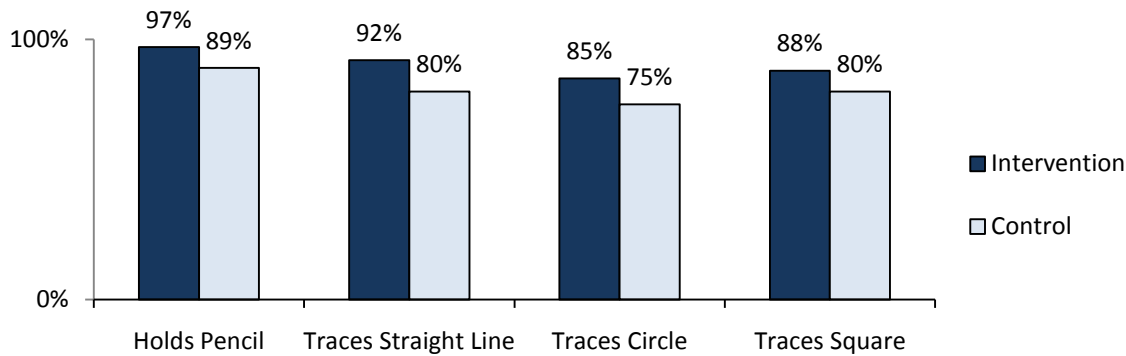
Across the four perceptual motor tasks combined, we found a small-to-medium programme effect on children's perceptual motor skills.[20] We did not find significant differences in programme effects based on child gender, whether the child had attended another early childhood development programme or not, household resource level, whether older children in the household were in school or out of school, or whether the caregiver who completed the baseline interview identified himself or herself as literate or illiterate. Among children in the Intervention group, the number of *Getting Ready for School* sessions attended did not have a significant effect on their perceptual motor skills.

Attention

We examined children's attention in three areas: Their ability to sustain attention on a detailed task, their ability to voluntarily focus their attention on tasks, and their ability to sit still during the assessment.

Sustained Attention: Sustained attention was measured with the Leiter-R sustained attention subtask,[21] a non-verbal task that requires the child to find as many pictures that match a model as they can within 30 seconds. Figure 11 shows the percentage of pictures marked correctly (out of 20 possible) by children in each group. There was no significant programme effect on children's sustained attention.[22]

Figure 11 Percentage of Pictures Marked Correctly

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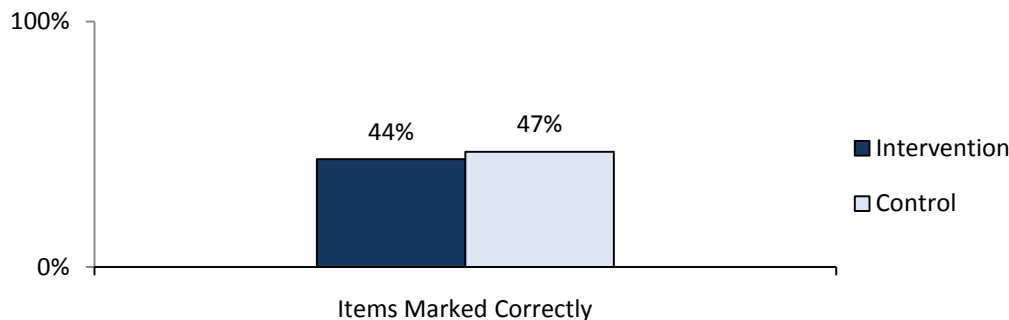
[19] With $F = 33.91$, $p < .001$, partial $\eta^2 = .040$ for holding a pencil; $F = 10.20$, $p = .001$, partial $\eta^2 = .012$ for tracing a line; $F = 19.59$, $p < .001$, partial $\eta^2 = .024$ for tracing a circle; $F = 7.17$, $p = .008$, partial $\eta^2 = .009$ for tracing a square
[20] $F = 27.67$, $p < .001$, partial $\eta^2 = .033$
[21] ©Stoelting Co., 1997, used with permission
[22] $F = 0.49$, $p = .483$, partial $\eta^2 = .001$

21

We did not find significant differences in programme effects on sustained attention based on child gender, whether the child participated in another early childhood development programme or not, household resource level, whether older children in the household were in school or out of school, or whether the caregiver who completed the baseline interview self-identified as literate or illiterate. Among children in the Intervention group, the number of *Getting Ready for School* sessions attended did not have a significant effect on their sustained attention.

Focused Attention and Body Movement: At the conclusion of the child assessment, the assessor rated the child's focused attention and body movement based on observation of the child's behaviour throughout the assessment. In the area of focused attention, the assessor rated the child's behaviour as *Focuses attention voluntarily*; *Attends with assessor direction*; *Some distraction with noise or movement of others*; or *Easily distracted*. In the area of body movement, the assessor rated the child's behaviour as *Sits quietly*; *Some squirming*; *Much movement*; or *Out of seat, body in constant motion*. Figure 12 shows the percentage of children in each group rated as focusing their attention voluntarily on the assessment tasks, and the percentage who were able to sit quietly during the assessment. There was a small positive programme effect on children's ability to voluntarily focus their attention on academic tasks, but a small negative programme effect on children's ability to sit quietly while completing academic tasks.[23]

Figure 12 Focused Attention and Body Movement
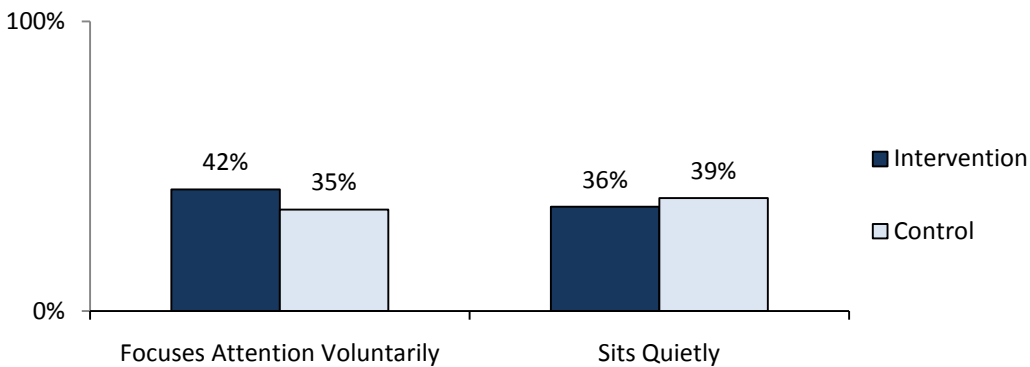
Children who attended another early childhood development programme received a greater programme effect from *Getting Ready for School* on their ability to focus their attention voluntarily.[24] There was no differential programme impact on children's ability to sit quietly. There were no significant differences in programme effects on children's focused attention or body movement based on child gender, household resource level, whether older children in the household were in school or out of school, or whether the caregiver who completed the baseline interview self-identified as literate or illiterate. Among children in the Intervention group, the number of *Getting Ready for School* sessions attended did not have a significant effect on their ability to focus attention voluntarily or to sit quietly while completing tasks.

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[23] $F = 15.27$, $p < .001$, partial $\eta^2 = .019$ for voluntary focus; $F = 7.28$, $p = .007$, partial $\eta^2 = .009$ for body movement
[24] $F = 4.81$, $p = .029$, partial $\eta^2 = .006$

Mastery motivation

At the conclusion of the child assessment, the assessor rated the child's task persistence and self-confidence based on observations of the child's behaviour throughout the assessment. In the area of task persistence, the assessor rated the child's behaviour as *Persists with task*; *Attempts task briefly*; *Attempts task after much encouragement*; or *Refuses*. In the area of self-confidence, the assessor rated the child's behaviour as *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*. Figure 13 shows the percentage of children in each group who assessors rated as persisting with assessment tasks (even if the task was difficult), and the percentage who were very sure of themselves (self-confident). There were small programme effects on both children's task persistence and their self-confidence while completing academic tasks.[25]

Figure 13 Task Persistence and Self-Confidence
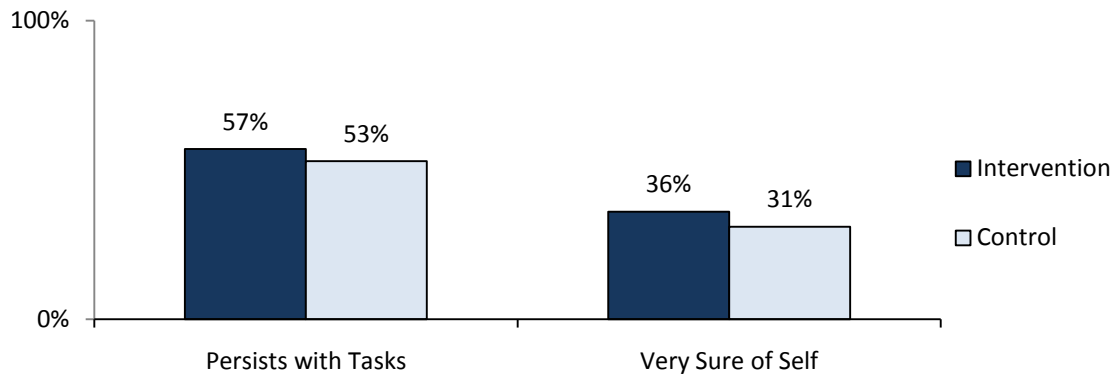
There were no significant differences in programme effects on children's task persistence or self-confidence based on child gender, whether the child participated in another early childhood development programme or not, household resource level, whether older children in the household were in school or out of school, or whether the caregiver who completed the baseline interview self-identified as literate or illiterate. Among children in the Intervention group, the number of *Getting Ready for School* sessions attended did not have a significant effect on their task persistence or self confidence.

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[25]$F = 22.45$, *p* < .001, partial η^2 = .027 for task persistence, $F = 8.48$, *p* = .004, partial η^2 = .010 for self confidence

Ability to follow directions

At the conclusion of the child assessment, the assessor rated the child's attention to and comprehension of directions based on observations of the child's behaviour 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 the area of attention to directions, the assessor rated the child's behaviour *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 the area of comprehension of directions, the assessor rated the child's behaviour *Rapid comprehension of directions, given age expectations*; *Understands after several repetitions*; *Partial comprehension of directions*; or *Does not appear to comprehend most directions*. Figure 14 shows the percentage of children in each group rated as attending to directions, and the percentage who comprehended directions rapidly. There was a small-to-medium programme effect on children's attention to directions but no significant effect on comprehension of directions.[26]

Figure 14 Attention to and Comprehension of Directions
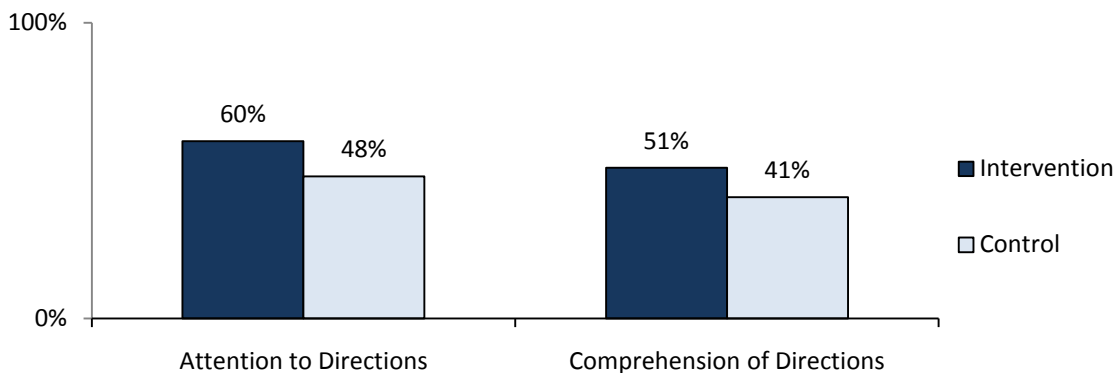
We found a small differential programme effect for attention to directions based on children's participation in another early childhood development programme. Children who had *not* participated in another programme received more benefit from *Getting Ready for School* than those who had.[27] This differential programme effect did not carry over to comprehension of directions. There were no significant differences in programme effects on children's attention to or comprehension of directions based on child gender, household resource level, whether older children in the household were in school or out of school, or whether the caregiver who completed the baseline interview self-identified as literate or illiterate. Among children in the Intervention group, the number of *Getting Ready for School* sessions attended did not have a significant effect on their attention to or comprehension of directions.

2.5.2   On-time enrolment in primary school

Among children in the Intervention group, 93 percent (n = 402) enrolled with the first week of school, 2 percent (n = 9) had not enrolled, and the status of 5 percent of the children (n = 22) was unknown. Among children in the Control group, 81 percent (n = 365) enrolled with the first week of school, 8 percent (n = 36) had not enrolled, and the status of 11 percent of the children (n = 50) was unknown. Therefore, while somewhat less information about on-time enrolment was available for the control group, it is highly likely based on this information that the Intervention group had a higher rte of on-time enrolment than the control group (but we cannot be certain what the exact differences between the two groups would be).

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[26] F = 28.87, p < .001, partial η^2 = .035 for attention to directions, F = 0.39, p = .533, partial η^2 < .001 for comprehension of directions
[27] F = 12.56, p < .001, partial η^2 = .016

2.5.3 Summary of programme impacts on young children

The *Getting Ready for School* programme had two goals for young children: To increase their school readiness and to increase their on-time enrolment in primary school. In the area of school readiness, we found small and small-to-medium positive programme effects on colour naming; pattern recognition; beginning mathematics; perceptual motor skills; and focused attention, persistence, self-confidence and attention to directions. We did not find significant programme effects in the areas of beginning literacy, sustained attention or ability to sit quietly or follow directions while completing academic tasks. We did not find a consistent pattern of differential programme effects based on child or family characteristics or risk factors. Among the Intervention group, while we did not find a significant relationship between number of *Getting Ready for School* sessions children attended and their school readiness on any tasks, fewer than 10 percent had attended 25 or fewer sessions so the overall high attendance with little variability may account for this finding. In the area of on-time enrolment, children in the Intervention group were more likely to have enrolled in school on time than children in the Control group, but the exact between-group difference is unclear because the enrolment status was unknown for 11 percent of the control group, versus only 5 percent of the intervention group.

2.6 Programme Impacts on Families

There were two *Getting Ready for School* programme goals for families: To improve their understanding of the importance of school readiness and to increase their active support for their young children's learning. Outcomes in each of these areas will be presented below.

2.6.1 Caregiver understanding of the importance of school readiness

We provided caregivers with a list of developmental areas such as health and social and emotional learning, and some specific academic skills. For each item listed in Table 6, caregivers were asked to indicate how important they believed it was for a child to have that characteristic or skill when he or she began first grade. Response choices were *Not at all important*, *Somewhat important*, or *Very important*. These items also came together to form an Importance of School Readiness scale.[28] There was no significant programme effect on caregivers' Importance of School Readiness scale scores.[29]

Table 6 Percentage of Caregivers who Indicated that It Was Very Important for a Child to Have Each Characteristic or Skill

	Intervention	Control
It is important that the child is in good physical health.	95.6% (n = 334)	89.4% (n = 370)
It is important that the child is confident.	86.5% (n = 334)	87.8% (n = 361)
It is important that the child is curious and explores his/her environment.	80.3% (n = 305)	78.0% (n = 323)
It is important that the child is able to play with other children.	86.3% (n = 334)	77.6% (n = 322)
It is important that the child has good problem-solving skills (for example, tries different ways to solve a problem).	68.0% (n = 257)	58.7% (n = 242)
It is important that the child knows some letters.	97.4% (n = 376)	96.4% (n = 400)

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[28] Scale reliability was α = .80 across the full sample at baseline
[29] F = 1.87, p = .178, partial η^2 = .002

	Intervention	Control
It is important that the child is able to read some words.	97.4% (n = 377)	94.2% (n = 391)
It is important that the child is able to write his/her own name.	96.9% (n = 375)	95.4% (n = 396)
It is important that the child is able to count from one to ten.	97.7% (n = 378)	96.4% (n = 400)
It is important that the child is able to recognise and name shapes.	91.5% (n = 354)	91.1% (n = 378)

We did not find any differential programme effects based on child gender, household resource level, or whether the caregiver who completed the baseline interview self-identified as literate or illiterate.

2.6.2 Active family support for young children's learning

We asked caregivers whether within the past week anyone in the household had engaged in each activity listed in Table 7 to support their young child's learning. These items came together to form a Support for Learning scale.[30] There was a small programme effect on Support for Learning scale scores.[31]

Table 7 Family Support for Children's Learning

	Intervention	Control
Told stories to child	85.5% (n = 331)	77.0% (n = 318)
Sang songs with child	66.9% (n = 259)	50.6% (n = 209)
Read books or looked at pictures with child	88.4% (n = 342)	86.0% (n = 357)
Took child out of home/yard/compound	75.6% (n = 296)	66.3% (n = 275)
Played with child	88.6% (n = 343)	77.3% (n = 321)
Spent time with child naming, counting or drawing things	91.5% (n = 354)	86.5% (n = 359)

We did not find any differential programme effects based on child gender, household resource level, or whether the caregiver who completed the baseline interview self-identified as literate or illiterate.

2.6.3 Summary of programme impacts on families

There were two *Getting Ready for School* programme goals for families whose young children participated: to improve their understanding of the importance of school readiness and to increase their active support for their young children's learning. There were no significant programme effects on caregivers' belief in the importance of school readiness, but there was a small programme effect on the number of activities caregivers engaged in to support their young child's learning. We did not find any differential programme impacts based on child gender, household resource level, or whether the caregiver who completed the baseline interview self-identified as literate or illiterate.

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[30] Scale reliability was $\alpha = .70$ across the full sample at baseline

[31] $F = 10.31$, $p = .001$, partial $\eta^2 = .012$

2.7   Outcomes for Young Facilitators

There were three *Getting Ready for School* programme goals for the Young Facilitators: to improve their educational engagement and performance, to increase their positive attitudes toward learning and to increase their understanding of the importance of school readiness. Outcomes in each of these three areas will be presented below.

2.7.1   Academic engagement and performance

We looked at student academic engagement in two areas: student reports of how often they had missed school without permission from the school or their family (truancy) and student reports of whether they planned to continue their education next year. Note that truancy did not include occasions when the student had to miss school in order to work or to help at home.

There was a significant decrease in Young Facilitator reports of truancy from school.[32] At the time of the baseline evaluation, 49 percent (n = 196) indicated that they had not been truant at all in the past year, 46 percent (n = 183) that they had been truant one to five days per month, and 5 percent (n = 18) that they had been truant six days or more per month. At the time of the outcome evaluation, 71 percent of Young Facilitators (n = 282) indicated that they had not been truant at all in the past year, 24 percent (n = 94) that they had been truant one to five days per month, and 5 percent (n = 21) that they had been truant six days or more per month. Ninety-nine percent of young facilitators (n = 394) indicated at baseline that they planned to continue their education next year, and 100 percent (n = 396) planned to continue their education at the time of the outcome evaluation.

To measure academic progress, we asked Young Facilitators to indicate what grades they usually received in each of four main academic subjects: language arts, mathematics, science and social studies. Response choices were *Mostly poor/failing, Mostly fair*, *Mostly good*, and *Mostly excellent*. Figure 15 shows the percentage of young facilitators who indicated that their grades were mostly good or excellent at the baseline and outcome assessments. There was a significant improvement in Young Facilitators' self-reported grades in all four subjects.[33]

Figure 15 Young Facilitators Reporting Grades of Good or Excellent by Subject

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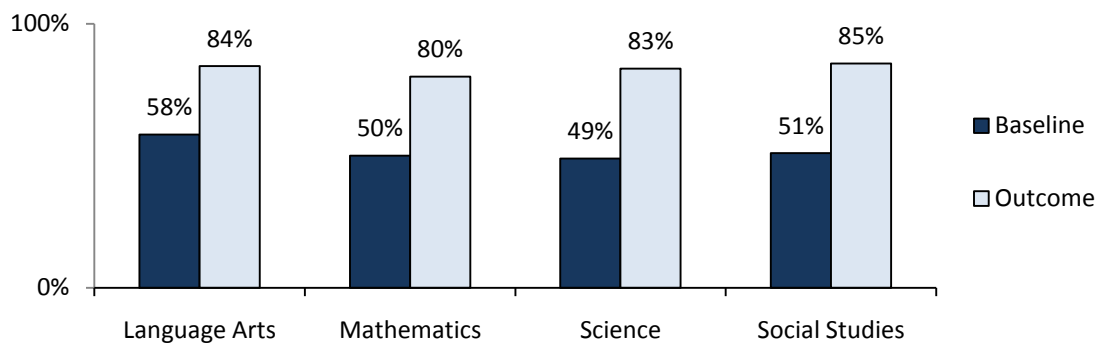
[32] $t(396) = -4.66$, $p < .001$

[33] With $t(396) = 10.92$, $p < .001$ for language arts; $t(396) = 11.81$, $p < .001$ for mathematics; $t(152) = 13.67$, $p < .001$ for science; $t(152) = 13.95$, $p < .001$ for social studies

2.7.2 Positive attitudes toward learning

Young Facilitators were presented with 14 statements regarding their attitudes toward learning, and were asked to indicate whether they agreed, disagreed, or were unsure for each. These items combined to form a Positive Attitudes toward Learning scale based on the survey items displayed in Table 8.[34] There was a significant increase in Young Facilitators' scale scores for Positive Attitudes toward Learning from baseline to outcome.[35] There were no significant differences in the degree of change in scale scores based on Young Facilitator gender. There was no significant relationship between number of *Getting Ready for School* sessions attended by Young Facilitators and changes in their positive attitudes toward learning from baseline to outcome.

Table 8 Young Facilitator Positive Attitudes toward Learning

	Baseline	Outcome
I get high marks at school.	85.6% (n = 340)	94.7% (n = 376)
Learning is fun.	98.7% (n = 392)	99.5% (n = 395)
I learn things from other students.	91.9% (n = 365)	97.2% (n = 386)
I learn things by playing with my friends.	94.2% (n = 373)	98.5% (n = 391)
I try to learn new things every day.	94.7% (n = 376)	99.2% (n = 393)
I enjoy solving problems in daily life.	93.2% (n = 369)	95.0% (n = 377)
I am trying my best at school work.	96.5% (n = 382)	99.0% (n = 393)
I like expressing my opinions in class.	93.5% (n = 371)	94.5% (n = 375)
I like teaching my friends or younger children to learn.	99.0% (n = 393)	98.2% (n = 390)
I like sharing my ideas with friends.	96.5% (n = 383)	98.7% (n = 392)
I like leading class activities.	90.9% (n = 361)	93.7% (n = 372)
Helping other students or younger children learn helps me learn as well.	98.0% (n = 389)	99.5% (n = 395)
The subjects I am learning at school will be important for me later in my life.	99.5% (n = 395)	99.5% (n = 395)
I plan to attend secondary school someday.	99.7% (n = 396)	99.5% (n = 395)

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[34] Scale reliability was α = .78 across the full sample at baseline
[35] $t(392) = 5.28$, $p < .001$

2.7.3 Understanding the importance of school readiness

Young Facilitators were presented with four statements regarding the importance of school readiness, and were asked to indicate whether they agreed, disagreed, or were unsure for each. There was one negatively worded item (shown in italics) where agreement shows a *lack* of support for the importance of school readiness. These items did not come together to form a reliable scale, so they are examined individually here. Table 9 displays the percentage of Young Facilitators who agreed with each statement at baseline and at outcome. Young Facilitators were significantly more likely at the outcome assessment than at the baseline assessment to agree that it was important for young children to learn about their new school before they go to first grade, more likely to agree that young children will have better marks in first grade if they have already learned letters and some mathematics before they go to first grade, and less likely to believe that it was a waste of time to teach young children before they went to first grade.[36] The more *Getting Ready for School* sessions that Young Facilitators attended, the greater the change in their attitude that it is a waste of time to teach young children before they go to first grade. There was no significant relationship between number of *Getting Ready for School* sessions attended by Young Facilitators and changes in their understanding of the importance of school readiness across the other three areas presented in Table 9.

Table 9 Young Facilitator Understanding of the Importance of School Readiness

	Baseline	Outcome
It is important for young children to learn about their new school before they go to first grade.	97.5% (n =387)	99.5% (n = 395)
It is a waste of time to teach young children before they go to first grade because they are too young to learn.	*19.6% (n = 78)*	*12.8% (n = 51)*
Young children will have better marks in first grade if they know most letters of the alphabet before they begin school.	98.7% (n = 392)	99.7% (n = 395)
Young children will have better marks in first grade if they have already learned a little bit of mathematics before they go to first grade.	98.5% (n = 390)	100.0% (n = 397)

2.7.4 Summary of outcomes for Young Facilitators

Because there was no control group for Young Facilitators we were not able to isolate specific programme impacts, so results should be interpreted with caution. We were able to compare baseline and outcome information at the level of the individual Young Facilitator to note any significant changes. Young Facilitators showed significant improvements in their academic engagement (attendance and self-reported grades in academic subjects), an increase in their positive attitudes toward learning, and an increase in their appreciation for the importance of young children's school readiness. And the more *Getting Ready for School* sessions Young Facilitators attended, the greater the change in their attitude that it is a waste of time to teach young children before they go to first grade.

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[36] With $t(396) = 2.13$, $p < .05$ for I*t is important for young children to learn about their new school before they go to first grade*; $t(395) = 1.53$, $p < .05$ for *Young children will have better marks in first grade if they know most letters of the alphabet before they begin school; t(395) = 2.47$, $p < .05$ for *Young children will have better marks in first grade if they have already learned a little bit of mathematics before they go to first grade*; $t(396) = –2.48$, $p < .05$ for *It is a waste of time to teach young children before they go to first grade because they are too young to learn*

2.8   Programme Impacts on Teachers

There were three *Getting Ready for School* programme goals for teachers: to improve their belief in the use of child-centred pedagogy, to increase their understanding of the importance of school readiness, and – for first grade teachers – to raise their expectations regarding the level of school readiness of incoming first grade students at their school. Programme impacts in each of these three areas will be presented below.

2.8.1   Attitudes toward child-centred pedagogy

We asked teachers to respond to 15 survey items regarding their belief in the use of child-centred pedagogy. These items covered issues such as the teacher's role in supporting all children, the importance of a classroom environment where children are encouraged to participate, and the value of students' ideas and experiences outside the classroom. The items did not come together as a group to form a robust scale, so we are presenting findings at the item level in this area. Table 10 shows the percentage of teachers who responded *Mostly true* or *Very true* to each item. Items displayed in italics were negatively worded, so agreement with the item indicates a *lack* of child centeredness. There was a medium-to-large programme effect on teachers' belief that they should give students feedback on their assignments to help improve their work.[37] While all participating teachers believed that this was mostly true or very true at the outcome assessment, there was a greater improvement on this item from baseline for the Intervention group when compared with the Control group. There were no significant programme effects on teacher responses to other items in the area of child-centred pedagogy.

Table 10 Attitudes toward Child-Centred Pedagogy

	Intervention	Control
Classroom learning is most effective when based primarily on teacher lectures, with students responding when called on.	78.6% (n = 44)	85.4% (n = 35)
Teachers should give feedback to students on assignments to help them improve their work.	100.0% (n = 56)	100.0% (n = 41)
It is best when students work on assignments alone to show how much they know.	82.1% (n = 46)	80.5% (n = 33)
All students should be helped to participate in class discussions.	96.5% (n = 54)	100.0% (n = 41)
Teachers know more than students. They should just explain the facts to students.	94.7% (n = 53)	87.8% (n = 36)
Teachers should give students problems with specific, correct answers and ideas.	96.5% (n = 54)	100.0% (n = 41)
When students talk with each other during class time they disrupt the flow of class and the learning of other students.	91.1% (n = 51)	97.6% (n = 40)
When students work on projects without the teacher being involved they usually learn "incorrect knowledge."	85.7% (n = 48)	87.8% (n = 36)
Students also learn important information outside the classroom.	98.2% (n = 55)	95.2% (n = 39)
The teacher's role is to help all students in their class be successful.	100.0% (n = 56)	100.0% (n = 41)
Allowing students to talk about their ideas in class takes time away from learning.	17.8% (n = 10)	17.1% (n = 7)

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[37] F = 8.11, p = .005, partial η^2 = .079

	Intervention	Control
Teachers should not spend too much time helping students at the bottom of the class that do not perform well. It takes too much time away from the good students.	*19.7%* *(n = 11)*	*26.8%* *(n = 11)*
Teachers should give more time to the best students in the class.	*59.0%* *(n = 33)*	*56.1%* *(n = 23)*
Students have better academic achievement in classrooms where the teacher encourages students to participate.	98.2% (n = 55)	97.5% (n = 40)
It is the teacher's responsibility to find a way to meet the learning needs of every student in the class.	96.4% (n = 54)	100.0% (n = 41)

2.8.2 Understanding the importance of school readiness

We asked teachers how important it was for students to have certain skills upon school entry across the range of areas of development shown in Table 11. Teachers responded to a four-point Likert scale (see Table B-1, Appendix B for a description of the individual survey items for each area of school readiness). There were large programme effects on teachers' belief in the importance of school readiness in the areas of mathematics, motor skills and social and emotional learning.[38] There was no significant programme effect on teachers' belief in the importance of school readiness across all five areas combined or in the areas of literacy or behaviour specifically.

Table 11 Teacher Belief in the Importance of School Readiness

	Intervention	Control
Importance of school readiness across all areas	M =3.62 SD = 0.28	M = 3.47 SD = 0.40
Literacy	M = 3.56 SD = 0.35	M = 3.40 SD = 0.44
Mathematics	M = 3.63 SD = 0.36	M = 3.46 SD = 0.51
Motor skills	M = 3.54 SD = 0.35	M = 3.29 SD = 0.53
Behaviour	M = 3.77 SD = 0.32	M = 3.63 SD = 0.47
Social and emotional learning	M = 3.63 SD = 0.41	M = 3.52 SD = 0.46

2.8.3 First grade teacher expectations for school readiness

Forty teachers in the Intervention group and 30 in the Control group indicated that they taught first grade. We asked these first grade teachers whether they expected their students to have certain skills upon school entry in the areas of literacy, mathematics, motor skills, behaviour, and social and emotional learning. Teachers responded to a four-point Likert scale, with response options ranging from *Do not have the skill* to *Very prepared* (see Table B-2, Appendix B for a description of the individual survey items for each area of school readiness). Table 12 shows the average level of expectations for school readiness in each developmental area (with possible scores ranging from a low of one to a high of four).

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[38] With F = 7.50*, p* = .007, partial η^2 = .075 for mathematics; F = 6.70*, p* = .011, partial η^2 = .066 for motor skills; F = 10.32*, p* = .005, partial η^2 = .098 for social and emotional learning

There were no significant programme effects on first grade teachers' expectations for school readiness among children entering first grade at their school.

Table 12 First Grade Teacher Expectations for School Readiness

	Intervention	Control
Expectations for school readiness across all areas	*M* = 3.62 *SD* = 0.28	*M* = 3.47 *SD* = 0.40
Literacy	*M* = 3.56 *SD* = 0.35	*M* = 3.40 *SD* = 0.44
Mathematics	*M* =3.63 *SD* = 0.36	*M* = 3.47 *SD* = 0.51
Motor skills	*M* = 3.54 *SD* = 0.35	*M* = 3.29 *SD* = 0.53
Behaviour	*M* = 3.77 *SD* = 0.32	*M* = 3.63 *SD* = 0.47
Social and emotional learning	*M* = 3.63 *SD* = 0.41	*M* = 3.52 *SD* = 0.46

2.8.4 Summary of programme impacts on teachers

There were three *Getting Ready for School* programme goals for teachers who participated: to increase their belief in the value of child-centred pedagogy, to increase their understanding of the importance of school readiness, and – for first grade teachers – to raise their expectations regarding the level of school readiness of incoming first grade students at their school. Programme impacts in each of these three areas were varied. We found medium-to-large programme effects on teachers' belief in the importance of school readiness in the areas of mathematics, motor skills and social and emotional learning. In the area of child-centred pedagogy, we found a large programme effect on teachers' belief in the importance of providing feedback to students to help them improve their work, but all teachers believed that this was true by the outcome evaluation (the Intervention group just improved more in this area from baseline). We did not find any other significant programme effects on teachers' beliefs in the importance of child-centred pedagogy. We did not find any significant programme effects on first grade teachers' expectations for school readiness among young children enrolling at their school.

2.9   Programme Costs

There are two aspects of cost in the implementation of a pilot programme or any new programme – the cost of developing and launching the programme in the country or region and the cost of implementing the programme. Launching a programme is generally expected to be the most costly in the first year as there may be start-up costs associated with advocacy for the program, the development of the programme design and materials, the establishment of systems to meet the programme's need (such as printing and distributing materials), and the training of key staff. These costs may be incurred again on a smaller scale within a country if the programme expands to a new region or significant changes are made in programme design. The cost of implementing the programme would be expected to be similar from year to year as long as the programme continues to function in the same regions of the country, or expands to other regions with similar characteristics (e.g., similar teacher salaries, similar accessibility of programme sites).

2.9.1 Costing assumptions

In order to complete this cost analysis, several assumptions or decisions were made that may influence how these results should interpreted. First, while school staff who implemented the programme were not paid directly for their time by the programme, there is what is known as an "opportunity cost" associated with their service: A teacher's time has a certain value, which is reflected in his or her salary. It is standard practice in cost assessments to include these "donated" hours as having a cost equivalent to the teacher's hourly wage. When a teacher spends his or her time involved with the programme, that teacher is not available to do other things during that time – he or she has taken one opportunity over another. His or her time as a teacher is being used by the programme. So while teachers volunteered their time for the programme, their time is factored into this cost evaluation as if they had been paid. While children who participated in this programme as Young Facilitators also donated their time to the programme – time that could have been spent in other activities with value for their families, such as providing child care or helping with chores – these opportunity costs are not included here because the Young Facilitator was also expected to benefit from the programme, and also because determining the alternate uses of Young Facilitator time and the value of that time is beyond the scope of this cost evaluation.

Second, there are similar opportunity costs for the use of space in schools and other buildings where the programme was implemented. There are costs associated with maintaining that space and the resources within that space (e.g., desks). The calculation of the opportunity cost for the use of this space requires information regarding the costs of school infrastructure and maintenance that can be broken down to levels such as an hourly rate per classroom. The scope of this evaluation does not allow us to collect this information (if it is indeed available), so we cannot factor in these costs here. Programme implementation did not involve any direct costs (e.g., rent) for the use of these spaces.

Third, we are assuming that the development of an orientation for children and families and the development of a training programme for teachers and Young Facilitators was a start-up cost, but that the orientations and trainings would need to be repeated within each community or school catchment area on an annual basis – that is, the actual orientations and trainings are an ongoing cost. We are assuming that the extensive training of master trainers is a start-up cost.

And finally, costs were incurred in Bangladesh's currency, the Taka (BDT), and are reported here in US dollars (USD) at an exchange rate of USD $1 = BDT 68.50.

In the remainder of this section, we will focus on the costs that were associated with the development and launch of the pilot programme (the "start-up" costs) and the costs that were associated with running the programme on an ongoing basis (the "ongoing costs").

2.9.2 Start-Up Costs

Start-up costs in Bangladesh included planning and orientation workshops and events that involved UNICEF staff, government officials and government partners; orientation and training for master trainers; planning, adaptation and translation of programme materials; and the design of communications materials. Table 13 shows a summary of costs associated with each activity. Note that some of these costs are estimates – UNICEF staff costs were estimated based on the average hourly rate among staff in the required position since is it unclear from aggregate task hours exactly how many hours each specific staff person worked.

Table 13 In-Country Start-Up Costs

Activity	Total Cost
Planning and Orientation Workshops and Events	
Orientation workshop for UNICEF field officers	$1,087.29
Orientation workshop for government partners	$2,228.55
Planning workshop with government officials	$414.13
Orientation workshop for training of master trainers	$368.25
Training for master trainers	$6,215.33
Materials	
Adaptation of materials	$9,293.93
Translation of materials	$2,625.11
UNICEF staff time associated with planning, adaptation and translation of materials	$16,607.33
Communications	
Communication workshop to plan and design communication materials	$1,048,52
Total	**$39,888.44**

2.9.3 Ongoing Costs

Ongoing costs in Bangladesh that we would expect to the programme incur on an annual basis include programme orientations at the upazila level as well as for Young Facilitators and families; training of implementing teachers and Young Facilitators; an official launch of the programme at the school level; the printing, distribution and storage of teaching-learning materials; the purchase of learning materials such as pencils; printing and distribution of communications materials; school-level communications such as telephone costs to discuss the programme with school staff; teacher and school head time to implement the programme; snacks (tiffin) provided during the sessions; mid-term programme review; and ongoing programme monitoring and support. See Table 14 for information regarding ongoing programme costs incurred during the pilot year. Note that some of these costs are estimates (e.g., teachers estimated cost of snacks provided each week rather than accounting for the specific amount spent each session; UNICEF staff costs were estimated based on the average hourly rate among staff in the required position since is it unclear from aggregate task hours exactly how many hours each specific staff person worked).

Table 14 Ongoing Costs

Activity	Total Cost
Planning and Orientation Workshops and Events	
Training of implementing teachers (not including UNICEF staff time)[39]	$14,833.90
District (upazila) advocacy workshops (not including UNICEF staff time)	$44,301.17[40]
Orientation for parents and Young Facilitators (not including UNICEF staff time)	
Young Facilitator training (not including UNICEF staff time)	
School launch of the programme (not including UNICEF staff time)	
UNICEF staff time for planning trainings and orientations	$2,869.25
UNICEF staff time for development and production of training and orientation materials	$1,244.65
UNICEF staff time to conduct trainings and orientations	$4,782.09
Materials	
Printing, delivery and storage of teaching-learning materials	$12,449.71
Procured learning materials (scissors, pencils, erasers, crayons, drawing books, glues, bags etc.)	$17,106.36
Communications	
Printing, production and delivery of communications materials	$8,230.30
School-level communications costs	$166.42
Teacher and School Head Services	
School head programme implementation	$1,666.57
Teacher programme implementation	$1,764.10
Other School-Level Costs	
Snacks (tiffin) for Young Facilitators and Young Learners provided by UNICEF	$288.44
Snacks (tiffin) and other materials for Young Facilitators, Young Learners and/or parents purchased locally by school staff[41]	$804.57
Programme Monitoring	
Ongoing programme oversight by UNICEF staff	$18,809.56
Mid-term review meetings	$5,772.74
Overall Total	**$135,089.83**
Cost per School	**$4,502.99**
Cost per Young Learner	**$67.54**

In sum, the per child cost of implementing *Getting Ready for School* in Bangladesh is extremely low – less than $70 per child. Yet this relatively small investment has led to improvements in children's school readiness across a range of areas of development. On-time enrolment and retention in school are areas of great concern within the Bangladesh school system, so follow-up with these same children at the end of first grade will help us determine whether there are other benefits to the educational system as well as to individual children, such as improved child attendance and progress in grade one.

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[39] Includes a per diem for participating teachers and school heads
[40] These four activities were combined in the costs reported by the country.
[41] School staff often reported approximate costs and often did not distinguish between which costs were for food and which for supplies (but nearly all expenditures were for food)

2.10 Discussion and Recommendations for Bangladesh

The *Getting Ready for School* programme had a very successful implementation in this pilot year in Bangladesh. The programme already enjoys a high level of support among education officials, and is filling a vital role within the educational system by providing an interim form of early childhood development support while the government continues to make progress toward universal access to pre-primary education. The programme evaluation in Bangladesh was in the form of a well-run randomized controlled trial, so evaluation findings can be viewed with confidence

There were several areas of strength in this pilot programme. First, there was a high level of buy-in from communities, the Ministry of Education, local school staff, families and children. Attendance at programme sessions was very high. School Management Committees and/or a school chairperson took on a significant role in programme implementation in many communities, providing ongoing oversight and support to the teachers and families involved in the programme, even though this support had not been formally planned. Many families contributed materials and snacks to the programme, and accompanied their child to sessions. Anecdotal evidence suggests that families incorporated some of the *Getting Ready for School* activities such as songs and rhymes into everyday living at home.

Children who had been in the Getting Ready for School intervention group had a 12 percent higher on-time enrolment rate when compared with children in the control group, although a small amount of missing data means that these figures are estimates. We found small and small-to-medium positive programme effects on young children's colour naming; pattern recognition; beginning mathematics; perceptual motor skills; and focused attention, persistence, self-confidence and attention to directions. There was also a small but significant programme impact on the number of learning support activities that parents engaged in with their children (such as telling stories). Given the relatively low level of programme dosage (just a few hours a week), and the fact that most children in the Control group attended other early childhood development programmes, achieving any impact on children's academic and behavioural skills or on parent behaviours constitutes a notable achievement for the *Getting Ready for School* programme.

We were unable to isolate specific programme impacts for Young Facilitators due to the lack of a control group. Young Facilitators showed significant improvements in their academic engagement (attendance and self-reported grades in academic subjects), an increase in their positive attitudes toward learning, and an increase in their belief in the importance of young children's school readiness. Teachers in the Intervention group also showed a significant increase in their belief in the importance of school readiness.

The UNICEF office in Bangladesh has a long-term goal for this programme to shift toward filling a role as a home-based learning support programme as universal pre-primary education is phased in. To that end, the fact that fewer than half of the parents in the Intervention group reported that they felt like they understood the *Getting Ready for School* programme well after it had first been introduced to them points to the need for further development of programme communications with families in the future.

Reports from the field indicated that children found the high number of programme materials difficult to keep track of. The UNICEF Bangladesh *Getting Ready for School* team has already taken steps to modify the materials so that home-based activities require few materials, and so that materials can be contained in a single notebook with a small box for pencils and other materials.

The recommendations emerging from this evaluation are as follows:

- Parents need to be better informed about the programme prior to its implementation.
- Programme impacts on children's early learning were significant in several areas. Where children still did not achieve school readiness skills or behaviours at the desired level, programme developers may want to consider ways to better encourage those areas of development through programme activities.
- Given the programme's goal to eventually shift to a more home-based design, programme development staff should start taking steps now to identify ways to increase family involvement in young children's learning to smooth the transition.
- Ongoing training with Young Facilitators should continue to help Young Facilitators to adopt more child-centred methods of pedagogy and more positive strategies to manage young children's behaviour.

In sum, Bangladesh has had an extremely successful pilot implementation of the *Getting Ready for School* programme. The programme seems to already fill a need within the Bangladeshi educational system, and UNICEF programme staff are already planning for the long-term evolution of the programme to fit the shifting needs of the educational system.

CHAPTER 3   CHINA: COUNTRY-LEVEL OUTCOMES

In this chapter, we present country-level results for China, including the need for the intervention, the implementation of the *Getting Ready for School* programme, outcomes for young children and their families, and programme costs. We conclude the chapter with a discussion of the findings and list of recommendations for the future success of the *Getting Ready for School* programme in China.

3.1   Need for the Intervention

The government of China has prioritized expansion of early childhood development programming to rural areas and to families of lesser means, and the promotion of inclusive education for students with special needs, minority language speakers and migrant children. For example, the Ministry of Education adopted the Rules for the Administration of Kindergartens, the Directive Rules for the Work of Kindergartens, and other laws to promote the development of preschool education. Regional education authorities have also adopted quality standards and evaluation systems to ensure that services are cohesive and consistent. Advancement of the early childhood development agenda requires cross-ministerial cooperation; the Ministry of Education is responsible for the development and implementation of policies and regulations related to kindergarten centres but must work closely with other ministries such as the Department of Health. As an example, in 1990, the State Council created a Committee for Women's and Children's Work to coordinate all matters related to woman and children, drawing upon on the Ministries of Finance, Foreign Trade and International Cooperation for support.

Local governments are the main providers of preschool education; they work to establish regulations and systems grounded in the centrally mandated national policy. A number of local governments have established specific education funds for vulnerable and disadvantaged children. In March 2003, the State Council enacted Recommendations on Early Childhood Education Reform and Development that set targets for enrolment rates in pre-school education at least one year before beginning primary school, as well as provision of universal access to pre-primary education for children three years before entry to primary school. Finally, early childhood development systems were expanded to cover children aged birth to three years (UNESCO, 2006). Despite these initiatives, opportunities for children to actually attend early childhood development programmes remain limited in many areas.

Pingguo County, Guangxi Province

3.2   Nature of the Intervention

The Ministry of Education selected Pingguo county of Guangxi province to be the pilot county and identified the Intervention and Control group townships based on data collected by Guangxi provincial experts. Guangxi is an autonomous region of China and is located in southern China, along the border with Vietnam. The region is very mountainous and there has been relatively little industry in the province as compared to the rest of China. Guangxi is also known for its ethno-linguistic diversity.

UNICEF officers in China decided to implement *Getting Ready for School* as a parent-to-child approach, wherein parents facilitate learning sessions for groups of young children, rather than the approach taken in other countries, where older children serve as facilitators. This modification in programme design took place because older children would be unlikely to be permitted to take part in the programme due to parental concern about the children losing time for homework, and because older children living in these

areas often leave their communities to attend school elsewhere for better educational opportunities. Programme implementation took place from February 2009 through May 2009.

3.3   The Evaluation

In this section, we present information on data collection procedures and the evaluation sample in China, noting any areas of concern that could influence the interpretation of findings.

3.3.1   Data collection

Baseline data were collected in August of 2008; outcome data for community stakeholders were collected in June of 2009; and outcome data for children and their caregivers were collected in August of 2009. Data were collected by trained, certified assessors. Data collection oversight and quality monitoring was conducted by the consulting project managers from East China Normal University. Assessors did not complete ratings of children's behaviour during the assessment nor administer the supplemental caregiver survey at outcome due to oversight.

3.3.2   Sample

The evaluation sample included a total of 500 children and their families – 250 in the Intervention group and 250 in the Control group. Within the Intervention group, 248 of the 250 families and children participated in the baseline evaluation and 204 participated in the outcome evaluation. Within the Control group, 249 of the 250 children and families took part in the baseline evaluation and 205. Both Intervention and Control groups had a high attrition rate of 18 percent. The attrition rate was nearly identical between the two groups so *differential* attrition is not of concern, but caution should be taken when generalizing findings. Table 15 summarizes child and family characteristics at baseline.

Table 15 Child and Family Characteristics at Baseline

	Intervention	Control
Gender of participating child (% female)	49%	49%
Number of household members	*M* = 5.0 *SD* = 2.7	*M* = 5.5 *SD* = 2.6
Number of household members under age 12[42]	*M* = 0.7 *SD* = 1.6	*M* = 1.0 *SD* = 1.6
Two-parent households	93%	93%
Families with out-of-school children[43]	4%	5%
Responding caregiver literacy (% literate)	76%	81%
Family resource level[44] (% low)	39%	46%

Community leader interviews were conducted with eight village leaders and two school heads in the communities where the programme was implemented.

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[42] This does not include the child participating in the evaluation

[43] Among households with one or more older children aged 7-13, percentage of households where at least one of those children was not enrolled in school at the time of the baseline evaluation

[44] Low resource level based on the presence of three or fewer of the following items in the household: Tap water, electric lamp, telephone, television, motorcycle, washing machine, refrigerator, air conditioner, car

3.4   Programme Implementation

The programme was implemented over the course of 22 weeks. Early childhood teachers trained parent facilitators to carry out the *Getting Ready for School* activities, meeting with other parents every two weeks. There were about 40 groups of children, with three to eight children in each group. Teachers demonstrated the activities, provided parents with guidance in interacting with their children, and provided feedback and support to parents as they practiced the activities. Parents were then expected to engage in the *Getting Ready for School* activities with their child at home and during twice-weekly parent meetings. These meetings were arranged by one or two parents who had been chosen as group leaders in their communities. Parents were also expected to do the activities with their child at home. The next time the group met with the teacher, parents would bring in examples of some of the activity work they had completed with their children, and would have an opportunity to ask questions and receive additional support. While reports from the field suggest a high level of attendance at the program, specific programme attendance information is unavailable.

3.4.1   *Getting Ready for School* programme strengths and challenges

There were a number of programme strengths in China. All parents who had the programme made available to them participated in training to potentially become the parent facilitators, so all became familiar with the programme and learned how to implement activities. Then some parents who did especially well during the training were selected to become the parent facilitators. This approach built parental awareness about the programme and provided all parents involved in the intervention with information about how they could support their child's learning through the *Getting Ready for School* activities. All of the community leaders interviewed reported that young children, parents, teachers and community leaders had expressed support and enthusiasm for the programme. When asked to describe any changes in community behaviours or attitudes regarding early childhood education, all community leaders reported that the *Getting Ready for School* programme had increased awareness of the importance of early childhood education among parents and other community members and the types of activities that can and should be done with young children to better prepare them for school (e.g., buying flash cards and pens instead of candy). And all of these community leaders expressed the view that this type of programme is a critical one for young children because it lays the foundation for learning at the primary level and provides young children with the opportunity to learn basic literacy and numeracy skills, along with social-emotional skills.

While there were few challenges associated with implementation of the programme in the pilot phase, long-term sustainability of the programme was an area of concern for both community members and UNICEF country office staff. There has been very little development of early childhood educational policies or programmes on the part of the government, so active support for *Getting Ready for School* is not expected to be available through any government channels. NGOs are available in many other countries to take on the support of such programmes where government support is unavailable, but such NGOs are not generally active in China. All community leaders expressed the view that new policies were needed regarding early childhood education (such as the training of pre-school and kindergarten teachers, incentives to attract qualified teachers to rural communities, and resources and materials for classrooms). So while there is a high level of buy-in for the programme within communities, the sustainability of the *Getting Ready for School* programme is jeopardized by the lack of a reliable source of long-term funding and practical support.

3.5   Child Outcomes

In this section, we present programme impact findings for young children in the area of school readiness. We examined the data for any differential programme impacts for children based on their gender, their household resource level, and whether the caregiver who completed the baseline interview self-identified as literate or illiterate. We were unable to examine on-time enrolment in grade one because most children participated in the programme two years before on-time school entry rather than one year.

3.5.1 School readiness

We examined children's school readiness in the areas of academic skills, perceptual motor skills and social emotional learning. Academic skills included colour naming, pattern recognition, beginning mathematics (including numeral identification, counting and applied addition and subtraction) and beginning literacy (including letter identification, beginning reading and beginning writing). Caregivers provided information regarding the child's social and emotional learning. Assessors in China did not complete the rating sheet that measured children's attention, mastery motivation, or ability to follow directions, so we do not have an evaluation of children's development in these areas.

Colour naming

Children were shown a page with nine coloured flowers (red, blue, green, yellow, black, grey, orange, pink and purple). Children were asked to say the colour name for any colours they knew (recall). Then for any colour names that they did not recall, children were provided with the name of the colour and then were asked to point to the flower of that colour (recognition). Figure 16 shows the average percentage of colours recognised and recalled by children in each group. Overall, there were small programme effects on children's ability to both recall and recognise colour names.[45]

Figure 16 Percentage of Colours Identified Correctly
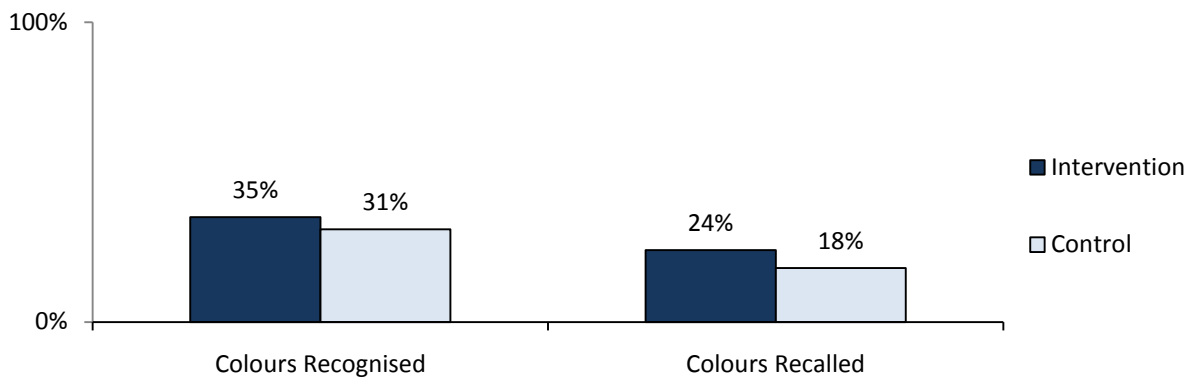
There were no significant differences in programme effects in the areas of colour recognition or colour recall based on child gender, household resource level, or whether the caregiver who completed the baseline interview self-identified as literate or illiterate.

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[45] With $F = 6.05$, $p = .014$, partial $\eta^2 = .015$ for recognition; $F = 9.84$, $p = .002$, partial $\eta^2 = .024$ for recall

Pattern recognition

Children were first presented with a pattern of two alternating colours, then a pattern of three alternating colours. For each, the assessor placed coloured plastic bears one by one in sequence (e.g., red, blue, red, etc.). The child was then asked to choose which of three coloured bears came next. Figure 17 shows the percentage of children in each group who were able to correctly complete the two-colour and the three-colour patterns. There were no significant programme effects on children's ability to complete a two-colour pattern or a three-colour pattern.[46]

Figure 17 Percentage of Children who Completed Patterns
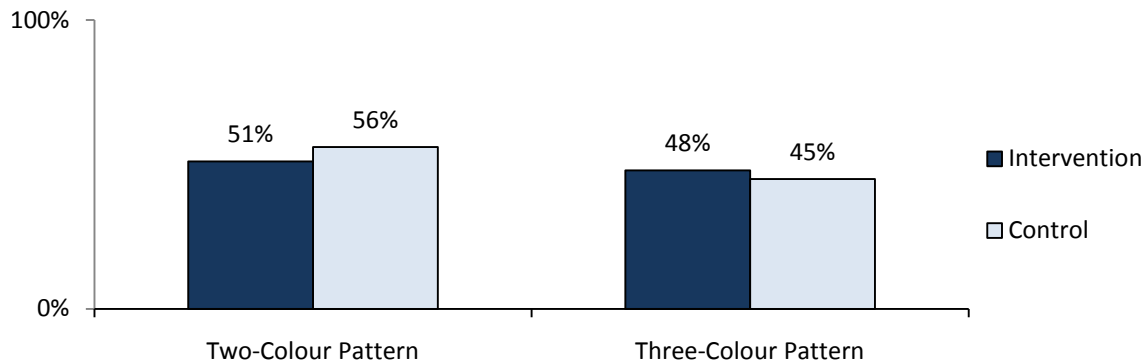
There were no significant differences in programme effects on children's ability to make patterns based on child gender, household resource level, or whether the caregiver who completed the baseline interview identified him- or herself as literate or illiterate.

Beginning mathematics

In the area of beginning mathematics, we assessed children's ability to name and recognise written numerals, to count to 10, to count objects with one-to-one correspondence (that is, assign one number name to each object) and to complete simple applied problems in addition and subtraction. Across tasks, there was no significant programme effect on children's school readiness in the area of mathematics.[47,48] There were no significant differential programme effects across beginning mathematics tasks based on child gender, household resource level, or whether the caregiver who completed the baseline interview self-identified as literate or illiterate. Findings for each beginning mathematics task are presented in more detail below.

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[46] With $F = 2.31$, $p = .129$, partial $\eta^2 = .006$ for two-colour pattern; $F = 0.01$, $p = .949$, partial $\eta^2 < .001$ for three-colour pattern

[47] Cross-task mathematics performance was calculated for each child by summing correct number of responses for numeral recognition, counting to 10, counting with one-to-one correspondence, and the four addition and subtraction tasks

[48] $F = 0.96$, $p = .328$, partial $\eta^2 = .002$

Numeral Recognition and Recall: Children were shown a page with pictures of numerals 0 through 9 and were asked to say the name of any numerals they knew (recall). Then for any numeral names they did not recall, children were provided with the name of the numeral and then were asked to point to the numeral (recognition). Figure 18 shows the average percentage of numerals recognised and recalled by children in each group. There were no significant programme effects on children's ability to recognise or to recall written numerals.[49]

Figure 18 Percentage of Numerals Identified Correctly
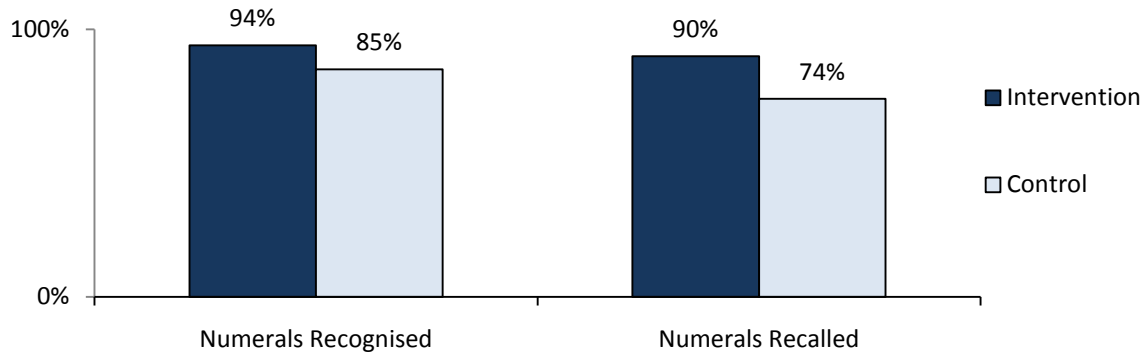
Counting: Children were presented with 10 plastic bears in a line and were asked to count them. Children were scored based on whether they counted to three, counted to 10, and counted with one-to-one correspondence (that is, assigned one number name to each bear). Figure 19 shows the percentage of children in each group who completed each counting task correctly. There were no significant programme effects on children's ability to count to three, to count to 10, or to count with one-to-one correspondence.[50]

Figure 19 Percentage of Children Counting Correctly

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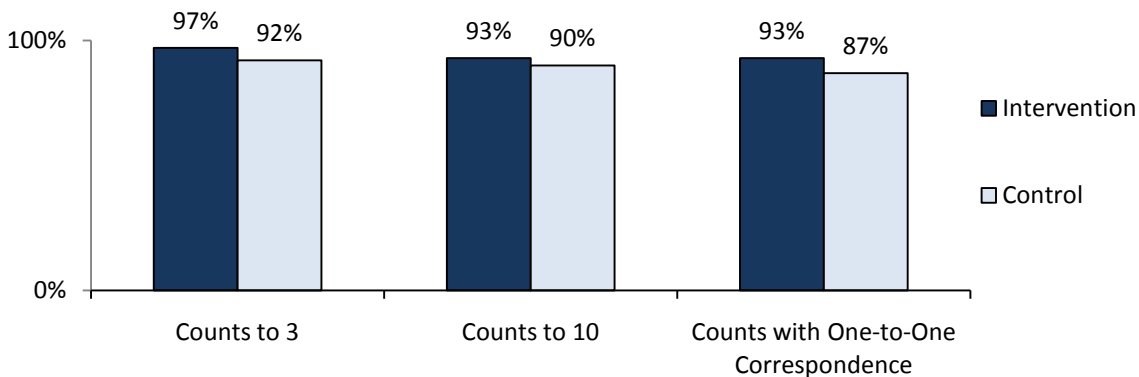
[49] With $F = 0.85$, $p = .356$, partial $\eta^2 = .002$ for recognition; $F = 0.17$, $p = .681$, partial $\eta^2 < .001$ for recall

[50] With $F = 1.52$, $p = .219$, partial $\eta^2 = .004$ for counts to three; $F = 0.76$, $p = .384$, partial $\eta^2 = .002$ for counts to 10; $F = 2.12$, $p = .146$, partial $\eta^2 = .005$ for counts with one-to-one correspondence

Addition and Subtraction: Children were presented with two problems in addition and two in subtraction. For each, the child was presented with plastic bears and asked to state how many bears there would be if a certain number were added or taken away. Children were given credit for either saying the name of the correct number, or for showing the correct number with their fingers. Figure 20 shows the percentage of children in each group who completed each task correctly. There were no significant programme effects on children's ability to add one, to add three, to subtract one or to subtract two.[51]

Figure 20 Percentage of Children Solving Applied Problems in Addition and Subtraction
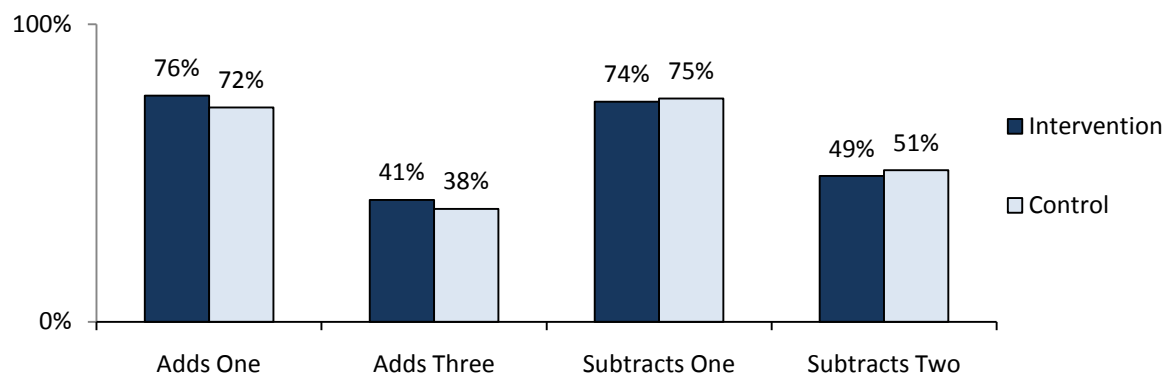
Beginning literacy

In the area of beginning literacy, we assessed children's ability to read simple words and to write their name.

Reading: Children were shown 10 words and asked to read each word. Words were selected by project staff or others with expertise in beginning reading in Chinese. The first five words were considered easy beginning reading words, and the second five were more difficult. Children who were unable to read *any* of the five easy words were not asked to read the more difficult words. Figure 21 shows the average percentage of words read by children in each group. There was no significant programme effect on children's ability to read beginning words.[52] There were no significant differences in programme effects based on child gender, household resource level, or whether the caregiver who completed the baseline interview self-identified as literate or illiterate.

Figure 21 Percentage of Words Read

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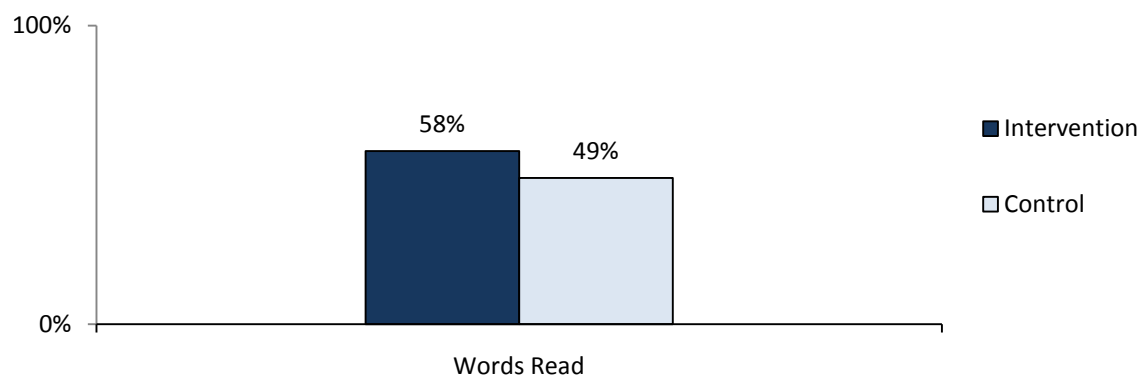
[51] With $F = 0.46$, $p = .500$, partial $\eta^2 = .001$ for adds one; $F = 0.04$, $p = .834$, partial $\eta^2 < .001$ for adds three; $F = 0.01$, $p = .894$, partial $\eta^2 < .001$ for subtracts one; $F = 0.51$, $p = .478$, partial $\eta^2 = .001$ for subtracts two
[52] $F = 0.91$, $p = .342$, partial $\eta^2 = .002$

Writing: Children were provided with a sheet of paper with a line on it and a pencil, and asked to write their names. Children's responses were scored based on whether they could write at least half of their name correctly, and whether they could write their entire name. Characters were accepted even if they were poorly formed. Figure 22 shows the percentage of children each group who performed each writing task correctly. There was no significant programme effect on children's ability to write at least half of their name or to write their whole name.[53] There were no significant differences in programme effects based on child gender, children's household resource level, or whether the caregiver who completed the baseline interview self-identified as literate or illiterate.

Figure 22 Percentage of Children Giving Correct Responses on Beginning Writing Tasks
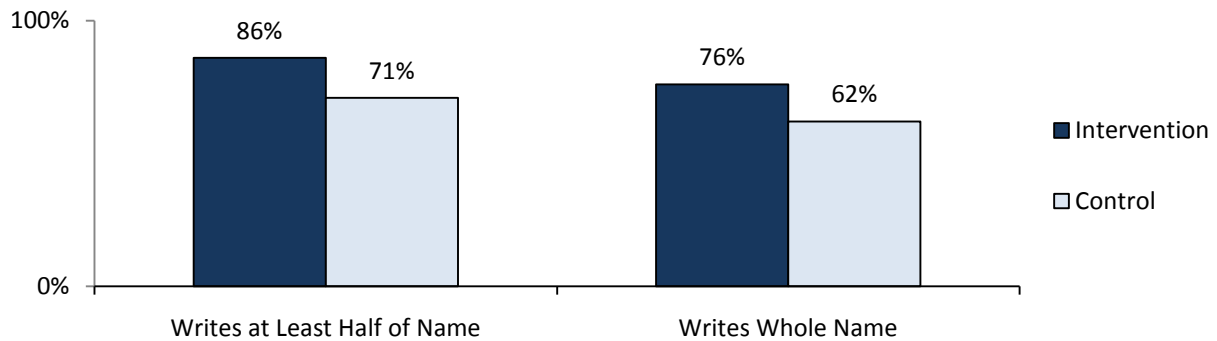
Perceptual motor skills

We measured children's perceptual motor skills with a series of four pencil-and-paper activities. Children were provided with a pencil and a sheet of paper with the dotted outlines of two straight lines, a circle and a square. The assessor demonstrated how to trace a straight line, and asked the child to trace the remaining straight line, the circle and the square. Assessors noted whether the child knew how to hold a pencil correctly (based on local custom), and whether the child was able to trace each shape, staying on the dotted line at least 50 percent of the time.

Across the four perceptual motor tasks combined, we found a significant *negative* programme effect.[54] While children in the Control group improved in their ability to complete perceptual motor tasks, children in the Intervention group did not. We did not find any differential programme effects based on child gender, children's household resource level or whether the caregiver who completed the baseline interview self-identified as literate or illiterate.

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[53] With $F = 0.12$, $p = .733$, partial $\eta^2 < .001$ for writing at least half of name; $F = 0.67$, $p = .414$, partial $\eta^2 = .002$ for writing entire name

[54] $F = 55.39$, $p < .001$, partial $\eta^2 = .120$

Figure 23 shows the percentage of children in each group who performed each perceptual motor task correctly. At the individual task level, there was no significant programme effect on children's ability to hold a pencil correctly, but there was a large *negative* programme effect on children's ability to trace a straight line and to trace a square, and a medium negative programme effect on children's ability to trace a circle.[55]

Figure 23 Percentage of Children Correctly Completing Perceptual Motor Tasks
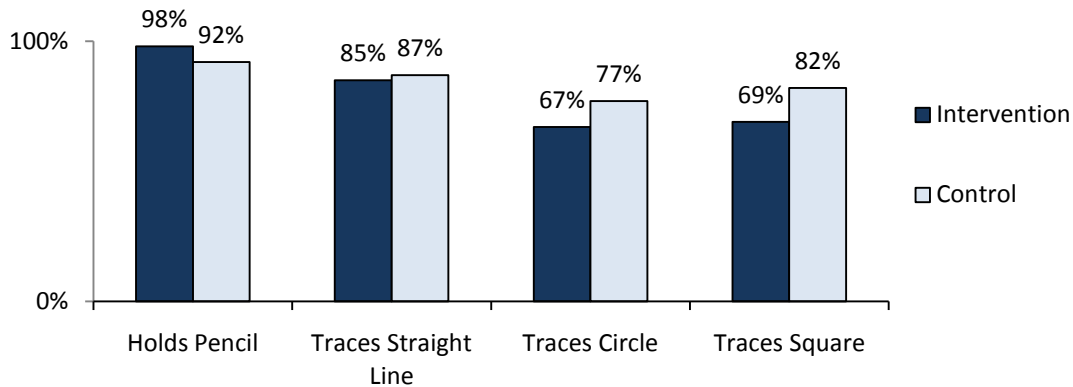
Attention

We examined children's attention in two areas: their ability to sustain attention, and their ability to voluntarily focus their attention and sit still during the assessment.

Sustained Attention: Sustained attention was measured with the Leiter-R sustained attention subtask,[56] a non-verbal task that requires the child to find as many pictures that match a model as they can within 30 seconds. Figure 24 shows the percentage of pictures marked correctly (out of 20 possible) by children from each group. There was no significant programme effect on children's sustained attention.[57] There were no significant differential programme effects based on child gender, children's household resource level, or whether the caregiver who completed the baseline interview self-identified as literate or illiterate.

Figure 24 Percentage of Pictures Marked Correctly

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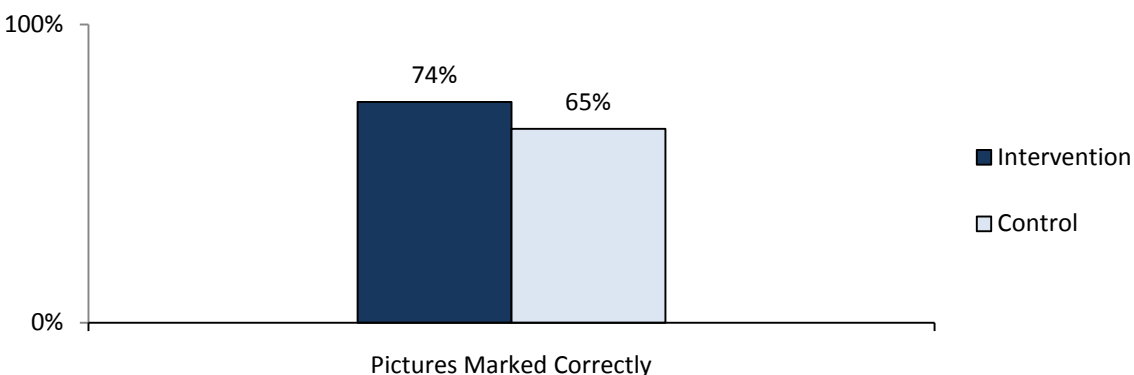
[55] With $F = 0.09$, $p = .771$, partial $\eta^2 < .001$ for holding a pencil; $F = 31.64$, $p < .01$, partial $\eta^2 = .072$ for tracing a line; $F = 51.67$, $p < .001$, partial $\eta^2 = .013$ for tracing a circle; $F = 46.04$, $p < .001$, partial $\eta^2 = .102$ for tracing a square

[56] ©Stoelting Co., 1997, used with permission

[57] $F = 0.07$, $p = .796$, partial $\eta^2 < .001$

Social emotional learning

Caregivers were asked to provide information regarding their child's social and emotional learning by indicating how often their child engaged in each of the nine behaviours listed below in Table 14 (*Never or hardly ever*, *Sometimes*, or *Most of the time*). These items came together to form a Social and Emotional Learning scale.[58] Table 14 shows the percentage of caregivers who indicated that their child engaged in this behaviour *most of the time*.

Table 16 Percentage of Caregivers who Indicated that their Child Displayed Each Aspect of Social and Emotional Learning Most of the Time

	Intervention	Control
Takes care of personal belongings	74.5% (n = 152)	68.9% (n = 135)
Follows safety rules such as crossing the street safely	77.3% (n = 157)	68.2% (n = 133)
Asks for help with difficult tasks such as picking up heavy items, putting on clothes, or locating lost items	79.2% (n = 160)	67.8% (n = 135)
Expresses feelings	68.8% (n = 137)	58.0% (n = 112)
Expresses needs to adults	87.7% (n = 179)	80.0% (n = 160)
Helps with simple household tasks	52.5% (n = 107)	43.4% (n = 86)
Offers comfort when others are in distress	45.7% (n = 91)	37.2% (n = 73)
Gets along with other family members	83.8% (n = 171)	73.9% (n = 147)
Shares newly learned ideas	69.8% (n = 141)	52.3% (n = 101)

While children in the Intervention group had somewhat higher ratings on the Social and Emotional Learning scale than children in the Control group, programme effects did not reach the level of statistical significance.[59] There were no significant differential programme effects on children's social and emotional learning based on child gender, children's household resource level, or whether the caregiver who completed the baseline interview self-identified as literate or illiterate.

3.5.2 Summary of child outcomes

The *Getting Ready for School* programme had two goals for young children: to increase their school readiness and to increase their on-time enrolment in primary school. Children in China participated in the programme two years prior to their anticipated enrolment in primary school, so we are only able to examine outcomes in the area of school readiness. We found a small programme effect on children's ability to name colours, but no significant programme effects in the areas of pattern recognition, beginning mathematics, beginning literacy, sustained attention or social and emotional learning. There was a small negative programme effect on children's perceptual motor skills. We did not find a consistent pattern of differential programme effects based on child or family characteristics or risk factors.

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[58] Scale reliability was α = .77 across the full sample at baseline

[59] F = 3.55, p = .060, partial η^2 = .011

These results should be interpreted with caution for several reasons. First, a lack of random assignment means that we cannot be certain that between-group differences are solely the result of the intervention. Second, while children in the Intervention group outperformed children in the Control group on several tasks at the outcome assessment, children in the Intervention group had already scored significantly higher than children in the Control group in beginning literacy, beginning mathematics and sustained attention at the baseline assessment. And finally, there may have been ceiling effects in some areas, such as counting. When nearly all children in both groups can successfully complete the task, we cannot be completely confident that there is no programme effect because differences may have emerged if children had been presented with more challenging tasks.

3.6   Family Outcomes

There were three *Getting Ready for School* programme goals for families whose young children participated: to improve their understanding of the importance of school readiness, to increase their understanding of how children learn, and to increase their active support for their young children's learning. Outcomes in each of these three areas will be presented below.

3.6.1 Caregiver beliefs in the importance of school readiness

We provided caregivers with a list of developmental areas such as health and social and emotional learning, and some specific academic skills. For each item listed in Table 15, caregivers were asked to indicate how important they believed it was for a child to have that characteristic or set of skills when he or she began first grade. Response choices were *Not at all important*, *Somewhat important*, or *Very important*. These items also came together to form an Importance of School Readiness scale.[60] There was no significant programme effect on Importance of School Readiness scale scores.[61] However, there was a small differential programme effect based on household resource level, with caregivers in households with a lower resource level improving more in their Importance of School Readiness scale scores when they participated in the intervention than did caregivers from households with greater resources.[62] There was no significant programme effect based on whether the caregiver who completed the baseline interview self-identified as literate or illiterate.

Table 17 Percentage of Caregivers who Indicated that It Was Very Important for a Child to Have Each Characteristic or Skill

	Intervention	Control
It is important that the child is in good physical health.	87.1% (n = 176)	83.8% (n = 165)
It is important that the child is confident.	76.7% (n = 148)	67.0% (n = 124)
It is important that the child is curious and explores his/her environment.	69.5% (n = 132)	57.4% (n = 105)
It is important that the child is able to play with other children.	63.1% (n = 128)	51.8% (n = 101)
It is important that the child has good problem-solving skills (for example, tries different ways to solve a problem).	70.3% (n = 135)	72.0% (n = 134)
It is important that the child is able to read some words.	81.3% (n = 165)	83.2% (n = 164)
It is important that the child is able to write his/her own name.	83.7% (n = 170)	80.7% (n = 159)
It is important that the child is able to count from one to ten.	78.6% (n = 158)	75.1% (n = 148)
It is important that the child is able to recognise and name shapes.	78.2% (n = 151)	69.4% (n = 129)

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[60] Scale reliability was α = .80 across the full sample at baseline. Participants in China were not given the survey item *It is important that the child knows some letters*.

[61] $F = 0.61$, $p = .436$, partial $\eta^2 = .002$

[62] $F = 4.85$, $p = .028$, partial $\eta^2 = .016$

2.6.2 Active family support for young children's learning

We asked caregivers whether within the past week, anyone in the household had engaged in the activities listed in Table16 to support their young child's learning. These items came together to form a Support for Learning scale, which reflected how many activities families had engaged in to support the child's learning within the past week.[63] There was a small positive programme effect on family support for children's learning.[64] Families benefited more from the intervention when caregivers had self-identified as literate versus illiterate at baseline, although this differential programme effect was quite small in magnitude.[65] There was no significant differential programme effect based on household resource level.

Table 18 Family Support for Children's Learning

	Intervention	Control
Told stories to child	81.7% (n = 165)	67.2% (n = 131)
Sang songs with child	77.4% (n = 154)	76.8% (n = 152)
Read books or looked at pictures with child	81.7% (n = 176)	73.1% (n = 144)
Took child out of home/yard/compound	85.2% (n = 173)	85.8% (n = 169)
Played with child	96.5% (n = 195)	90.5% (n = 180)
Spent time with child naming, counting or drawing things	88.7% (n = 180)	80.9% (n = 157)

3.6.3 Summary of outcomes for families

There were two *Getting Ready for School* programme goals for families: To improve their understanding of the importance of school readiness and to increase their active support for their young children's learning. There were small positive programme effects on both caregivers' belief in the importance of school readiness and on the number of activities caregivers engaged in to support their young child's learning. The programme had a larger effect on caregiver belief in the importance of school readiness in households with a lower resource level, and had a larger effect on family support for children's learning when caregivers self-identified as literate versus illiterate.

3.7   Discussion and Recommendations for China

The *Getting Ready for School* pilot programme was implemented with a modified design in China, with parents taking on the role of facilitators. The programme as implemented in China shows some areas of strength, but faces significant challenges in terms of long-term sustainability and achieving desired impacts. The main area of strength was a high level of buy-in from community leaders and parents. The programme design included training in programme activities for all parents who wished to enrol their child in the programme, providing an opportunity for parents to improve their skills in supporting their child's young learning. And we did find a significant increase in the number of school readiness activities that parents engaged in with their children. While these increased activities did not seem to lead to increased

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[63] Scale reliability was α = .70 across the full sample at baseline

[64] F = 9.58, p = .002, partial η^2 = .019

[65] F = 4.40, p = .036, partial η^2 = .009

school readiness skills on the part of young children, there was a ceiling effect for several of the assessment tasks, so it is possible that programme impacts would have been identified if children had been given more difficult assessment items.

The programme faces significant challenges to long-term sustainability. The main issue involves financial support. According to UNICEF staff and partners implementing the programme, there are no known NGOs or other organizations in the area that could provide long-term funding for the programme, and the Chinese government is not currently focused on financially supporting such programmes. If ongoing support were made available, the next challenge would be to build home-school relationships and engage the educational community in the programme, given the fact that schools tend to be a long distance from the programme villages and many older children leave the community to attend school elsewhere. And the third challenge involves finding adults with available time to implement the programme in the villages. Young adults, including parents, need to work and tend to live outside of the village to work at/or attend school, leaving young children in the village with grandparents. Older community members who are present in the village and have time available tend to have a minimal educational background.

Recommendations for China are as follows:

- UNICEF staff in the China office should continue to explore potential funding sources for long-term programme sustainability.
- If funding is secured, programme staff should work to identify ways to increase school—to-community connections given the long distances between villages and schools.
- If the programme continues to be implemented, programme staff should continue to explore ways to increase the number of trained adults or older children available to implement the programme in the villages (for example, perhaps older children from a neighbouring community with a school could visit on a regular basis).

CHAPTER 4   DEMOCRATIC REPUBLIC OF CONGO: COUNTRY-LEVEL IMPACTS

In this chapter, we present country-level results for the Democratic Republic of Congo (DRC), including: the reason for the intervention; the implementation of the *Getting Ready for School* programme in the DRC; programme impacts for young children, families, Young Facilitators and teachers; and programme costs. We conclude the chapter with a discussion of the findings and a list of recommendations for the future success of the *Getting Ready for School* programme in the DRC.

4.1   Need for the Intervention

According to a recent background paper prepared for the 2007 Education for All Global Monitoring Report on early care and education, DRC is one of the most populous and poorest nations in the world with over 60 million people, about 80 percent of whom live on less than one US dollar per person per day (Youdi, 2006). The country's tumultuous history has had devastating consequences on the populace of the DRC, most notably children and youth. For example, the re-emergence of civil unrest has threatened the progress of stable government and jeopardized the wellbeing of children, many of whom are forced into fighting. Other consequences include the dissolution of family units, rapid increases in the number of street children, reduced access to basic social services, reduced income for families and increased infant mortality rates. However, the government of DRC has taken formal steps to protect the rights and wellbeing of its youngest citizens. It has signed the World Declaration on the Survival, Protection and Development of Children and pledged to continue the progress made towards the goals of the 1990 World Summit for Children in New York. The government has also ratified the Convention on the Rights of the Child by a 1990 decree and in 1992 implemented a National Action Programme for the Survival, Protection and Promotion of the Mother and Child. Further, a national nursery education curriculum was adopted in 1997 with the help of UNESCO. Article 18 of Framework Law recognises pre-primary school education but considers it optional. The Law on the Protection of the Child was adopted in January 2009.

About 12 million Congolese children under age six are the intended beneficiaries of special programs (UNWire, 2001). But due to the social and economic crises that have plagued the DRC, local NGOs and other groups have faced enormous challenges in establishing sustainable educational programs for children. Within the sector of early care and education, the DRC continues to focus on strengthening these local institutions to fully implement children's rights, expanding access to pre-school education through reduced cost programs, and encouraging equal gender access to pre-primary school education. In the DRC, the net enrolment rates in preschool remain very low at less than 1 percent (UNESCO, 2006).

To respond to these issues, UNICEF is helping the DRC in creating Early Childhood Development Centres for the comprehensive care for young people. In addition, the DRC has campaigned to participate in the pilot implementation of *Getting Ready for School* as a means to promote school readiness among young children and forward their agenda to expand access to early education.

4.2   Nature of the Intervention

The Ministry of Primary, Secondary and Professional Education, with support from UNICEF, selected 25 primary schools in which to implement the intervention and 25 similar schools to serve as control schools in the evaluation. Fifteen pairs of these schools are located in Kinshasa and 10 pairs of schools are located in Mbandaka in the province of Equateur. The language of instruction in both cities is Lingala. Two-thirds of these schools are already supported by UNICEF and have received educational materials such as school kits and services such as teacher training.

In each school, five school personnel were retained: two teachers from grade 1, one teacher from grade 6, one teacher from grade 5 and the school principal. Each school had 20 Young Facilitators and each Young Facilitator guided three younger children. Across both provinces, there were a total of 500 students and facilitators and 1500 young children supervised by 100 teachers (although only a random sub-sample took part in the evaluation).

An initial training for 75 teachers took place from August to September 2008 in Kinshasa. A second training for 50 teachers took place in October 2008 in Mbandaka. The training for 300 Young Facilitators took place in September 2008 in Kinshasa. In Mbandaka, about 200 student facilitators were trained in November 2008.

Programme implementation began in Kinshasa in November of 2008 and in Mbandaka in December of 2008. The programme concluded in June of 2009.

4.3 The Evaluation

In this section, we present information on data collection procedures and the evaluation sample in the DRC, noting any areas of concern that could influence the interpretation of findings.

4.3.1 Data collection

Baseline data were collected in November 2008 through February of 2009; outcome data for teachers, Young Facilitators and community stakeholders were collected in June of 2009; and outcome data for children and their caregivers were collected in February and March of 2010. Data were collected by trained, certified assessors. Data collection quality monitoring was conducted by UNICEF. Evaluation staff faced a number of significant issues in the course of data collection. Flooding limited access to several areas during the period of outcome data collection. This country has had a significant, ongoing conflict and incursions of fighting into programme areas and high levels of family mobility also limited the collection of outcome data.

4.3.2 Sample

In this section, we present information about the schools, children and families, Young Facilitators, and teachers who took part in the evaluation. Overall, 500 Young Facilitators and 1,500 young children participated in the *Getting Ready for School* programme. A random sub-sample was drawn from them for the purposes of evaluation.

Table 19 shows the characteristics of the 25 participating Intervention group schools and 25 Control group schools at the time of the baseline evaluation.

Table 19 School Characteristics

	Intervention	Control
Number of students enrolled	*M* = 625 (Range 243– 1322)	*M* = 531 (Range 155 – 1225)
Number of teachers and educational assistants	*M* = 12 (Range 1 – 26)	*M* = 12 (Range 1 – 21)
Student/teacher ratio	*M* = 52:1 (Range 21:1 – 247:1)	*M* = 44:1 (Range 22:1 – 73:1)
Daily absence rate as of 2007/2008 school year	*M* = 12% (Range 1% – 30%)	*M* = 13% (Range 1% – 29%)
Dropout rate as of 2007/2008 school year	*M* = 15% (Range 3% – 43%)	*M* = 13% (Range 0% – 43%)

At the baseline evaluation, 59 teachers were in the Intervention group and 43 in the Control group. At the outcome evaluation, 100 Intervention group teachers completed the teacher survey, but no Control group participants did. Table 20 shows the characteristics of teachers in the Intervention and Control groups (as reported at baseline). Teachers in the Control group were more likely to be female and less likely to live in the community where the school was located when compared with teachers from the Intervention group.[66] The lack of outcome information on the Control group, combined with the very unequal baseline and outcome samples for the Intervention group, limits our ability to report valid findings for teachers.

Table 20 Teacher Characteristics at Baseline

	Intervention	Control
Gender (% female)	57%	78%
Years teaching	*M* = 24.5 *SD* = 13.8	*M* = 25.2 *SD* = 21.5
Live in school community? (% yes)	85%	66%

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[66] $t(76.78) = -2.50$, $p < .05$ for gender; $t(76.2) = 2.47$, $p < .05$ for live in school community

At the baseline evaluation, 375 children and their families were in the Intervention group and 373 in the Control group. Outcome evaluations were completed with 228 children and their families in the Intervention group and 217 in the Control group – attrition rates were 39 percent in the Intervention group and 41 percent in the Control group. While these attrition rates are high, they are not significantly *different* between groups. This attrition rate was due to logistical difficulties in implementing data collection (see the discussion in section 4.3.1 above) rather than refusal on the part of the participants. Table 21 summarizes child and caregiver characteristics for the baseline and outcome samples. Families in the Control group had more than double the rate of out-of-school older children than families in the Intervention group, were more likely to have a caregiver who identified himself or herself as illiterate, and were also more likely to fall into the lower household resource category when compared with families in the Intervention group.[67] Each of these three characteristics will be taken into account when evaluating programme impacts. Note that for both groups, caregivers' self-reported literacy rates are higher than the 63 percent rate reported by UNESCO in 2002.[68]

Table 21 Child and Family Characteristics at Baseline

	Intervention	Control
Gender of participating child (% female)	49%	54%
Number of household members	$M = 3.8$	$M = 4.0$
Number of household members under age 12[69]	$M = 1.1$	$M = 1.0$
Two-parent households	73%	76%
Families with out-of-school children[70]	9%	21%
Responding caregiver literacy (% literate)	91%	82%
Family resource level[71] (% low)	30%	42%

A total of 479 Young Facilitators participated in the intervention sample. Of those, 464 were retained for the outcome evaluation – a low 3 percent attrition rate. Note that there was no Control group for Young Facilitators. Table 22 shows the characteristics of the Young Facilitators.

Table 22 Young Facilitator Characteristics at Baseline

Gender (% female)	50%
Grade	
Three	2%
Four	2%
Five	39%
Six	57%

Community leader interviews were completed with heads of each of the 25 Intervention group schools and with one member of each of the 25 school communities.

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[67] $t(146.6) = 2.46$, $p < .05$ for out-of-school older child; $t(677.5) = -3.75$, $p < .001$ for caregiver literacy; $t(739.5) = 3.62$, $p < .001$ for household resource level (higher or lower within sample)

[68] See http://portal.unesco.org/en/ev.php-URL_ID=22558&URL_DO=DO_TOPIC&URL_SECTION=201.html

[69] This does not include the child participating in the evaluation

[70] Among households with one or more older children aged 6-11, percentage of households where at least one of those children was not enrolled in school at the time of the baseline evaluation

[71] Low resource level based on the presence of three or fewer of the following items in the household: Bed, table, chair, radio, television, clock, computer, refrigerator, camera

4.4   Programme Strengths and Challenges

Interviews with school heads from all 25 Intervention schools identified numerous areas of programme strength. All were extremely positive about the programme and cited numerous benefits. School heads were nearly unanimous in reporting that the Young Facilitators were highly enthusiastic, did an excellent job, developed a significant level of skill in teaching young children, became more engaged in school, and became highly visible and very well regarded in their communities. Young children have been observed practicing the songs and skills they learned at home, with friends and out in the community. School heads noted that the children who participated in the programme seemed to learn a great deal, had developed good relationships with others and had developed skills for first grade. Young children were observed to have become very enthusiastic about enrolling in first grade, and school heads were looking forward to having a well prepared first grade class the next year.

Parents and community members became active supporters of the programme and of young children's learning, expressing their appreciation for the programme to the school heads. Parents had also reportedly became more aware of the importance of early learning and increased their level of communication with the school. School heads indicated that parents asked them if the programme can continue during school vacations, that parents of children who were not enrolled in the programme came to ask if their child could participate, and that parents of younger children had requested their participation next year.

School heads noted a significant programme benefit for teachers as well. Several school heads described the *Getting Ready for School* teacher training as excellent, and nearly all school heads reported observing an increase in teacher skills and knowledge. Teachers were enthusiastic participants in the programme, despite the extra demands placed on them with their participation. School heads also described an increased level of professional commitment among teachers as a result of the introduction of this programme.

The challenges faced in the programme implementation during this pilot year were mostly logistical in nature. School heads reported that their main difficulties were with regard to instructional materials arriving late (this seems to have been due to impassable roads in at least some communities), and that sometimes promised incentives for children and teachers (biscuits, and a transportation allowance for Young Facilitators and teachers) were not forthcoming. School heads noted that the irregular provision of snacks left children hungry during the sessions and may have discouraged attendance in some cases. Several school heads also noted some difficulty in reaching parents and getting correct information about participating children due to family mobility.

4.5   Programme Impacts on Children

In this section, we present programme impact findings for young children in the areas of school readiness and on-time enrolment in first grade. We examined the data for any differential programme impacts for children based on what region they lived in, their gender, their household resource level, and whether the caregiver who completed the baseline interview self-identified as literate or illiterate. Among young children who lived with an older school-age child, we looked for differential programme impacts based on whether that older child was enrolled in school or not. And among children in the Intervention group, we looked at whether there were any significant relationships between the number of *Getting Ready for School* sessions they participated in and their acquisition of school readiness skills and behaviours.

4.5.1 School readiness

We examined children's school readiness in the areas of academic skills, perceptual motor skills, attention, mastery motivation, and the ability to follow directions. Academic skills included colour naming, pattern recognition, beginning mathematics (including numeral identification, counting and applied addition and subtraction) and beginning literacy (including letter identification, beginning reading and beginning writing).

Colour naming

Children were shown a page with nine coloured flowers (red, blue, green, yellow, black, grey, orange, pink and purple). Children were asked to say the colour name for any colours they knew, and then for any colours they did not recall, children were provided with the name of the colour and then were asked to point to the flower of that colour (recognition). Figure 25 shows the average percentage of colours recognised and recalled by children in each group. There was a medium programme effect on children's ability to recognise colour names, and a medium effect on their ability to recall colours.[72]

Figure 25 Percentage of Colours Identified Correctly
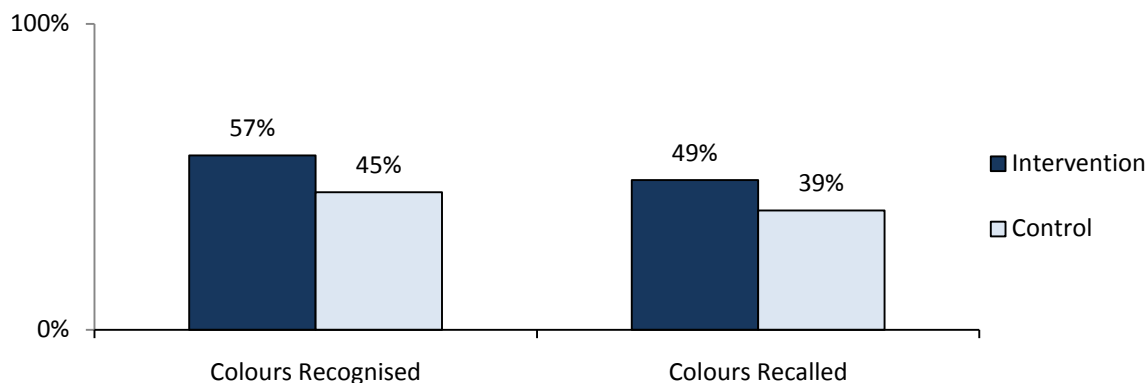
There was a small but significant differential programme effect based on region. Children from Mbandaka benefited more from the programme in their acquisition of colour name recognition and recall than children from Kinshasa.[73] Children also had a significantly greater programme benefit on their ability to recall (but not to recognise) colour names if their caregiver at baseline had self-identified as illiterate – although this effect size was quite small.[74] Caregiver literacy levels were very similar in Kinshasa and Mbandaka, so this differential programme effect based on caregiver literacy is not an artefact of regional differences in literacy. There were no differences in programme effects based on child gender, household resource level, or whether older children in the household were in school or out of school.

Pattern recognition

Children were first presented with a pattern of two alternating colours, then a pattern of three alternating colours. For each, the assessor placed coloured plastic bears one by one in sequence (e.g., red, blue, red, etc.). The child was then asked to choose which of three coloured bears came next. Figure 26 shows the percentage of children in each group who were able to correctly complete the two-colour and the three-colour patterns. There was no significant programme effect on children's ability to complete a two-

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[72] With $F = 23.85$, $p < .001$, partial $\eta^2 = .051$ for recognition; $F = 23.50$, $p < .001$, partial $\eta^2 = .050$ for recall

[73] With $F = 3.98$, $p = .047$, partial $\eta^2 = .009$ for recognition; $F = 5.72$, $p = .017$, partial $\eta^2 = .013$ for recall

[74] $F = 4.39$, $p = .037$, partial $\eta^2 = .010$

colour pattern, but a small-to-medium programme effect on children's ability to complete a three-colour pattern.[75]

Figure 26 Percentage of Children who Completed Patterns

There were no significant differences in programme effects based on region, child gender, household resource level, whether older children in the household were in school or out of school, or whether the caregiver who completed the baseline interview self-identified as literate or illiterate.

Beginning mathematics

In the area of beginning mathematics, we assessed children's ability to name and recognise written numerals, to count to 10, to count objects with one-to-one correspondence (that is, assign one number name to each object), and to complete simple applied problems in addition and subtraction. Across tasks, there was no significant programme effect on children's school readiness in the area of mathematics.[76,77]

In the area of beginning mathematics, children from Kinshasa benefited significantly more from the programme than children from Mbandaka, although the magnitude of the programme effect was still small.[78] Across both Kinshasa and Mbandaka, children whose families were in the higher-resource category (within the sample) received a greater programme benefit in the area of beginning mathematics than children whose families were in the lower-resource category.[79] Again, the programme effect was small. Although families from Kinshasa were more likely to be in the higher-resource group than families from Mbandaka, both of these factors (region and resource level) were independently associated with programme impacts.

There were no significant differences in programme effects based on child gender, whether older children in the household were in school or out of school, or whether the caregiver who completed the baseline interview self-identified as literate or illiterate. Findings for each beginning mathematics task are presented in more detail below.

Numeral Recognition and Recall: Children were shown a page with pictures of numerals 0 through 9 and were asked to say the name of any numerals they knew (recall). Then for any numeral names they did not recall, children were provided with the name of the numeral and then were asked to point to the numeral (recognition). Figure 27 shows the average percentage of numerals recognised and recalled by

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[75] With $F = 0.25$, $p = .618$, partial $\eta^2 < .001$ for two-colour pattern; $F = 16.15$, $p < .001$, partial $\eta^2 = .036$ for three-colour pattern
[76] Cross-task mathematics performance was calculated for each child by summing correct number of responses for numeral recognition, counting to 10, counting with one-to-one correspondence, and the four addition and subtraction tasks
[77] $F = 0.59$, $p = .442$, partial $\eta^2 = .001$
[78] $F = 5.83$, $p = .016$, partial $\eta^2 = .013$
[79] $F = 4.96$, $p = .026$, partial $\eta^2 = .011$

children in each group. We did not find a significant programme effect on children's ability to recognise or to recall written numerals.[80]

Figure 27 Percentage of Numerals Identified Correctly
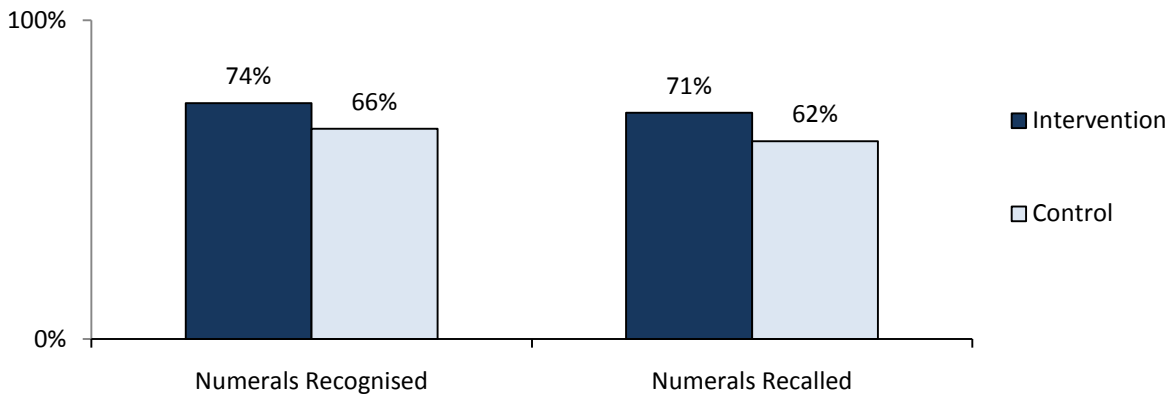
Counting: Children were presented with 10 plastic bears in a line and were asked to count them. Children were scored based on whether they counted to three, counted to 10, and counted with one-to-one correspondence (that is, assigned one number name to each bear). Figure 28 shows the percentage of children in each group who completed each counting task correctly. There was a small programme effect on children's ability to count to 10, but no significant effect on children's ability to count to three or on children's ability to count with one-to-one correspondence.[81]

Figure 28 Percentage of Children Counting Correctly
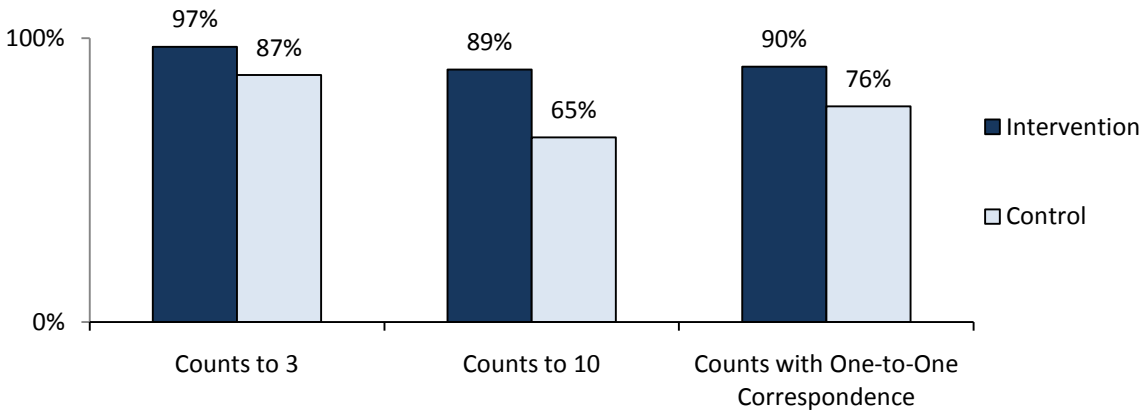
Addition and Subtraction: Children were presented with two problems in addition and two in subtraction. For each problem, the child was presented with plastic bears and asked to state how many bears there would be if a certain number were added or taken away. Children were given credit for either saying the name of the correct number, or showing the correct number with their fingers. Figure 29 shows the percentage of children in each group who completed each addition and subtraction task correctly. There was a small programme effect on children's ability to add one, but no significant effect on their ability to
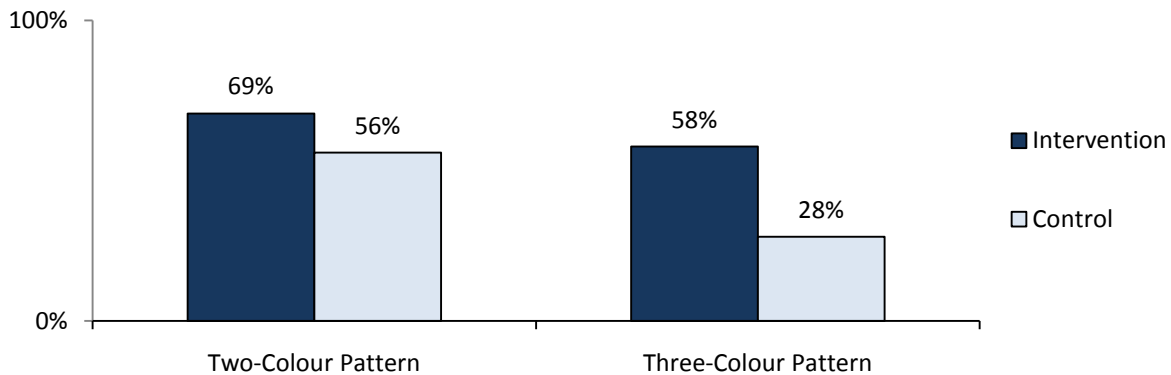
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[80] With $F = 0.37$, $p = .546$, partial $\eta^2 = .001$ for recognition; $F = 1.86$, $p = .174$, partial $\eta^2 = .004$ for recall
[81] With $F = 0.60$, $p = .441$, partial $\eta^2 = .001$ for counts to three; $F = 12.10$, $p = .001$, partial $\eta^2 = .027$ for counts to 10; $F = 1.02$, $p = .313$, partial $\eta^2 = .002$ for counts with one-to-one correspondence

add three, to subtract one, or subtract three.[82] A high proportion of children in both intervention and control groups were able to solve these beginning mathematics problems.

Figure 29 Percentage of Children Solving Applied Problems in Addition and Subtraction
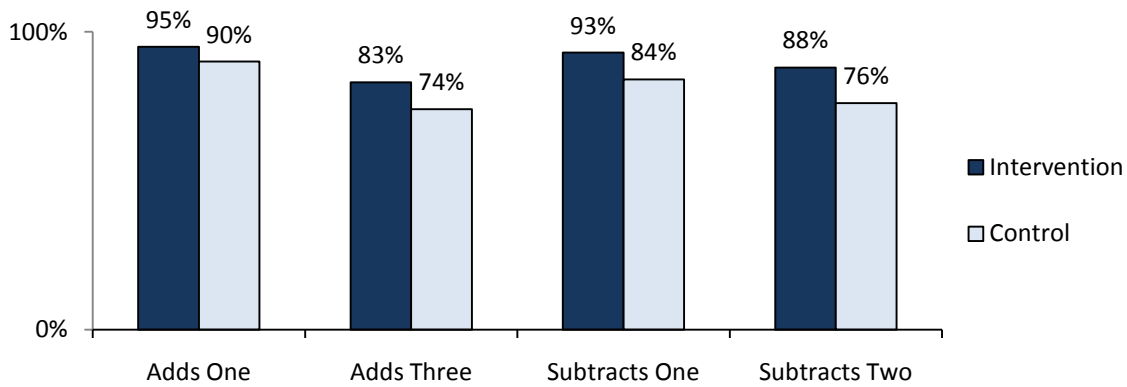
Beginning literacy

In the area of beginning literacy, we assessed children's ability to name and recognise written letters, to read simple words, to write any letters, and to write their name. Across tasks, we found a large positive programme effect on children's school readiness in the area of beginning literacy.[83,84]

We did not find any significant differences in programme effects based on region, child gender, household resource level, whether older children in the household were in school or out of school, or whether the caregiver who completed the baseline interview self-identified as literate or illiterate. Findings for each beginning literacy task are presented in more detail below.

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[82] With $F = 5.73$, $p = .017$, partial $\eta^2 = .013$ for adds one; $F = 1.34$, $p = .246$, partial $\eta^2 = .003$ for adds three; $F = 0.12$, $p = .726$, partial $\eta^2 < .001$ for subtracts one; $F = 0.15$, $p = .901$, partial $\eta^2 < .001$ for subtracts three
[83] Cross-task literacy performance was calculated for each child by summing correct number of responses for letter recognition, reading, and writing their whole name
[84] $F = 28.06$, $p < .001$, partial $\eta^2 = .061$

Letter Recognition and Recall: Children were asked to look at a page with approximately nine letters of the alphabet printed on it, and asked if they knew the names of any of those letters (recall). Then for any letter names they did not recall, children were provided with the name of the letter and then were asked to point to that letter on the page (recognition). This procedure was repeated for three pages of letters in Lingala (a total of 26 letters). Figure 30 shows the average percentage of letters recognised and recalled by children in each group. There were medium-to-large programme effects on children's ability to recognise and to recall letter names.[85]

Figure 30 Percentage of Letters Identified Correctly
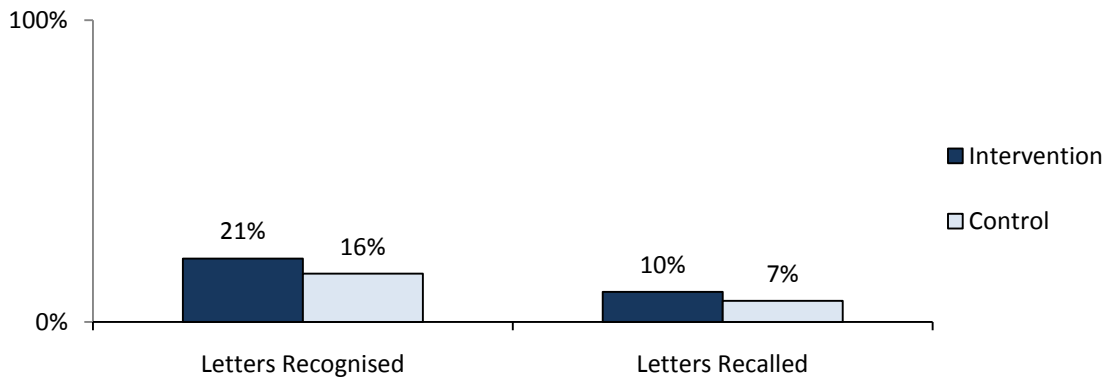
Reading: Children were shown 10 words one by one and asked to read each word. Words were selected by project staff or others with expertise in beginning reading in Lingala. The first five words were considered to be easy beginning reading words, and the second five were more difficult. Children who were unable to read *any* of the five easy words were not asked to read the more difficult words. Figure 31 shows the average percentage of words read by children in each group. There was a small but significant programme effect on children's ability to read words.[86]

Figure 31 Percentage of Words Read
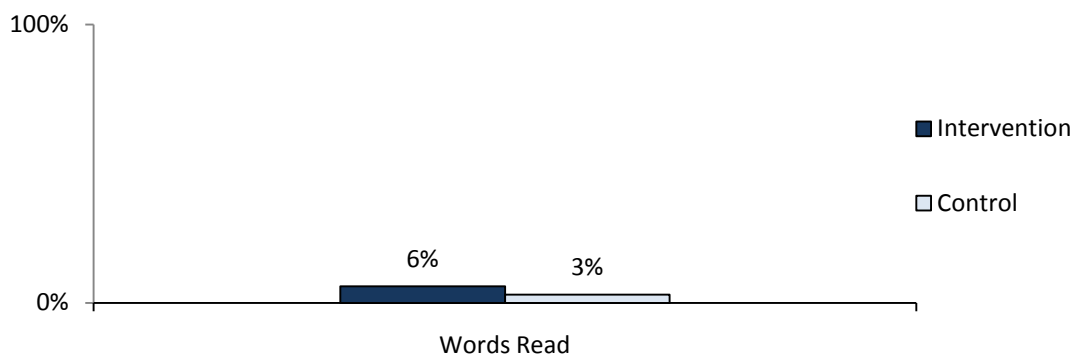
Writing: Children were provided with a sheet of paper with a line on it and a pencil, and asked to write their names. Children's responses were scored based on whether they could write at least half of the letters in their name, and whether they could write all of the letters of their name in the correct order.[87] Letters were accepted even if they were reversed or poorly formed. Figure 32 shows the percentage of children in each group who performed each writing task correctly. There was a large positive programme

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[85] With $F = 25.86$, $p < .001$, partial $\eta^2 = .055$ for recognition; $F = 26.49$, $p < .001$, partial $\eta^2 = .056$ for recall

[86] $F = 4.48$, $p = .035$, partial $\eta^2 = .010$

[87] One task in this area – writes any letters – was dropped from analysis due to scoring errors

effect on children's ability to write at least half of the letters in their name, and a large programme effect on children's ability to write their whole name.[88]

Figure 32 Percentage of Children Giving Correct Responses on Beginning Writing Tasks
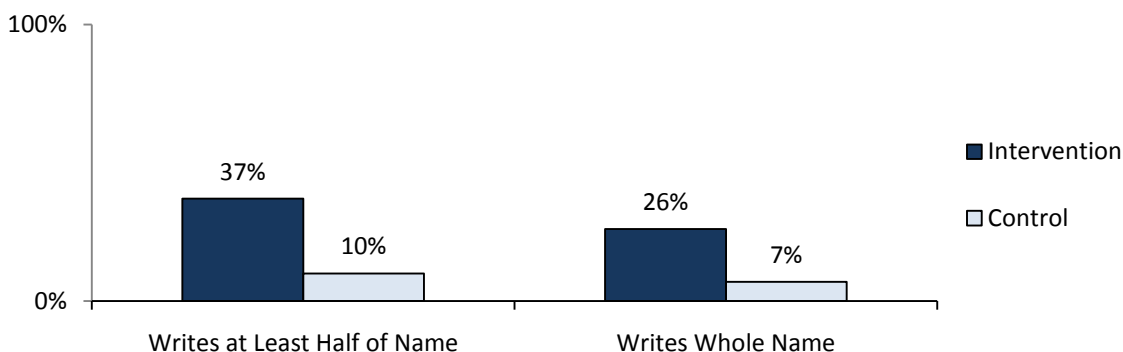
Perceptual motor skills

We measured children's perceptual motor skills with a series of four pencil-and-paper activities. Children were provided with a pencil and a sheet of paper with the dotted outlines of two straight lines, a circle, and a square. The assessor demonstrated how to trace a straight line, and asked the child to trace the remaining straight line, the circle and the square. Assessors noted whether the child knew how to hold a pencil correctly (based on local custom), and whether the child was able to trace each shape, staying on the dotted line at least 50 percent of the time.

Figure 33 shows the percentage of children in each group who performed each perceptual motor task correctly. There were no significant programme effects on children's ability to hold a pencil correctly, to trace a line, to trace a circle or to trace a square.[89]

Figure 33 Percentage of Children Correctly Completing Perceptual Motor Tasks
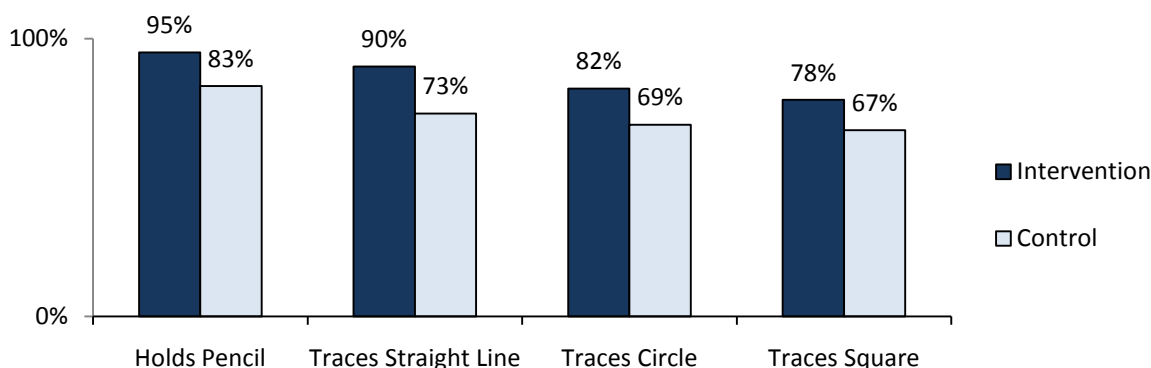
Across the four perceptual motor tasks combined, we did not find a significant programme effect on children's perceptual motor skills.[90] There was a differential programme effect based on region, with children in Kinshasa benefiting more from the intervention than children from Mbandaka in their

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[88] With F = 34.53, p < .001, partial η^2 = .074 for writing at least half of the letters in their name; F = 28.26, p < .001, partial η^2 = .061 for writing all of the letters in their name

[89] With F = 1.29, p = .256, partial η^2 = .003 for holding a pencil; F = 0.51, p = .476, partial η^2 = .001 for tracing a line; F = 0.03, p = .871, partial η^2 < .001 for tracing a circle; F = 0.27, p = .605, partial η^2 = .001 for tracing a square

[90] F = 0.13, p = .718, partial η^2 < .001

development of fine motor skills.[91] We did not find significant differences in programme effects based on child gender, household resource level, whether older children in the household were in school or out of school, or whether the caregiver who completed the baseline interview identified himself or herself as literate or illiterate.

Attention

We examined children's attention in two areas: their ability to voluntarily focus their attention on tasks and their ability to sit still during the assessment.[92]

Focused Attention and Body Movement: At the conclusion of the child assessment, the assessor rated the child's focused attention and body movement based on observation of the child's behaviour throughout the assessment. In the area of focused attention, the assessor rated the child's behaviour as *Focuses attention voluntarily*; *Attends with assessor direction*; *Some distraction with noise or movement of others*; or *Easily distracted*. In the area of body movement, the assessor rated the child's behaviour as *Sits quietly*; *Some squirming*; *Much movement*; or *Out of seat, body in constant motion*. Figure 34 shows the percentage of children in each group rated as focusing their attention voluntarily on the assessment tasks, and the percentage who were able to sit quietly during the assessment. There were no significant programme effects on children's ability to voluntarily focus their attention on academic tasks or to sit quietly while completing academic tasks.[93]

Figure 34 Focused Attention and Body Movement
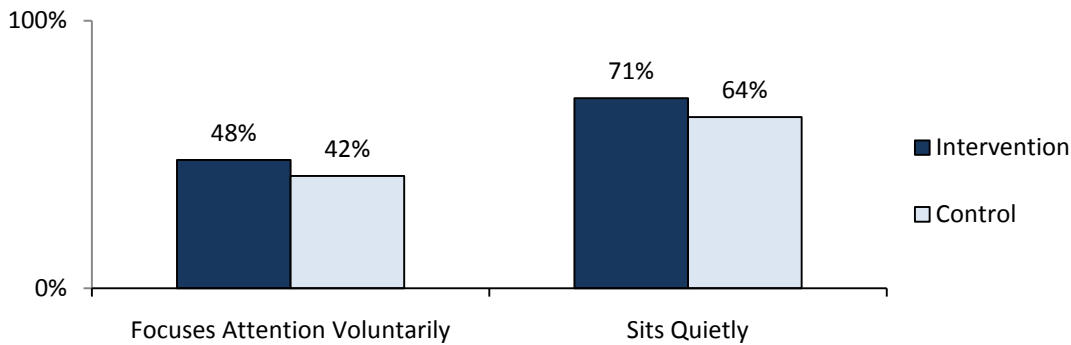
There were no significant differences in programme effects on children's focused attention based on region, child gender, household resource level, whether older children in the household were in school or out of school, or whether the caregiver who completed the baseline interview self-identified as literate or illiterate. In the area of body movement, children from lower-resource households benefited more from the intervention than children from higher-resource households.[94] Caregivers from higher-resource households were more likely to self-identify as literate, and caregiver literacy did not play a significant role in programme impacts once family resource level had been taken into consideration. There were no significant differences in programme effects on children's ability to site quietly based on region, child gender, or whether older children in the household were in school or out of school.

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[91] F = 11.41, p = .001, partial η^2 = .026

[92] The Leiter-R sustained attention task (©Stoelting Co., 1997) was also administered, but was dropped from analyses based on difficulty interpreting scoring

[93] F = 2.80, p = .095, partial η^2 = .007 for voluntary focus; F = 0.95, p = .330, partial η^2 = .003 for body movement

[94] F = 7.60, p = .006, partial η^2 = .020

Mastery motivation

At the conclusion of the child assessment, the assessor rated the child's task persistence and self-confidence based on observations of the child's behaviour throughout the assessment. In the area of task persistence, the assessor rated the child's behaviour as *Persists with task*; *Attempts task briefly*; *Attempts task after much encouragement*; or *Refuses*. In the area of self-confidence, the assessor rated the child's behaviour as *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*. Figure 35 shows the percentage of children in each group who assessors rated as persisting with assessment tasks (even if the task was difficult), and the percentage who were very sure of themselves (self-confident). There were no significant programme effects on children's task persistence or their self-confidence while completing academic tasks.[95]

Figure 35 Task Persistence and Self-Confidence
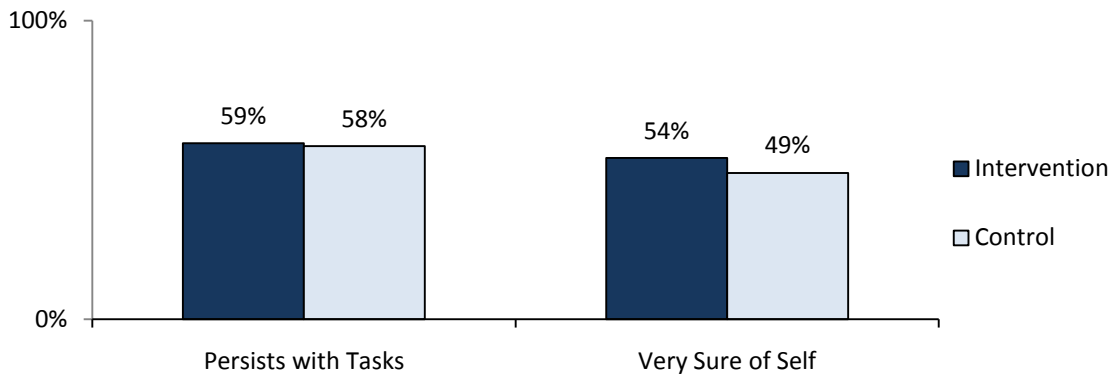
Among children who lived with an older school-aged child in the home, those from homes where all older children were in school benefited more from the intervention in both task persistence and self-confidence when compared with those who lived with one or more out-of-school older children.[96] However, the low number of children in the Intervention group who lived with an out-of-school older child was very small, so these results should be interpreted with caution. There were no significant differences in programme effects on children's task persistence or self-confidence based on region, child gender, household resource level, or whether the caregiver who completed the baseline interview self-identified as literate or illiterate.

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[95] $F = 1.17$, $p = .280$, partial $\eta^2 = .003$ for task persistence, $F = 0.21$, $p = .648$, partial $\eta^2 = .001$ for self confidence
[96] $F = 7.94$, $p = .006$, partial $\eta^2 = .068$ for task persistence, $F = 7.01$, $p = .009$, partial $\eta^2 = .060$ for self confidence

Ability to follow directions

At the conclusion of the child assessment, the assessor rated the child's attention to and comprehension of directions based on observations of the child's behaviour 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 the area of attention to directions, the assessor rated the child's behaviour *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 the area of comprehension of directions, the assessor rated the child's behaviour *Rapid comprehension of directions, given age expectations*; *Understands after several repetitions*; *Partial comprehension of directions*; or *Does not appear to comprehend most directions*. Figure 36 shows the percentage of children in each group rated as attending to directions, and the percentage who comprehended directions rapidly. There were no significant programme effects on children's attention to directions or comprehension of directions.[97]

Figure 36 Attention to and Comprehension of Directions
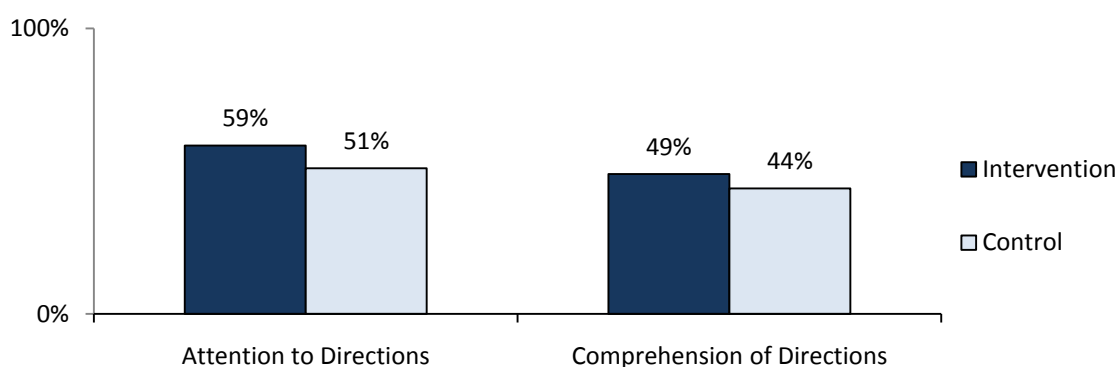
There were no significant differences in programme effects on children's attention to or comprehension of directions based on region, child gender, household resource level, whether older children in the household were in school or out of school, or whether the caregiver who completed the baseline interview self-identified as literate or illiterate.

4.5.2   On-time enrolment in primary school

Available data show an on-time enrolment rate of 76 percent among Intervention group children and 64 percent among Control group children. However, on-time enrolment information was available for a larger percentage of Intervention group children than Control group children, so we cannot be sure that these percentages would look the same if information was available for the whole sample.

4.5.3   Summary of programme impacts for young children

The *Getting Ready for School* programme had two goals for young children: to increase their school readiness and to increase their on-time enrolment in primary school. In the area of school readiness, we found a large positive programme effect on children's beginning literacy. While we did not find a significant effect on children's overall performance in beginning mathematics, children in both the Intervention and Control groups did very well on these tasks and there may have been a ceiling effect that limited our ability to detect between-group differences. We did not find significant programme effects in the areas of attention, mastery motivation, or the ability to sit quietly or follow directions while completing academic tasks. We did not find a consistent pattern of differential programme effects based on child or family characteristics or risk factors. While there was a higher rate of on-time enrolment in school among children in the Intervention group compared with children in the Control group, the unequal availability of

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[97] $F = 0.13$, $p = .715$, partial $\eta^2 < .001$ for attention to directions, $F = 0.44$, $p = .506$, partial $\eta^2 = .001$ for comprehension of directions

data means that we cannot be sure whether the enrolment rates would have been the same if information from the full sample had been available.

4.6   Programme Impacts on Families

There were two *Getting Ready for School* programme goals for families: to improve their understanding of the importance of school readiness and to increase their active support for their young children's learning. Outcomes in each of these areas will be presented below.

2.6.1 Caregiver understanding of the importance of school readiness

We provided caregivers with a list of developmental areas such as health and social and emotional learning, and some specific academic skills. For each item listed in Table 23, caregivers were asked to indicate how important they believed it was for a child to have that characteristic or skill when he or she began first grade. Response choices were *Not at all important*, *Somewhat important*, or *Very important*. These items also came together to form an Importance of School Readiness scale.[98] There was a small-to-medium *negative* programme effect on caregivers' Importance of School Readiness scale scores.[99] Intervention and Control group caregivers started with nearly identical average scores at baseline. Within the Intervention group, caregivers from lower-resource households increased in their Importance of School Readiness scale scores, but those from higher-resource homes decreased. Within the Control group, scale scores were very stable from baseline to outcome and were nearly identical across higher- and lower-resource households. The reason for this decrease among higher-resource Intervention group families is unclear based on the information available.

Table 23 Percentage of Caregivers who Indicated that It Was Very Important for a Child to Have Each Characteristic or Skill

	Intervention	Control
It is important that the child is in good physical health.	89.8% (n = 228)	93.1% (n = 202)
It is important that the child is confident.	81.9% (n = 208)	88.3% (n = 189)
It is important that the child is curious and explores his/her environment.	87.3% (n = 219)	89.7% (n = 192)
It is important that the child is able to play with other children.	83.3% (n = 210)	87.9% (n = 188)
It is important that the child has good problem-solving skills (for example, tries different ways to solve a problem).	79.0% (n = 199)	85.7% (n = 180)
It is important that the child knows some letters.	87.7% (n = 222)	89.3% (n = 191)
It is important that the child is able to read some words.	87.4% (n = 222)	88.4% (n = 190)
It is important that the child is able to write his/her own name.	89.8% (n = 228)	88.8% (n = 190)
It is important that the child is able to count from one to 10.	91.3% (n = 232)	95.4% (n = 207)
It is important that the child is able to recognise and name shapes.	81.4% (n = 206)	79.2% (n = 171)

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[98] Scale reliability was α = .80 across the full sample at baseline

[99] F = 11.47, p = .001, partial η^2 = .031

There were no significant differential programme effects based on region, child gender, or whether the caregiver who completed the baseline interview self-identified as literate or illiterate.

2.6.2 Active family support for young children's learning

We asked caregivers whether within the past week anyone in the household had engaged in each activity listed in Table 24 to support their young child's learning. These items came together to form a Support for Learning scale.[100] There was a small positive programme effect on Support for Learning scale scores, with caregivers in the Intervention group reported a greater increase in the number of learning support activities at home for the participating child when compared with Control Group caregivers.[101] While Intervention group families from Kinshasa and Mbandaka increased their active support for their child's learning, the increase was larger among families from Kinshasa.[102]

Table 24 Family Support for Children's Learning

	Intervention	Control
Told stories to child	92.9% (n = 235)	94.9% (n = 206)
Sang songs with child	95.6% (n = 241)	94.5% (n = 205)
Read books or looked at pictures with child	85.0% (n = 216)	77.9% (n = 169)
Took child out of home/yard/compound	80.3% (n = 204)	76.5% (n = 166)
Played with child	94.5% (n = 240)	93.5% (n = 203)
Spent time with child naming, counting or drawing things	89.0% (n = 226)	86.6% (n = 188)

We did not find any differential programme effects based on child gender, household resource level, or whether the caregiver who completed the baseline interview self-identified as literate or illiterate.

4.6.3 Summary of programme impacts on families

There were two *Getting Ready for School* programme goals for families whose young children participated: to improve their understanding of the importance of school readiness and to increase their active support for their young children's learning. There were no significant programme effects on caregivers' belief in the importance of school readiness, but there was a small-to-medium programme effect on the number of activities caregivers engaged in to support their young child's learning. Families from Kinshasa received a greater programme impact on their support for their child's learning than families from Mbandaka. We did not find any differential programme impacts based on child gender, household resource level, or whether the caregiver who completed the baseline interview self-identified as literate or illiterate.

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[100] Scale reliability was α = .70 across the full sample at baseline

[101] F = 15.54, p < .001, partial η^2 = .020

[102] F = 9.26, p = .002, partial η^2 = .012

4.7   Outcomes for Young Facilitators

There were three *Getting Ready for School* programme goals for the Young Facilitators: to improve their educational engagement and performance, to increase their positive attitudes toward learning, and to increase their belief in the importance of supporting young children's learning. Outcomes in each of these three areas will be presented below.

4.7.1   Academic engagement and performance

We looked at student academic engagement in two areas: student reports of how often they had missed school without permission from the school or their family (truancy), and student reports of whether they planned to continue their education next year. Note that truancy did not include occasions when the student had to miss school in order to work or to help at home.

We did not find significant differences in Young Facilitators' levels of truancy between the baseline and outcome assessments.[103] At the time of the baseline evaluation, 62 percent (n = 278) indicated that they had not been truant at all, 38 percent (n = 170) that they had been truant one to five days per month, and less than one percent (n = 3) that they had been truant six days or more per month. At the time of the outcome evaluation, 69 percent of Young Facilitators (n = 307) indicated that they had not been truant at all, 29 percent (n = 130) that they had been truant one to five days per month, and two percent (n = 9) that they had been truant six days or more per month. At the time of the baseline evaluation, 96 percent of Young Facilitators (n = 461) stated that they planned to continue their education next year, and 96 percent (n = 442) planned to continue their education at the time of the outcome evaluation.

To measure academic progress, we asked Young Facilitators to indicate what grades they usually received in each of four main academic subjects: language arts, mathematics; science; and social studies. Response choices were *Mostly poor/failing, Mostly fair*, *Mostly good*, and *Mostly excellent*. Figure 37 shows the percentage of young facilitators who indicated that their grades were mostly good or excellent at the baseline and outcome assessments. There was a significant improvement in Young Facilitators' self-reported grades In language arts and mathematics, but changes in science and social studies did not reach the level of statistical significance.[104]

Figure 37 Young Facilitators Reporting Grades of Good or Excellent by Subject

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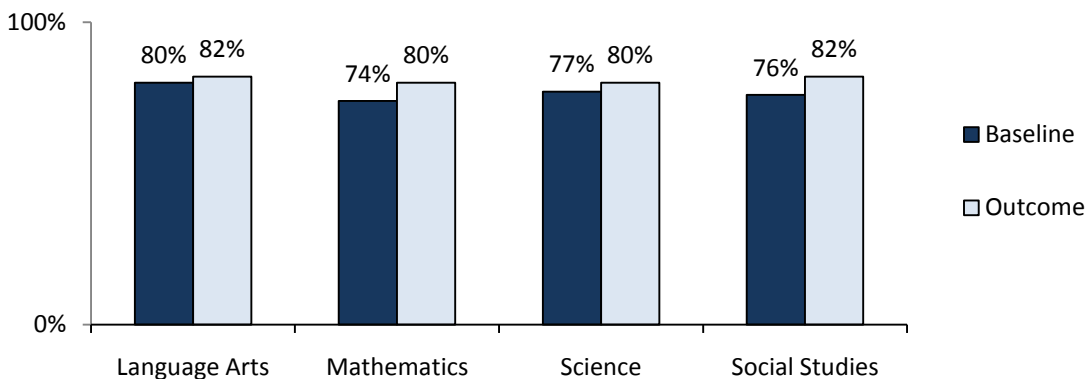
[103] $t(152) = 0.52$, *ns*

[104] With $t(433) = 39.59$, $p < .001$ for language arts; $t(435) = 34.70$, $p < .001$ for mathematics; $t(417) = -0.95$, *ns* for science; $t(416) = -0.87$, *ns* for social studies

4.7.2 Positive attitudes toward learning

Young Facilitators were presented with 14 statements regarding their attitudes toward learning, and were asked to indicate whether they agreed, disagreed, or were unsure for each. Table 25 shows the percentage of Young Facilitators who indicated that they agreed with each item. These items combined to form a Positive Attitudes toward Learning scale based on the survey items displayed in Table 25.[105] There was a significant increase in Young Facilitators' scale scores for Positive Attitudes toward Learning from baseline to outcome.[106] However, there were decreases on certain items, and the reason for this is unclear based on the information available. Young Facilitators from Mbandaka made greater gains in this area than Young Facilitators from Kinshasa.[107] There were no significant differences in changes in scale scores based on Young Facilitator gender.

Table 25 Young Facilitator Positive Attitudes toward Learning

	Baseline	Outcome
I get high marks at school.	63.7% (n = 297)	90.2% (n = 395)
Learning is fun.	75.2% (n = 357)	67.1% (n = 294)
I learn things from other students.	58.0% (n = 272)	42.0% (n = 178)
I learn things by playing with my friends.	64.5% (n = 305)	42.6% (n = 141)
I try to learn new things every day.	68.2% (n = 322)	77.2% (n = 329)
I enjoy solving problems in daily life.	59.2% (n = 282)	75.8% (n = 326)
I am trying my best at school work.	71.6% (n = 336)	80.7% (n = 355)
I like expressing my opinions in class.	57.9% (n = 275)	75.1% (n = 332)
I like teaching my friends or younger children to learn.	86.6% (n = 412)	95.4% (n = 431)
I like sharing my ideas with friends.	80.3% (n = 384)	87.1% (n = 390)
I like leading class activities.	77.1% (n = 366)	86.9% (n = 393)
Helping other students or younger children learn helps me learn as well.	87.0% (n = 416)	94.5% (n = 427)
The subjects I am learning at school will be important for me later in my life.	93.3% (n = 446)	96.7% (n = 435)
I plan to attend secondary school someday.	94.1% (n = 450)	93.8% (n = 410)

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[105] Scale reliability was α = .78 across the full sample at baseline
[106] $t(148) = 2.68$, $p < .01$
[107] $t(181.7) = -7.26$, $p < .001$

4.7.3   Support for young children's school readiness

Young Facilitators were presented with four statements regarding the importance of school readiness, and were asked to indicate whether they agreed, disagreed, or were unsure for each. There was one negatively worded item (shown in italics), where agreement shows a *lack* of support for the importance of school readiness. These items did not come together to form a reliable scale, so they will be examined individually. Table 26 displays the percentage of young facilitators who agreed with each statement at baseline and at outcome. Young Facilitators were more likely at the baseline assessment than the outcome assessment to believe that it was important for young children to learn about their new school before they go to first grade and that Young children will have better marks in first grade if they have already learned a little bit of mathematics before they go to first grade.[108]

Table 26 Young Facilitator Belief in the Importance of School Readiness

	Baseline	Outcome
It is important for young children to learn about their new school before they go to first grade.	82.6% (n = 394)	89.8% (n = 405)
It is a waste of time to teach young children before they go to first grade because they are too young to learn.	*31.2% (n = 148)*	*29.0% (n = 129)*
Young children will have better marks in first grade if they know most letters of the alphabet before they begin school.	82.2% (n = 392)	84.4% (n = 384)
Young children will have better marks in first grade if they have already learned a little bit of mathematics before they go to first grade.	87.0% (n = 416)	92.7% (n = 418)

4.7.4   Summary of outcomes for Young Facilitators

Because there was no control group for Young Facilitators we are not able to isolate specific programme impacts, so results should be interpreted with caution. However, we were able to compare baseline and outcome information at the level of the individual Young Facilitator to note any significant changes. In the area of academic engagement and performance, Young Facilitators showed a significant improvement in their self-reported grades in language arts and in mathematics. We did not find significant changes in levels of truancy or in grades in other academic subjects. There was a significant improvement in Young Facilitators' positive attitudes toward learning. And in the area of belief in the importance of young children's learning, after participating in the *Getting Ready for School* programme, Young Facilitators were more likely at the outcome assessment than they had been at the baseline assessment to believe that it is important for young children to learn about their new school before they go to first grade and that young children will have better marks in first grade if they have already learned a little bit of mathematics before they go to first grade.

4.8   Discussion and Recommendations for the DRC

The *Getting Ready for School* programme had a very successful implementation in this pilot year in the DRC. The programme already enjoys a very high level of support and is highly visible in communities, and there is significant demand for the continuation and expansion of the programme.

There were several areas of strength in this pilot programme. Enthusiastic Young Facilitators, teachers and school heads made a significant effort to implement the programme well. School heads reported that the *Getting Ready for School* training and programme had a significant positive effect on teachers' skills

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[108] $t(448) = -4.12$, $p < .001$ for *It is important for young children to learn about their new school before they go to first grade*; and $t(449) = -3.23$, $p < .01$ *Young children will have better marks in first grade if they have already learned a little bit of mathematics before they go to first grade*

and knowledge. Young Facilitators not only gained teaching skills and increased their engagement in their own schooling, they also gained respect among peers and adults in their schools and communities. And school heads reported a higher level of parent engagement in school and a greater desire to meet their children's educational needs as a result of the programme.

We found a large positive programme effect on children's beginning literacy, and smaller programme effects in some other areas of development. Given the relatively low level of programme dosage (just a few hours a week) and the challenging living conditions faced by many children in DRC, achieving any impact on children's school readiness and parental engagement in education constitutes a notable achievement for the *Getting Ready for School* programme.

We were unable to isolate specific programme impacts for Young Facilitators due to the lack of a control group. Young Facilitators showed significant improvements in their academic engagement and an increase in their positive attitudes toward learning, and an increase in their belief in the importance of young children's school readiness. We were unable to examine impacts on teachers due to sampling and data collection issues.

Reports from the field indicated that the main challenges in implementing this programme in the DRC were logistical. These issues included late arrival of materials, and inconsistent provision of a snack for the children and travel allowances for Young Facilitators and teachers. Such issues are not unexpected given the poor roads and the unstable nature of the country.

UNICEF DRC staff have indicated that they plan to add a health, sanitation and hygiene component to the curriculum. The *Getting Ready for School* programme seems like an ideal vehicle to provide this type of information and education to communities.

The recommendations to emerge from this evaluation are as follows:

- Alternate or back-up plans should be in place in case predicable logistical issues arise (e.g., impassable roads during the rainy season) to increase the likelihood that food and travel allowances reach participants in a timely manner.
- Programme impacts on children's early learning were significant in several areas. Results from children in the Control group show us that children already learn a great deal of mathematics in their home and their communities. Programme developers may wish to increase the level of mathematics activities in the materials to add more to what children already know.
- UNICEF DRC should take advantage of the programme's success to incorporate valuable information in areas of health, hygiene and sanitation as planned.

In sum, the *Getting Ready for School* programme was extremely successful in the DRC – a country that faces severe challenges in providing support and education to children and families. Every effort should be made to maintain and expand this programme if possible to benefit more children in the DRC.

CHAPTER 5   ETHIOPIA: COUNTRY-LEVEL IMPACTS

In this chapter, we present country-level results for Ethiopia, including the need for the intervention; the implementation of the *Getting Ready for School* programme in Ethiopia; programme impacts for young children, families, Young Facilitators and teachers; and programme costs. We conclude the chapter with a discussion of the findings and list of recommendations for the future success of the *Getting Ready for School* programme in Ethiopia.

5.1   Need for the Intervention

A primary focus of the government of Ethiopia is to improve the quality of education. However, extant educational data suggest this will be a daunting task. For example, there are 7.3 million children of pre-primary school age in Ethiopia, but about 7.1 million of them do not have access to early childhood development programs (UNESCO, 2006). Ethiopia faces several challenges in expanding access to pre-primary and primary education, including the privatization of most of the pre-primary schools in Ethiopia (the majority of which are located in urban areas), a lack of trained pre-primary teachers and a fragmented quality assurance system that does not ensure that high quality education is provided to the most disadvantaged (i.e., rural) populations.

Despite these current weaknesses in the overall provision of early childhood development programmes in Ethiopia, there is a general consensus that such programs could significantly boost cognitive, academic and socio-emotional outcomes for young children. Therefore, the Ethiopian Ministry of Education (MoE) has a stated goal of universal primary education by 2015 as articulated in the 1994 Education and Training Policy. The government of Ethiopia has demonstrated a commitment to supporting the development and implementation of early childhood development policies. For example, in 2005, the six-year Education Sector Development Program III plan was enacted to promote pre-primary education and expand access to pre-primary programming through policies that enhanced investment by the private sector, NGOs and communities. The *Getting Ready for School* Approach is viewed by MoE counterparts as an important springboard for early childhood development programming.

5.2   Nature of the Intervention

Initially, six regions were selected to participate in the pilot implementation of the *Getting Ready for School* programme. Due to logistical constraints, it was decided that the pilot would be implemented in a phased approach, with initial implementation taking place in only three regions during 2008-2009. These three regions, Harar, Oromia and Tigray, were not only interested in the programme but also had a strong commitment and capacity to successfully implement the programme.

School clusters are small groups of schools in relative proximity that are linked through one school that acts as cluster resource centre. A cluster is put in place for schools to share resources such as professional development support and teaching materials. It is typically made up of five to seven schools. School clusters were selected in each region to participate in the programme (or to be part of the control group). All participating schools were in rural areas, and were selected to take part based on good working relations among the cluster schools and willingness of the headmasters.
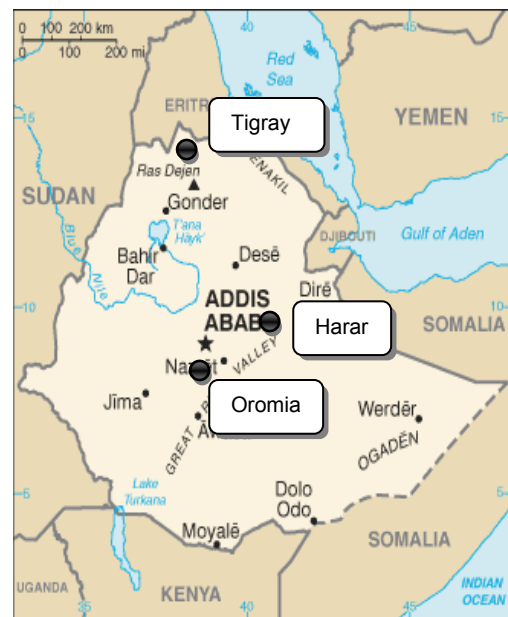
5.3   The Evaluation

In this section, we present information on data collection procedures and the evaluation sample in Ethiopia, noting any areas of concern that could influence the interpretation of findings.

5.3.1   Data collection

Baseline data were collected in November and December of 2008; outcome data for teachers, Young Facilitators and community stakeholders were collected in June and July of 2009; and outcome data for children and their caregivers were collected in September of 2009. Data were collected by trained, certified assessors. Data collection quality monitoring was conducted by a UNICEF consultant and staff from the universities overseeing the project in each region. There were some issues with missing data, especially at the baseline assessment (for example, there were no baseline surveys from Young Facilitators in one region). Where data are missing, outcome analyses have been presented with a description of the missing data and a discussion of how this missing data affected the analyses and interpretation of the findings.

5.3.2   Sample

In this section, we present information about the schools, children and families, Young Facilitators and teachers who took part in the evaluation. A total of 415 Young Facilitators and 2,258 young children took part in the *Getting Ready for School* programme. Among these, a random sub-sample was selected to serve as the Intervention group in this evaluation. We do not have school-level information available for Intervention or Control group schools in Ethiopia. However, we know that Intervention group schools were selected to represent a mix of high-, medium- and low-performing schools, then matched Control group schools were selected based on similar location, characteristics, and level of performance.

At the baseline evaluation, 68 of the 84 programme teachers took part in the Intervention group but only 6 teachers participated in the Control group. At the outcome evaluation, less than half of the original Intervention group teachers (n = 37) and 44 Control group teachers took part. Therefore, while we provide information about how Intervention and Control group teachers responded to survey items at the outcome assessment, we were unable to examine programme impacts due to the low number of participants in the Control group at baseline, and unable to examine changes within the Intervention group from baseline to outcome due to the high rate of attrition within the Intervention group.

Of the 231 children who took part in the baseline evaluation in Ethiopia, 208 also took part in the outcome assessment – a low overall attrition rate of 4 percent. Among the Intervention group, 117 children completed the baseline assessment and 114 completed the outcome assessment (an attrition rate of less than 2 percent). Among the Control group, 114 children completed the baseline assessment and 108 completed the outcome assessment (an attrition rate of 5 percent). So we do not have concerns about differential attrition among children and families. Note that an additional Intervention group child completed the outcome assessment but did not participate in the baseline, for a final sample of 232 children participating. Table 27 summarizes child and family characteristics at baseline.

Table 27 Child and Family Characteristics at Baseline

	Intervention	Control
Gender of participating child (% female)[109]	49%	49%
Number of household members	M = 5.9 SD = 1.7	M = 6.0 SD = 2.0
Number of household members under age 12[110]	M = 2.1 SD = 1.2	M = 2.1 SD = 1.3
Two-parent households	90%	83%
Families with out-of-school children[111]	52%	56%
Responding caregiver literacy (% literate)	31%	35%
Family resource level[112] (% low)	58%	66%

A total of 415 Young Facilitators were in the Intervention group. Of those, 407 were retained for the outcome evaluation – a low 2 percent attrition rate. Note that there was no Control group for Young Facilitators. Table 28 shows the characteristics of the Young Facilitators.

Table 28 Young Facilitator Characteristics

Gender (% female)	41%
Grade	
Three	2%
Four	2%
Five	38%
Six	57%

Community leader interviews were completed with school heads from 19 of the 20 Intervention group schools, and with three community leaders – one PTA member, one village elder, and one neighbourhood (*kebele*) leader.

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[109] Child gender was not collected for a large portion of the sample at baseline, so this figure is based on the outcome sample. Note that at the outcome assessment, child gender data were only collected for half of the children.
[110] This does not include the child participating in the evaluation
[111] Among households with one or more older children aged 7-13, percentage of households where at least one of those children was not enrolled in school at the time of the baseline evaluation
[112] Low resource level based on the presence of three or fewer of the following items in the household: Grain mill, radio, mobile telephone, clock, furniture, bed, animals, oxen

5.4   Programme Implementation

In this section, we provide information regarding the level of participation in the *Getting Ready for School* programme among children assigned to the Intervention group and the Young Facilitators; programme implementation; the extent to which children in both the Intervention and Control groups participated in other early childhood development programmes; the success of programme communications in conveying key messages to the community; and stakeholder perceptions of programme strengths, challenges and sustainability.

5.4.1   Participation in *Getting Ready for School* among Intervention group children

A total of 119 children were assigned to the Intervention group (117 children were in the baseline sample and 2 more were added to the Intervention group after baseline assessment). Attendance data were only available for 100 of the children. Among the 19 whose attendance is unknown, information from caregivers was available for 18 of the children, and caregivers for all 18 reported that their child had attended the programme at least once.

Attendance was very high overall among the 100 children whose attendance records were available. There were 35 programme sessions offered, and according to programme records, children attended an average of 32.99 sessions (SD = 5.07). Fifty percent of the children (n = 50) had perfect attendance, and 90 percent (n = 90) attended at least 32 of the 35 sessions. Only three children (3 percent) attended fewer than 28 sessions (including one child who unfortunately passed away). Attendance rates were similar in Oromia and Tigray, with an average of 34.15 sessions attended in Oromia (SD = 1.88) and 34.38 sessions attended in Tigray (SD = 0.87). Attendance was slightly lower in Harar, with an average of 31.15 sessions attended (SD = 7.41).

We did not find significant differences in attendance rates based on children's gender, household resource level, whether older children in the household were in school or out of school, or whether the caregiver who completed the baseline interview self-identified as literate or illiterate.[113]

5.4.2   Implementation of the *Getting Ready for School* programme in Ethiopia

As intended, the *Getting Ready for School* programme was implemented across 35 sessions, with each session lasting approximately 2 to 3 hours. At the conclusion of each session, the teacher completed a session record where he or she indicated whether the instructions in the teacher's guide were clear, whether the teacher felt that literacy and numeracy activities were fun for most of the children, whether the Young Facilitators felt that activities were fun, whether the lessons were at the right level of difficulty for the young children, and whether the Young Facilitators found it easy or difficult to implement the activities. Teachers also provided information about resources they had purchased for the sessions and about preparation time, and provided their recommendations for any needed improvements in the programme. Teacher feedback on *Getting Ready for School* sessions was available from Oromia and Tigray, but not Harar.

Teachers found their instructions to be *Very clear* 65 percent of the time and *Somewhat clear* 35 percent of the time. Young Facilitators found their instructions to be easy to follow 92 percent of the time. Teachers were somewhat more positive about how fun the activities were when compared with the Young Facilitators. Teachers rated the activities as *Very fun* 88 percent of the time and *Somewhat fun* 22 percent of the time. Young Facilitators rated the activities as *Very fun* 60 percent of the time and *Somewhat fun* 40 percent of the time. Fifty-two percent of activities were rated by teachers as being at the right level of difficulty for children, with 44 percent rated *Very easy* and less than 4 percent *Too difficult*.

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[113] With $t(66) = -1.08$, *ns* for gender; $t(98) = 0.06$, *ns* for resource level; $t(68) = -1.29$, *ns* for older child in school or out of school; $t(78) = 0.83$, *ns* for caregiver literacy

5.4.3   Participation in other early childhood development programmes

Five percent of children from the Intervention group (n = 6) and 10 percent from the Control group (n = 11) took part in other early childhood development programmes. Among the children in the Intervention group, three took part in a kindergarten/grade zero class at a public or private school, two participated in educational sessions run once or twice per week by a local community organization or NGO, and one attended a public (government-run) preschool. Among the Control group children, three attended a public (government-run) preschool, two attended first grade at a public school, two attended private kindergartens, two attended a parent-child play group, one participated in educational sessions run once or twice per week by a local community organization or NGO, and one attended a private preschool.

5.4.4   Programme communications

Through the caregiver supplemental interview, we were able to evaluate how successfully the *Getting Ready for School* programme communicated with Intervention group families. Four questions were asked, including how well parents understood what the *Getting Ready for School* programme was about, whether other parents in their community knew about *Getting Ready for School*, which methods of advertisement they observed in their community, and what messages *Getting Ready for School* conveyed about children's development and school readiness.

Sixty-two percent (n = 69) of caregivers reported that they understood the *Getting Ready for School* programme very well, while 20 percent (n = 22) reported that they only knew a little bit about the programme and 16 percent (n = 18) reported that they did not know what the programme was about. When asked whether other parents in their community knew about *Getting Ready for School*, 73 percent (n = 81) of caregivers thought that other parents were familiar with the programme. The most common forms of programme communications observed by caregivers were announcements in local community organizations (e.g., mosque/church, local schools, and health centres; 41 percent, n = 45) and word of mouth (e.g., personal communication with family members, neighbours and friends, 41 percent, n = 46). No caregivers reported learning about *Getting Ready for School* through posters, banners or fliers, radio or television.

Sixty-seven percent (n =74) of caregivers reported that they felt the *Getting Ready for School* programme conveyed at least two messages, the most common of which included: *Children learn through play*; *Children's early experiences can help their brains develop well*; *When you take time to talk with your child and listen to him/her, this helps your child feel good about himself/herself and want to learn;* and *Older children can help younger children learn/get ready for school*.

5.4.5   *Getting Ready for School* programme strengths and challenges

School heads and community leaders observed a number of benefits as a result of the introduction of the *Getting Ready for School* programme. Ninety percent of school heads (n = 17) believed that the development of the Young Facilitators as a community resource had been the greatest accomplishment of the programme. Over half of the school heads (n = 10) felt that the programme both improved teachers' interaction with children and prepared children better for school. Forty-two percent (n = 8) reported that parents became more involved in their children's education because of the program, and 47 percent (n = 9) said that the programme raised the value of early childhood education in the eyes of the community. UNICEF Ethiopia staff also observed that the programme was extremely well received by communities, with stakeholders in Control group communities anxious to have the programme as well. One of the community leaders interviewed noted the special benefit of having a programme that was able to encourage children's development in rural communities.

Stakeholders noted several challenges associated with the programme implementation in this pilot year. Some school heads felt that insufficient teaching and learning materials had been allocated to each school. School heads also noted that while the programme usually took place out of doors, the materials

were not always suitable to outdoor use (e.g., papers that could easily blow away). Both school heads 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, and that it was difficult (especially toward the beginning of the programme implementation) for parents and community members to see the programme benefits for Young Facilitators. UNICEF staff also noted that Young Facilitators often imitated the non-child-centred methods of their own teachers, focusing on repetition and rote learning. There were also special logistical challenges associated with launching a programme in multiple regions with different languages and cultures as are found in Ethiopia.

School heads, community leaders and UNICEF staff all expressed concern about the availability of long-term funding to maintain the programme. School heads believed that the lack of incentives for teachers to lend the considerable time needed for this programme posed the greatest challenge to long-term growth and sustainability of the programme.

5.5 Outcomes for Children

In this section, we present programme impact findings for young children in the areas of school readiness and on-time enrolment in first grade. We examined the data for any differential programme impacts for children based on what region they lived in, their gender, their household resource level, and whether the caregiver who completed the baseline interview self-identified as literate or illiterate. Among young children who lived with an older school-age child, we looked for differential programme impacts based on whether that older child was enrolled in school or not. And among children in the intervention group, we looked at whether there was any significant relationship between the number of *Getting Ready for School* sessions they participated in and their acquisition of school readiness skills and behaviours.

5.5.1 School readiness

We examined children's school readiness in the areas of academic skills, perceptual motor skills, attention, mastery motivation, and the ability to follow directions. Academic skills included colour naming, pattern recognition, beginning mathematics (including numeral identification, counting and applied addition and subtraction) and beginning literacy (including letter identification, beginning reading and beginning writing).

Colour naming

Children were shown a page with nine coloured flowers (red, blue, green, yellow, black, grey, orange, pink, purple). The children were asked to say the colour name for any colours they knew, and then for any colours they did not recall, children were provided with the name of the colour and then were asked to point to the flower of that colour (recognition). Figure 38 shows the average percentage of colours recognised and recalled by each group. There were no significant programme effects on children's ability to recall or to recognise colour names.[114]

Figure 38 Percentage of Colours Identified Correctly
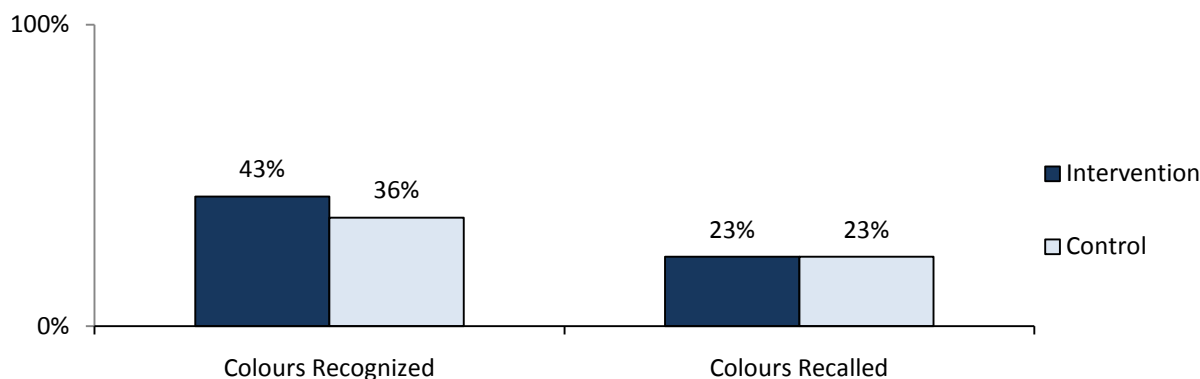
There were significantly greater programme effects on colour recognition and colour recall for children from households where the caregiver who completed the baseline family interview self-identified as literate (versus illiterate).[115] Among children in the Intervention group, the number of *Getting Ready for School* sessions they attended had a significant positive relationship with the number of colours they could both recognise and recall.[116] There were no significant differences in programme impacts on children's ability to recognise or recall colour names based on child gender, household resource level, or whether older children in the household were in school or out of school.

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[114] With $F = 1.44$, $p = .232$, partial $\eta^2 = .007$ for recognition; $F = 0.21$, $p = .650$, partial $\eta^2 = .001$ for recall

[115] With $F = 9.33$, $p = .003$, partial $\eta^2 = .049$ for recognition; $F = 6.11$, $p = .014$, partial $\eta^2 = .033$ for recall

[116] With $F = 4.83$, $p < .001$, partial $\eta^2 = .336$ for recognition; $F = 4.34$, $p < .001$, partial $\eta^2 = .312$ for recall

Pattern recognition

Children were first asked to complete a pattern of two alternating colours, then a pattern of three alternating colours. For each, the assessor placed coloured plastic bears one by one in sequence (e.g., red, blue, red, etc.). The child was then asked to choose which of three coloured bears came next. Figure 39 shows the percentage of children in each group who were able to correctly complete the two-colour and the three-colour patterns. There were no significant programme effects on children's ability to complete a two-colour pattern or a three-colour pattern.[117]

Figure 39 Percentage of Children who Completed Patterns
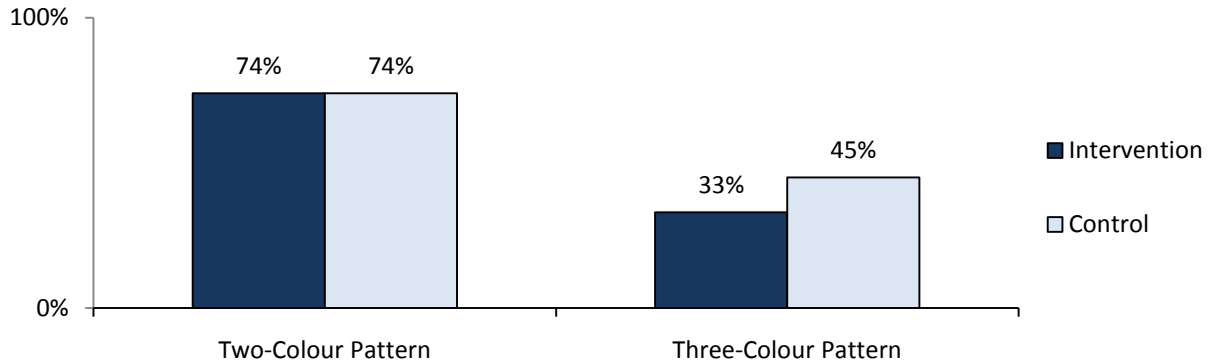
There were no significant differences in programme effects on pattern recognition based on region, child gender, household resource level, whether older children in the household were in school or out of school, or whether the caregiver who completed the baseline interview self-identified as literate or illiterate.

Beginning mathematics

In the area of beginning mathematics, we assessed children's ability to identify and recognise written numerals, to count to 10, to count objects with one-to-one correspondence (that is, assign one number name to each object), and to complete simple applied problems in addition and subtraction. Across tasks, there was a medium-sized positive programme effect on children's school readiness in the area of mathematics.[118,119] There were no significant differences in programme effects based on region, child gender, household resource level, whether older children in the household were in school or out of school, or whether the caregiver who completed the baseline interview self-identified as literate or illiterate. Among children in the Intervention group, the number of *Getting Ready for School* sessions children attended did not have a significant relationship with their development in beginning mathematics. Findings for each beginning mathematics task are presented in more detail below.

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[117] With $F = 3.50$, $p = .059$, partial $\eta^2 = .017$ for two-colour pattern; $F = 0.01$, $p = .915$, partial $\eta^2 < .001$ for three-colour pattern

[118] Cross-task mathematics performance was calculated for each child by summing correct number of responses for numeral recognition, counting to 10, counting with one-to-one correspondence, and the four addition and subtraction tasks

[119] $F = 13.73$, $p < .001$, partial $\eta^2 = .061$

Numeral Recognition and Recall: Children were shown a page with pictures of numerals 0 through 9 and were asked to say the name of any numerals they knew (recall). Then for any numeral names they did not recall, children were provided the name of the numeral and then were asked to point to the numeral (recognition). Figure 40 shows the average percentage of numerals recognised and recalled by children in each group. We found a small-to-medium programme effect on children's ability to recognise written numerals, but no significant programme effect on children's ability to recall written numerals.[120]

Figure 40 Percentage of Numerals Identified Correctly
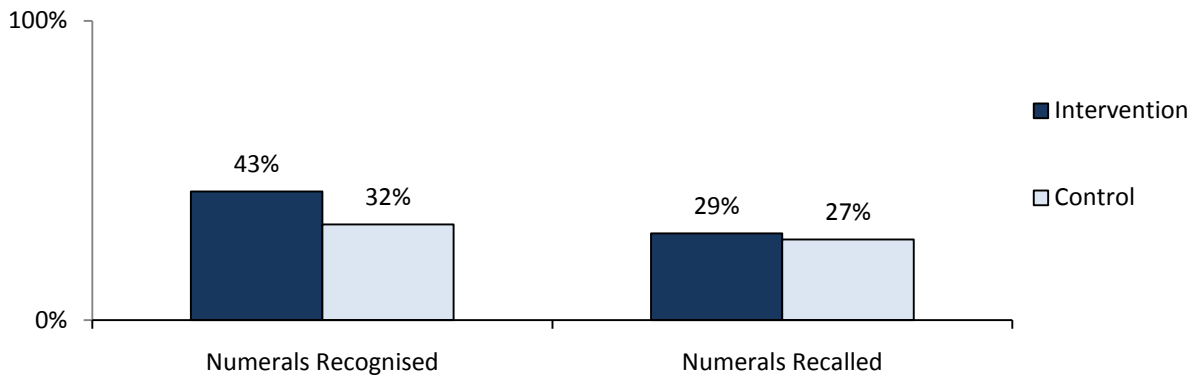
Counting: Children were presented with 10 plastic bears in a line and were asked to count them. Children were scored based on whether they counted to three, counted to 10, and counted with one-to-one correspondence (that is, assigned one number name to each bear). Figure 41 shows the percentage of children in each group who completed each counting task correctly. There was no significant programme effect on children's ability to count to three, but there was a small programme effect on children's ability to count to 10, and a medium-to-large effect on children's ability to count with one-to-one correspondence.[121]

Figure 41 Percentage of Children Counting Correctly
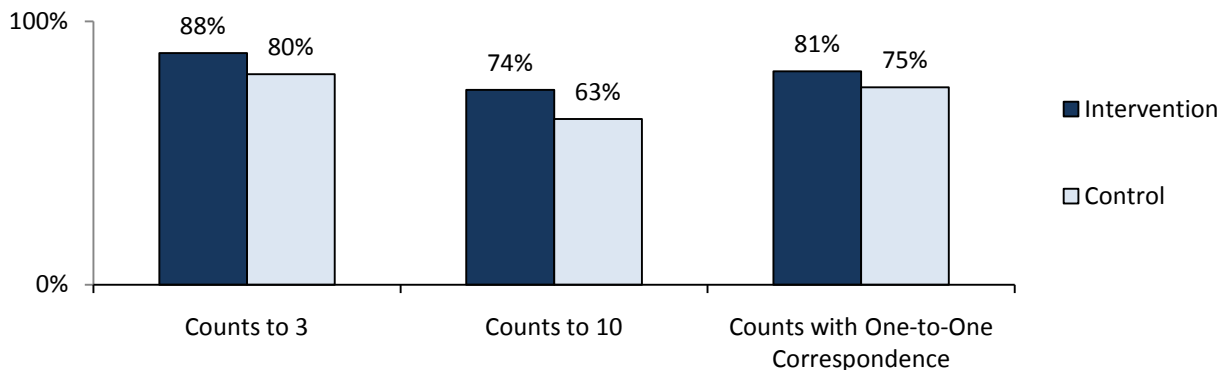
Addition and Subtraction: Children were presented with two problems in addition and two in subtraction. For each problem, the child was presented with plastic bears and asked to state how many bears there would be if a certain number were added or taken away. Children were given credit for either saying the name of the correct number, or showing the correct number with their fingers. Figure 42 shows the percentage of children in each group who completed each addition and subtraction task correctly. There was a small-to-medium programme effect on children's ability to subtract one.[122] Children in the Control group performed better than children in the Intervention group on this task at baseline (with 45 percent of

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[120] With $F = 6.96$, $p = .009$, partial $\eta^2 = .031$ for recognition; $F = 0.71$, $p = .401$, partial $\eta^2 = .003$ for recall

[121] With $F = 1.25$, $p = .265$, partial $\eta^2 = .006$ for counts to three; $F = 4.46$, $p = .036$, partial $\eta^2 = .021$ for counts to 10; $F = 17.33$, $p < .001$, partial $\eta^2 = .075$ for counts with one-to-one correspondence

[122] $F = 6.94$, $p = .009$, partial $\eta^2 = .031$

children in the Intervention group and 64 percent in the Control group solving the problem correctly). Although the Control group still performed slightly better at the outcome assessment, children in the Intervention group were significantly more likely to improve on this task than children in the Control group. There was no significant programme effect on children's ability to add one, to add three, or to subtract.[123]

Figure 42 Percentage of Children Solving Applied Problems in Addition and Subtraction
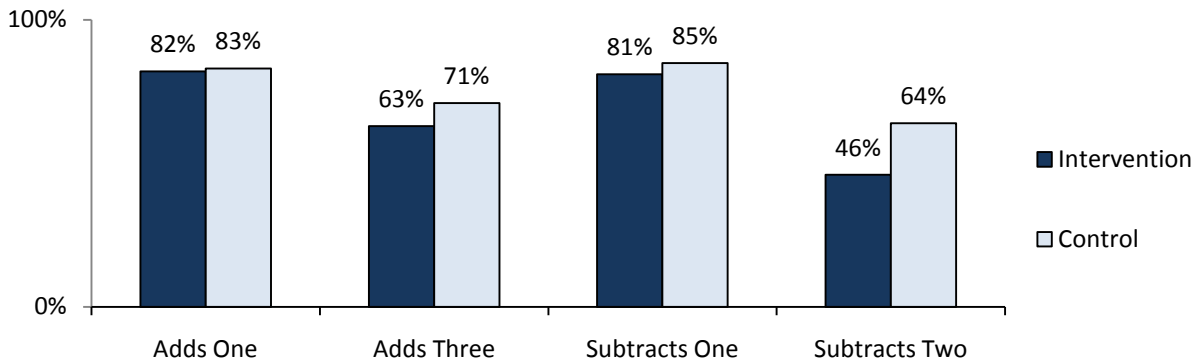
Beginning literacy

In the area of beginning literacy, we assessed children's ability to identify and recognise written letters, to read simple words, to write any letters, and to write their name. Across tasks, we found a large programme effect on children's school readiness in the area of beginning literacy.[124,125]

There were no significant differences in programme effects based on region, child gender, household resource level, whether older children in the household were in school or out of school, or whether the caregiver who completed the baseline interview self-identified as literate or illiterate. Among children in the Intervention group, the number of *Getting Ready for School* sessions attended did not have a significant relationship with their development of beginning literacy. Findings for each beginning literacy task are presented in more detail below.

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[123] With $F = 0.57$, $p = .450$, partial $\eta^2 = .003$ for adds one; $F = 0.06$, $p = .810$, partial $\eta^2 < .001$ for adds three; $F = 1.74$, $p = .188$, partial $\eta^2 = .008$ for subtracts three
[124] Cross-task literacy performance was calculated for each child by summing correct number of responses for letter recognition, reading, writing any letters, and writing their whole name
[125] $F = 20.05$, $p < .001$, partial $\eta^2 = .088$

Letter Recognition and Recall: Children were asked to look at a page with approximately 9 letters of the alphabet printed on it, and asked if they knew the names of any of those letters (recall). Then for any letter names they did not recall, children were provided with the name of the letter and then were asked to point to that letter on the page (recognition). This procedure was repeated for three pages of letters (for a total of 26 letters). Figure 43 shows the average percentage of letters recognised and recalled by children in each group. There was a large programme effect on children's ability to recognise letters, and a small programme effect on children's ability to recall letter names.[126]

Figure 43 Percentage of Letters Identified Correctly
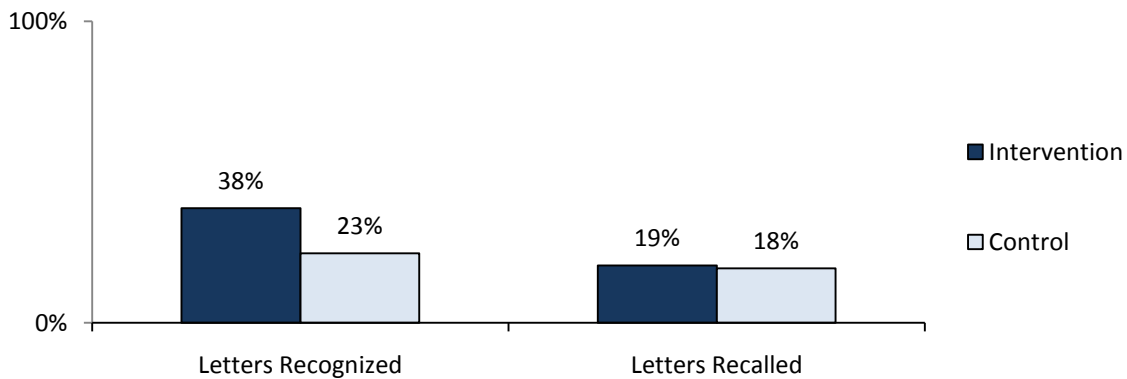
Reading: Children were shown 10 words and asked to read each word. Words were selected by project staff or others with expertise in beginning reading in Amharic (in Harar), Oromo (in Oromia) or Tigrinya (in Tigray). The first five words were considered easy beginning reading words, and the second five were more difficult. Children who were unable to read *any* of the five easy words were not asked to read the more difficult words. Figure 44 shows the average percentage of words read by children in each group. Few children were able to read any words, and there was no significant programme effect.[127]

Figure 44 Percentage of Words Read
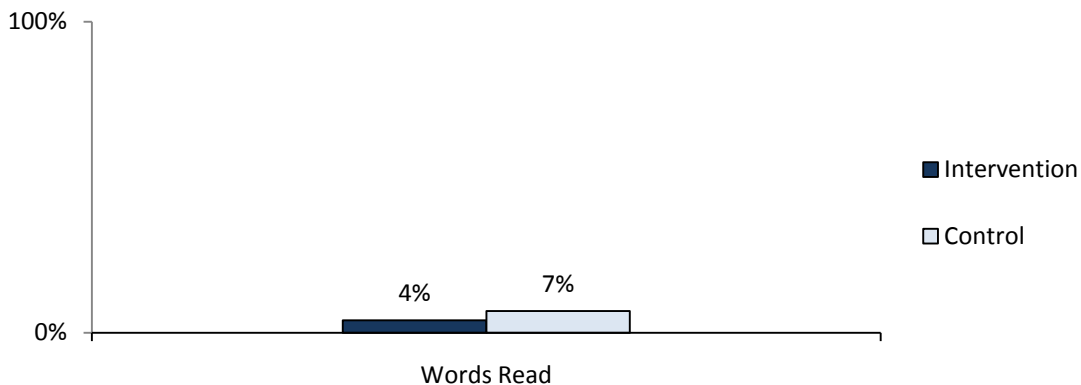
Writing: Children were provided with a sheet of paper with a line on it and a pencil, and asked to write their names. Children's responses were scored based on whether they could write any letters (whether or not these letters were part of their name), whether they could write at least half of the letters in their name, and whether they could write all of the letters of their name in the correct order. Letters were accepted even if they were reversed or poorly formed. Figure 45 shows the percentage of children in each group who performed each writing task correctly. There was a medium programme effect on

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[126] With $F = 22.75$, $p < .001$, partial $\eta^2 = .094$ for recognition; $F = 4.89$, $p = .028$, partial $\eta^2 = .022$ for recall
[127] $F = 0.62$, $p = .433$, partial $\eta^2 = .003$

children's ability to write any letters and to write at least half of the letters in their name, but no significant programme effect on children's ability write their whole name.[128]

Figure 45 Percentage of Children Giving Correct Responses on Beginning Writing Tasks

Perceptual motor skills

We measured children's perceptual motor skills with a series of four pencil-and-paper activities. Children were provided with a pencil and a sheet of paper with the dotted outlines of two straight lines, a circle, and a square. The assessor demonstrated how to trace a straight line, and asked the child to trace the remaining straight line, the circle and the square. Assessors noted whether the child knew how to hold a pencil correctly (based on local custom), and whether the child was able to trace each shape, staying on the dotted line at least 50 percent of the time.

Across the four perceptual motor tasks, although the Intervention group performed better than the Control group at the outcome assessment; the Intervention group had also performed somewhat better at the baseline assessment. We found no significant programme effects on children's perceptual motor skills across all four tasks combined.[129] There were no significant differences in programme effects based on region, child gender, household resource level, whether older children in the household were in school or out of school, or whether the caregiver who completed the baseline interview self-identified as literate or illiterate. Among children in the Intervention group, the number of *Getting Ready for School* sessions attended did not have a significant relationship with their development of perceptual motor skills.

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[128] With F = 11.60, p = .001, partial η^2 = .052 for writing any letters; F = 7.17, p = .008, partial η^2 = .033 for writing at least half of the letters in their name; F = 1.69, p = .195, partial η^2 = .008 for writing all of the letters in their name
[129] F = 2.20, p = .139, partial η^2 = .010

Figure 46 shows the percentage of children in each group who performed each perceptual motor task correctly. There was no significant programme effect on children's ability to trace a line, to trace a circle, or to trace a square.[130]

Figure 46 Percentage of Children Correctly Completing Perceptual Motor Tasks
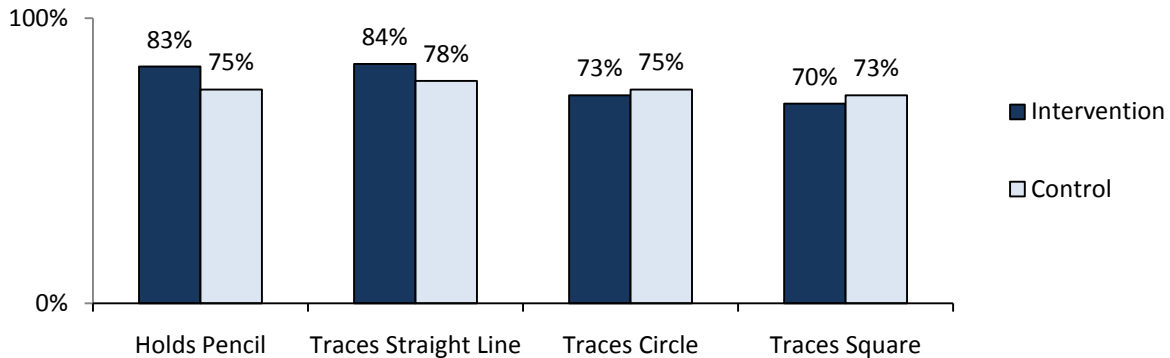
Attention

We examined children's attention in three areas: their ability to sustain attention, their ability to voluntarily focus their attention during tasks and their ability to sit still during the assessment.

Sustained Attention: Sustained attention was measured with the Leiter-R sustained attention subtask,[131] a non-verbal task that requires the child to find as many pictures that match as model as they can within 30 seconds. Figure 47 shows the percentage of pictures marked correctly (out of 20 possible) by children in each group. There was a large *negative* programme effect on children's sustained attention.[132] Children in the Control group scored lower than Intervention group children on this task at the baseline assessment, but Control group children improved more than Intervention group on this task and both groups performed nearly identically at the outcome assessment.

Figure 47 Percentage of Pictures Marked Correctly
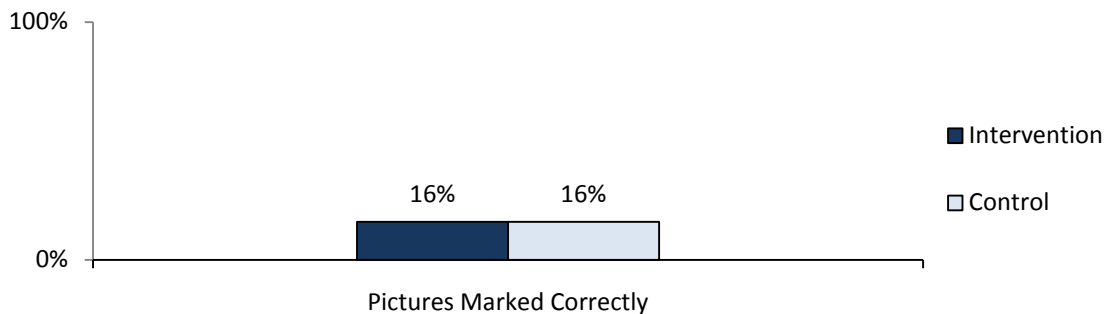
There was a negative programme effect for children from low-resource households, with children in the Control group showing greater gains in sustained attention than children in the Intervention group.[133] And among children in the Intervention group, the number of *Getting Ready for School* sessions attended had a negative relationship with their development of sustained attention. The greater number of sessions the

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[130] With $F = 1.11$, $p = .294$, partial $\eta^2 = .002$ for holding a pencil; $F = 1.97$, $p = .161$, partial $\eta^2 = .003$ for tracing a line; $F = 0.02$, $p = .900$, partial $\eta^2 < .001$ for tracing a circle; $F = 0.06$, $p = .813$, partial $\eta^2 < .001$ for tracing a square

[131] ©1997 Stoelting Co., used with permission

[132] $F = 13.47$, $p < .001$, partial $\eta^2 = .068$

[133] $F = 5.42$, $p = .021$, partial $\eta^2 = .029$

child attended, the less their improvement in this area.[134] There were no significant differences in programme effects based on region, child gender, whether older children in the household were in school or out of school, or whether the caregiver who completed the baseline interview self-identified as literate or illiterate.

Focused Attention and Body Movement: At the conclusion of the child assessment, the assessor rated the child's attention span and body movement based on their observations of the child's behaviour throughout the assessment. In the area of attention span, the assessor rated the child's behaviour *Focuses attention voluntarily*; *Attends with assessor direction*; *Some distraction with noise or movement of others*; or *Easily distracted*. In the area of body movement, the assessor rated the child's behaviour *Sits quietly*; *Some squirming*; *Much movement*; or *Out of seat, body in constant motion*. Figure 48 shows the percentage of children each group who assessors rated as focusing their attention voluntarily on the assessment tasks, and the percentage who were able to sit quietly during the assessment.

We found a small-to-medium programme effect on children's ability to focus their attention voluntarily while completing academic tasks.[135] While Intervention and Control group children were nearly equally likely to receive a rating of *Focuses attention voluntarily* from assessors at the outcome assessment, Intervention group children scored lower on this item at baseline than Control group children and so improved more by the outcome assessment. We also found a small-to-medium programme effect on children's ability to sit quietly while completing academic tasks.[136] While Intervention group children improved in this area from baseline to outcome, children in the Control group were *less* able to sit quietly at the outcome assessment than at the baseline assessment.

Figure 48 Focused Attention and Body Movement
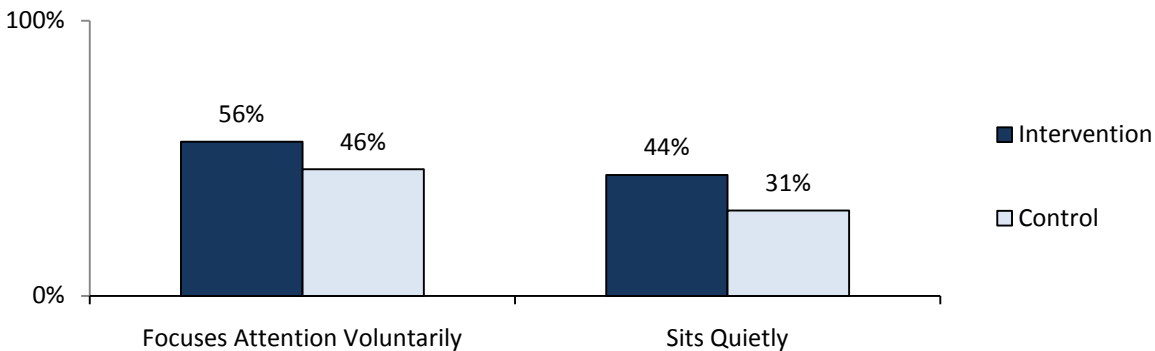
There were no significant differences in programme effects on children's focused attention or body movement based on region, child gender, household resource level, whether older children in the household were in school or out of school, or whether the caregiver who completed the baseline interview self-identified as literate or illiterate. Among children in the Intervention group, the number of *Getting Ready for School* sessions attended did not have a significant relationship with their development of attention span or the ability to sit quietly while completing tasks.

Mastery motivation

At the conclusion of the child assessment, the assessor rated the child's task persistence and self-confidence based on their observations of the child's behaviour throughout the assessment. In the area of task persistence, the assessor rated the child's behaviour as *Persists with task*; *Attempts task briefly*; *Attempts task after much encouragement*; or *Refuses*. In the area of self-confidence, the assessor rated

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[134] $r = -.34$, $p < .01$
[135] $F = 4.94$, $p = .028$, partial $\eta^2 = .037$
[136] $F = 6.35$, $p = .013$, partial $\eta^2 = .047$

the child's behaviour as *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*. Figure 49 shows the percentage of children in each group who assessors rated as persisting with assessment tasks (even if the task was difficult), and the percentage who were very sure of themselves (self-confident). There were no significant programme effects on children's task persistence or self-confidence while completing academic tasks.[137]

Figure 49 Task Persistence and Self-Confidence

There were no significant differences in programme effects on task persistence or self confidence based on region, child gender, household resource level, whether older children in the household were in school or out of school, or whether the caregiver who completed the baseline interview self-identified as literate or illiterate. Among children in the Intervention group, the number of *Getting Ready for School* sessions attended did not have a significant relationship with their development of task persistence or self-confidence.

Ability to follow directions

At the conclusion of the child assessment, the assessor rated the child's attention to and comprehension of directions based on observations of the child's behaviour throughout the assessment. Note that comprehension of directions involved the child understanding what he or she was supposed to do, such as pointing to something on a page or giving a verbal response, regardless of whether he or she provided the correct answer. In the area of attention to directions, the assessor rated the child's behaviour *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 the area of comprehension of directions, the assessor rated the child's behaviour *Rapid comprehension of directions, given age expectations*; *Understands after several repetitions*; *Partial comprehension of directions*; or *Does not appear to comprehend most directions*. Figure 50 shows the percentage of children in each group who assessors rated as carefully attending to directions and the percentage rated as rapidly comprehending directions. There was a medium programme effect on children's attention to directions and a small-to-medium programme effect on children's comprehension of directions.[138]

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[137] $F = 3.17$, $p = .077$, partial $\eta^2 = .024$ for task persistence, $F = 3.93$, $p = .050$, partial $\eta^2 = .030$ for self confidence
[138] $F = 6.69$, $p = .011$, partial $\eta^2 = .050$ for attention to directions, $F = 4.24$, $p = .042$, partial $\eta^2 = .032$ for comprehension of directions

Figure 50 Attention to and Comprehension of Directions
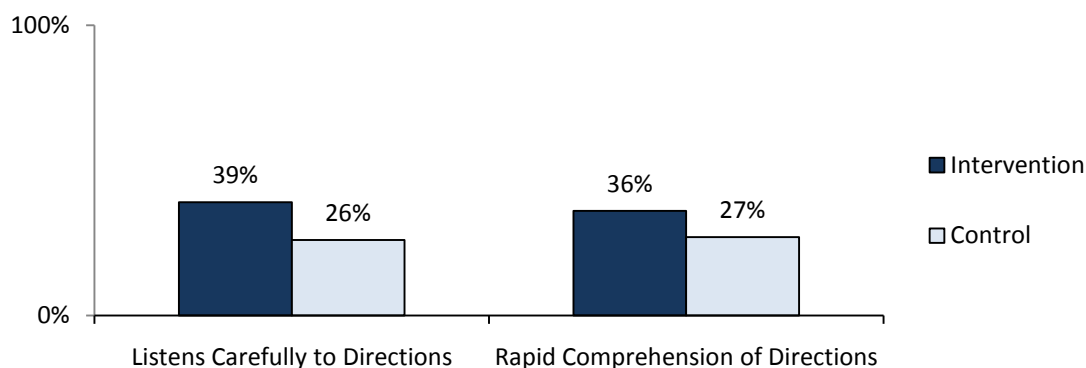
There were no significant differences in programme effects on attention to or comprehension of directions based on region, child gender, household resource level, whether older children in the household were in school or out of school, or whether the caregiver who completed the baseline interview self-identified as literate or illiterate. Among children in the Intervention group, the number of *Getting Ready for School* sessions attended did not have a significant relationship with their development of task persistence or self-confidence.

5.5.2 On-time enrolment in primary school

All children in the Intervention group enrolled in grade one on time. While we do not have information available regarding the on-time enrolment rate among the control group, the 100 percent on-time enrolment for the Intervention group compares very favourably with 2008 UNESCO national figures for Ethiopia of 78 percent net primary intake and an over-age enrolment rate of 19 percent.[139]

5.5.3 Summary of programme impacts on young children

The *Getting Ready for School* programme had two goals for young children: to increase their school readiness and to increase their on-time enrolment in primary school. In the area of school readiness, we found a medium-sized positive programme effect on children's development in beginning mathematics, and a large effect on children's beginning literacy. There were small-to-medium positive programme effects on children's ability to voluntarily focus attention on tasks, attention to directions, and comprehension of directions. There was a negative programme effect on children's sustained attention. The Intervention group had perfect on-time enrolment. While information regarding on-time enrolment among Control group children was unavailable, the 100 percent on-time enrolment rate for the Intervention group is substantially higher than would have been expected based on national norms.

We did not find a consistent pattern of differential programme effects based on child or family characteristics or risk factors. Among children in the Intervention group, we did not find any significant relationships between number of sessions attended and child outcomes. However, nearly all Intervention group children had very high programme attendance so it is unclear whether there would have been lower levels of improvement among children who had poorer attendance.

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[139] See http://stats.uis.unesco.org

5.6   Outcomes for Families

There were two *Getting Ready for School* programme goals for families: to improve their understanding of the importance of school readiness and to increase their active support for their young children's learning. Outcomes in each of these areas will be presented below.

5.6.1 Caregiver beliefs in the importance of school readiness

We provided caregivers with a list of developmental areas such as health and social and emotional learning, and some specific academic skills. For each item listed in Table 29, caregivers were asked to indicate how important they believed it was for a child to have that characteristic or skills when he or she began first grade. Response choices were *Not at all important*, *Somewhat important*, or *Very important*. These items also came together to form an Importance of School Readiness scale.[140] There was no significant programme impact on caregivers' Support for School Readiness scale scores.[141] There were also no significant differential programme effects by region.

Table 29 Percentage of Caregivers who Indicated that It Was Very Important for a Child to Have Each Characteristic or Skill

	Intervention	Control
It is important that the child is in good physical health.	98.2% (n = 108)	94.4% (n =101)
It is important that the child is confident.	97.3% (n = 107)	93.5% (n = 100)
It is important that the child is curious and explores his/her environment.	96.4% (n = 106)	94.4% (n = 101)
It is important that the child is able to play with other children.	88.2% (n = 97)	84.1% (n = 90)
It is important that the child has good problem-solving skills (for example, tries different ways to solve a problem).	82.7% (n = 91)	81.3% (n = 87)
It is important that the child knows some letters.	84.5% (n = 93)	81.3% (n = 87)
It is important that the child is able to read some words.	82.7% (n = 92)	82.9% (n = 86)
It is important that the child is able to write his/her own name.	84.4% (n = 92)	81.1% (n = 86)
It is important that the child is able to count from one to ten.	90.0% (n = 99)	93.5% (n = 100)
It is important that the child is able to recognise and name shapes.	93.6% (n = 103)	83.2% (n = 89)

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[140] Scale reliability was α = .80 across the full sample at baseline
[141] $F = 1.46$, $p = .228$, partial $\eta^2 = .008$

5.6.2 Active family support for young children's learning

We asked caregivers whether within the past week, anyone in the household had engaged in the activities listed in Table 30 to support their young child's learning. These items came together to form a Support for Learning scale.[142] There was no significant programme effect on caregivers' Support for Learning scale scores.[143] There were also no significant differential programme effects by region.

Table 30 Family Support for Children's Learning

	Intervention	Control
Told stories to child	72.6% (n = 77)	84.1% (n = 90)
Sang songs with child	79.6% (n = 78)	78.1% (n = 82)
Read books or looked at pictures with child	75.6% (n = 65)	62.2% (n = 61)
Took child out of home/yard/compound	73.3% (n = 63)	68.0% (n = 68)
Played with child	91.7% (n = 88)	91.4% (n = 96)
Spent time with child naming, counting or drawing things	75.9% (n = 60)	83.8% (n = 83)

5.6.3 Summary of programme impacts on families

There were two *Getting Ready for School* programme goals for families whose young children participated: To improve their understanding of the importance of school readiness, and to increase their active support for their young children's learning. We did not find significant programme impacts in either of these areas.

5.7   Outcomes for Young Facilitators

There were three *Getting Ready for School* programme goals for the Young Facilitators: to improve their educational engagement and performance, to increase their positive attitudes toward learning, and to increase their belief in the importance of supporting young children's learning. Outcomes in each of these three areas will be presented below. However, baseline data were unavailable from one region (Oromia), baseline cases were not aligned with the outcome sample for another region (Harar), and only about half of the Young Facilitators from the third region (Tigray) had completed both baseline and outcome surveys. This level of missing data means that we are unable to examine change in desired outcomes for Young Facilitators in Ethiopia, and that care must be taken when generalizing results.

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[142] Scale reliability was α = .70 across the full sample at baseline

[143] $F = 3.90$, $p = .050$, partial $\eta^2 = .017$

5.7.1   Academic engagement and performance

We looked at student academic engagement in two areas: student reports of how often they had missed school without permission from the school or their family (truancy) and student reports of whether they planned to continue their education next year. Note that truancy did not include occasions when the student had to miss school in order to work or to help at home.

At the time of the outcome evaluation, 69 percent of Young Facilitators (n = 281) indicated that they had not been truant at all, 26 percent (n = 107) that they had been truant one to five days per month, and four percent (n = 17) that they had been truant six days or more per month. Nearly all Young Facilitators (99.5 percent, n = 405) indicated that they planned to continue their education the next year.

To measure academic progress, we asked Young Facilitators to indicate what grades they usually received in each of four main academic subjects: language arts, mathematics; science; and social studies. Response choices were *Mostly poor/failing, Mostly fair*, *Mostly good*, and *Mostly excellent*. Figure 51 shows the percentage of young facilitators who indicated that their grades were mostly good or excellent at the outcome assessment.

Figure 51 Young Facilitators Reporting Grades of Good or Excellent by Subject
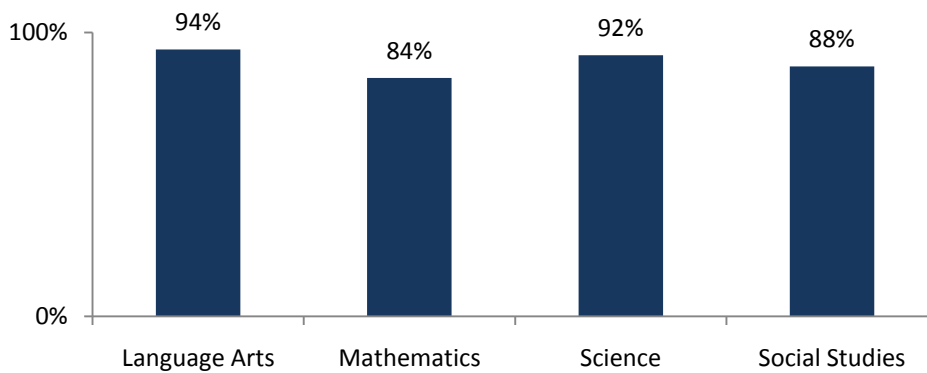
5.7.2   Positive attitudes toward learning

Young Facilitators were presented with 14 statements regarding their attitudes toward learning, and were asked to indicate whether they agreed, disagreed, or were unsure for each. The percentage of Young Facilitators who agreed with each item is presented in Table 31.[144]

Table 31 Young Facilitator Positive Attitudes toward Learning

	Outcome
I get high marks at school.	84.2% (n = 335)
Learning is fun.	91.9% (n = 373)
I learn things from other students.	79.6% (n = 317)
I learn things by playing with my friends.	82.2% (n = 328)
I try to learn new things every day.	75.4% (n = 301)
I enjoy solving problems in daily life.	78.2% (n = 312)
I am trying my best at school work.	88.4% (n = 351)
I like expressing my opinions in class.	92.1% (n = 373)
I like teaching my friends or younger children to learn.	93.1% (n = 378)
I like sharing my ideas with friends.	91.1% (n = 368)
I like leading class activities.	82.1% (n = 331)
Helping other students or younger children learn helps me learn as well.	90.4% (n = 367)
The subjects I am learning at school will be important for me later in my life.	91.9% (n = 373)
I plan to attend secondary school someday.	70.6% (n = 286)

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[144] Scale reliability was α = .78 across the full sample at baseline

5.7.3   Support for young children's school readiness

Young Facilitators were presented with four statements regarding the importance of school readiness, and were asked to indicate whether they agreed, disagreed, or were unsure for each. There was one negatively worded item (shown in italics) where agreement shows a *lack* of support for the importance of school readiness. Table 32 displays the percentage of young facilitators who agreed with each statement at outcome.

Table 32 Young Facilitator Belief in the Importance of School Readiness

	Outcome
It is important for young children to learn about their new school before they go to first grade.	89.4% (n = 362)
It is a waste of time to teach young children before they go to first grade because they are too young to learn.	*17.7% (n = 72)*
Young children will have better marks in first grade if they know most letters of the alphabet before they begin school.	88.1% (n = 357)
Young children will have better marks in first grade if they have already learned a little bit of mathematics before they go to first grade.	88.6% (n = 359)

5.7.4   Summary of outcomes for Young Facilitators

We were unable to isolate programme impacts for Young Facilitators due to the lack of a Control group, and unable to examine change in Young Facilitators' academic engagement, positive attitudes toward learning or appreciation of the importance of young children's school readiness due to a lack of baseline data. At the outcome assessment, a majority of Young Facilitators were academically engaged (although truancy was somewhat high) and had positive attitudes toward learning. Most (but not all) believed in the value of school readiness for young children.

5.8   Programme Outcomes for Teachers

There were three *Getting Ready for School* programme goals for teachers: to improve their belief in the value of child-centred pedagogy, to increase their understanding of the importance of school readiness, and – for first grade teachers – to raise their expectations regarding the level of school readiness of incoming first grade students at their school. Because there were only six participating Control group teachers at baseline and most of the Intervention group teachers who completed the baseline survey did not participate in the outcome survey, we present outcome assessment information for both groups but cannot examine programme impacts or compare baseline to outcome scores for Intervention group teachers. The results presented below should be interpreted with caution because we have no way of knowing whether there was baseline equivalence between Intervention and Control group teachers.

5.8.1   Attitudes toward child-centred pedagogy

We asked teachers to respond to 15 survey items regarding their belief in the value of child-centred pedagogy. These items covered issues such as the teacher's role in supporting all children, the importance of a classroom environment where children are encouraged to participate, and the value of students' ideas and experiences outside the classroom. The items did not come together as a group to form a robust scale, so we are presenting findings at the item level in this area. Table 33 shows the percentage of teachers who responded *Mostly true* or *Very true* to each item. Items displayed in italics were negatively worded, so agreement with the item indicates a *lack* of child centeredness.

Table 33 Attitudes toward Child-Centred Pedagogy

	Intervention	Control
Classroom learning is most effective when based primarily on teacher lectures, with students responding when called on.	*54.0%* *(n = 20)*	*22.7%* *(n = 10)*
Teachers should give feedback to students on assignments to help them improve their work.	100.0% (n = 37)	95.5% (n = 42)
It is best when students work on assignments alone to show how much they know.	*86.5%* *(n = 32)*	*86.3%* *(n = 38)*
All students should be helped to participate in class discussions.	94.6% (n = 35)	97.7% (n = 43)
Teachers know more than students. They should just explain the facts to students.	*91.9%* *(n = 34)*	*72.7%* *(n = 33)*
Teachers should give students problems with specific, correct answers and ideas.	*94.6%* *(n = 35)*	*84.1%* *(n = 37)*
When students talk with each other during class time they disrupt the flow of class and the learning of other students.	*59.4%* *(n = 22)*	*68.2%* *(n = 30)*
When students work on projects without the teacher being involved they usually learn "incorrect knowledge."	*29.7%* *(n = 11)*	*43.2%* *(n = 19)*
Students also learn important information outside the classroom.	75.6% (n = 28)	90.9% (n = 40)
The teacher's role is to help all students in their class be successful.	97.3% (n = 36)	90.9% (n = 40)
Allowing students to talk about their ideas in class takes time away from learning.	*21.6%* *(n = 8)*	*14.0%* *(n = 6)*
Teachers should not spend too much time helping students at the bottom of the class that do not perform well. It takes too much time away from the good students.	*32.4%* *(n = 12)*	*29.5%* *(n = 13)*
Teachers should give more time to the best students in the class.	*21.6%* *(n = 8)*	*21.0%* *(n = 9)*
Students have better academic achievement in classrooms where the teacher encourages students to participate.	97.3% (n = 36)	95.4% (n = 42)
It is the teacher's responsibility to find a way to meet the learning needs of every student in the class.	83.7% (n = 31)	81.9% (n = 36)

5.8.2   Understanding of the importance of school readiness

We asked teachers how important it was for students to have certain skills upon school entry across the range of areas of development shown in Table 34. Teachers responded to a four-point Likert scale (see Table B-1, Appendix B for a description of the individual survey items for each area of school readiness).

Table 34 Teacher Belief in the Importance of School Readiness

	Intervention	Control
Importance of school readiness across all areas	M = 3.49 SD = 0.46	M = 3.52 SD = 0.36
Literacy	M = 3.50 SD = 0.49	M = 3.52 SD = 0.43
Mathematics	M = 3.46 SD = 0.62	M = 3.43 SD = 0.49
Motor skills	M = 3.61 SD = 0.48	M = 3.58 SD = 0.40
Behaviour	M = 3.51 SD = 0.62	M = 3.66 SD = 0.37
Social and emotional learning	M = 3.30 SD = 0.68	M = 3.49 SD = 0.61

5.8.3   First grade teacher expectations for school readiness

We asked first grade teachers whether they expected their students to have certain skills upon school entry in the areas of literacy, mathematics, motor skills, behaviour, and social and emotional learning. Teachers responded to a four-point Likert scale, with response options ranging from *Do not have the skill* to *Very prepared* (see Table B-2, Appendix B for a description of the individual survey items for each area of school readiness). Table 35 shows the average level of expectations for school readiness in each developmental area (with possible scores ranging from a low of 1 to a high of 4).

Table 35 Grade One Teacher Expectations for School Readiness

	Intervention	Control
Importance of school readiness across all areas	M = 3.14 SD = 0.86	M = 3.10 SD = 0.75
Literacy	M = 2.98 SD = 0.89	M = 2.99 SD = 0.88
Mathematics	M = 3.30 SD = 0.93	M = 3.15 SD = 0.95
Motor skills	M = 3.24 SD = 0.97	M = 3.47 SD = 0.78
Behaviour	M = 3.34 SD = 0.58	M = 3.39 SD = 0.61
Social and emotional learning	M = 3.25 SD = 0.94	M = 3.00 SD = 1.03

5.8.4   Summary of outcomes for teachers

There were three *Getting Ready for School* programme goals for teachers: to improve their belief in the use of child-centred pedagogy, to increase their understanding of the importance of school readiness, and – for first grade teachers – to raise their expectations regarding the level of school readiness of incoming first grade students at their school. Due to sampling issues and a high level of attrition among Intervention group teachers, we were unable to determine programme impacts for teachers or examine changes from baseline to outcome in the Intervention group. The above data should be used for general informational purposes only.

5.9   Programme Costs

There are two aspects of cost in the implementation of a pilot programme or any new programme – the cost of developing and launching the programme in the country or region and the cost of implementing the programme. Launching a programme is generally expected to be the most costly in the first year as there may be start-up costs associated with advocacy for the program, the development of the programme design and materials, the establishment of systems to meet the programme's need (such as printing and distributing materials), and the training of key staff. These costs may be incurred again on a smaller scale within a country if the programme expands to a new region or significant changes are made in programme design. The cost of implementing the programme would be expected to be similar from year to year as long as the programme continues to function in the same regions of the country, or expands to other regions with similar characteristics (e.g., similar teacher salaries, similar accessibility of programme sites).

5.9.1 Costing assumptions

In order to complete this cost analysis, several assumptions or decisions were made that may influence how these results should interpreted. First, while school staff who implemented the programme were not paid directly for their time by the programme, there is what is known as an "opportunity cost" associated with their service: A teacher's time has a certain value, which is reflected in his or her salary. It is standard practice in cost assessments to include these "donated" hours as having a cost equivalent to the teacher's hourly wage. When a teacher spends his or her time involved with the programme, that teacher is not available to do other things during that time – he or she has taken one opportunity over another. His or her time as a teacher is being used by the programme. So while teachers volunteered their time for the programme, their time is factored into this cost evaluation as if they had been paid. While children who participated in this programme as Young Facilitators also donated their time to the programme – time that could have been spent in other activities with value for their families, such as providing child care or helping with chores – these opportunity costs are not included here because the Young Facilitator was also expected to benefit from the programme, and also because determining the alternate uses of Young Facilitator time and the value of that time is beyond the scope of this cost evaluation.

Second, there are similar opportunity costs for the use of space in schools and other buildings where the programme was implemented. There are costs associated with maintaining that space and the resources within that space (e.g., desks). The calculation of the opportunity cost for the use of this space requires information regarding the costs of school infrastructure and maintenance that can be broken down to levels such as an hourly rate per classroom. The scope of this evaluation does not allow us to collect this information (if it is indeed available), so we cannot factor in these costs here. Programme implementation did not involve any direct costs (e.g., rent) for the use of these spaces.

Third, we are assuming that the development of an orientation for children and families and the development of a training programme for teachers and Young Facilitators was a start-up cost, but that the orientations and trainings would need to be repeated within each community or school catchment area on an annual basis – that is, the actual orientations and trainings are an ongoing cost.

Costs were incurred in Ethiopia's currency, the Ethiopian Birr (ETB), and are reported here in US dollars (USD) at an exchange rate of USD 1 = ETB 13.66.

In the remainder of this section, we will focus on the costs that were associated with the development and launch of the pilot programme (the "start-up" costs) and the costs that were associated with running the programme on an ongoing basis (the "ongoing costs").

5.9.2 Start-Up Costs

Start-up costs in Ethiopia included adaptation and translation of programme materials. While programme advocacy to gain permission to implement the programme is an important start-up cost for any such programme, and we know these activities took place in Ethiopia, the total costs associated with these activities are unknown. Note that materials needed to be translated into three different languages in Ethiopia. While this was a start-up cost, this cost may be incurred again if the programme were to expand into new regions that use other languages. Table 36 below shows a summary of costs associated with each activity.

Table 36 In-Country Start-Up Costs

Activity	Total Cost
Programme advocacy	
Informational discussions with education officers and others for buy-in and planning	unknown
Materials	
Adaptation and translation of materials	$47,849.20

7.9.3 Ongoing Costs

Ongoing costs in Ethiopia that we would expect to incur on an annual basis include training of implementing teachers and Young Facilitators; printing, distribution and storage of teaching and learning materials; the purchase of learning materials such as pencils; and ongoing programme monitoring and support. Note that some of these costs are estimates – UNICEF staff costs were estimated based on the average hourly rate for staff who would have been involved, apportioned according to the balance of time each person (with his or her own hourly rate) has allotted to the programme overall since is it unclear from aggregate task hours exactly how many hours each specific staff person worked. Ongoing programme costs incurred during the pilot year are presented in Table 37.

Table 37 Ongoing Costs

Activity	Total Cost
Planning and Orientation Workshops and Events	
Workshops and trainings for teachers and Young Facilitators[145]	$14,286.42
Planning for workshops and trainings for teachers and Young Facilitators	$1,846.57
Preparation of workshop and training materials	$1,619.80
Materials for orientation workshops and trainings	$1,610.54
Transportation and per diem for workshop participants	$2,924.23
Materials	
Printing, delivery and storage of teaching-learning materials	$47,371.89
Communications	
Printing, production and delivery of communications materials	$0.00
Teacher and School Head Services	
School head programme implementation	$13,315.45
Teacher programme implementation[146]	$11,083.31
Other School-Level Costs	
Snacks for participating children[147]	---
Programme Monitoring	
Ongoing programme implementation by UNICEF	$27,360.91
Overall Total	**$121,419.12**
Cost per School	**$6,070.96**
Cost per Young Learner	**$53.77**

This programme has had a very low cost per child in Ethiopia. While there has been 100 percent on-time enrolment in primary school among Intervention group children, the enrolment rate among Control group children is not yet available. Given that the typical on-time enrolment rate in Ethiopia (which would be expected of the Control group) is substantially lower than 100 percent, we may be able to calculate a per child cost to achieve enrolment for a child who would not have been expected to enrol otherwise. This is a very meaningful figure because overage enrolment and non-enrolment in primary grades has a significant negative impact on the educational system and on society in Ethiopia.

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[145] Number of training days is estimated at 5 days

[146] Where number of average weekly hours teachers spent on programme were unavailable, the average time of 1.5 hours was used to calculate this cost

[147] Some teachers reported purchasing learning materials, such as pencils and erasers, and refreshments for children such as tea and biscuits, but costs are unknown

There are other known benefits of the programme, as discussed above. These benefits are more difficult to quantify (e.g., the "payoff" for increased child school readiness in literacy). However, a planned follow-up of these children at the end of first grade will allow us to examine more areas of potential benefit, such as increased attendance and improved academic performance.

5.10   Discussion and Recommendations for Ethiopia

The *Getting Ready for School* programme had a very successful implementation in this pilot year in Ethiopia, with several areas of strength. First, the development of the Young Facilitators as a community resource emerged as a significant programme accomplishment. Many school heads felt that the programme both improved teachers' interaction with children and prepared children better for school. Anecdotal evidence suggests that parents became more involved in their children's education because of the program and that the programme raised the value of early childhood education in the eyes of the community. UNICEF Ethiopia staff also observed that the programme was extremely well received by communities, with stakeholders in Control group communities anxious to have the programme as well.

In the area of school readiness, we found a medium-sized positive programme effect on children's development in beginning mathematics, and a large effect on children's beginning literacy. There were small-to-medium positive programme effects on children's ability to voluntarily focus attention on tasks, attention to directions, and comprehension of directions. There was a negative programme effect on children's sustained attention. The Intervention group had perfect on-time enrolment. While information regarding on-time enrolment among Control group children was unavailable, the 100 percent on-time enrolment rate for the intervention group is substantially higher than would have been expected based on national norms. Given the relatively low level of programme dosage (just a few hours a week), achieving any impact on children's academic and behavioural skills or on parent behaviours constitutes a notable achievement for the *Getting Ready for School* programme.

We did not find significant programme impacts on families. We were unable to examine programme impacts on teachers or changes for Young Facilitators due to sampling issues.

Stakeholders noted some challenges associated with the programme implementation in this pilot year, although none of them seems to have had a significant negative impact on the programme. UNICEF staff noted the challenges associated with simultaneously launching a programme in multiple geographic regions with different languages and cultures as are found in Ethiopia. Some school heads felt that insufficient teaching and learning materials had been allocated to each school, and that materials were sometimes not suitable to outdoor learning. Both school heads 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. UNICEF staff also reported that Young Facilitators often employed teaching methods with the young children that were not child centred.

School heads, community leaders and UNICEF staff all expressed concern about the availability of long-term funding to maintain the programme. School heads believed that the lack of incentives for teachers to lend the considerable time needed for this programme posed the greatest challenge to long-term growth and sustainability of the programme.

The recommendations to emerge from this evaluation are as follows:

- UNICEF should continue to explore long-term funding options to ensure the sustainability of the programme.
- Programme impacts on children's early learning were significant in several areas. Where children still did not achieve school readiness skills or behaviours at the desired level, programme developers may want to consider ways to better encourage those areas of development through programme activities.
- Programme developers should consider modifying activities and/or providing additional or different teaching and learning materials so that schools have the materials that they need and that these materials are appropriate for use outdoors.
- Training with Young Facilitators should include a focus on building their skills in the use of child-centred methods of pedagogy.

Ethiopia had an extremely successful pilot implementation of the *Getting Ready for School* programme across three distinct regions of the country. Every effort should be made to work toward long-term sustainability of the programme so that Ethiopian children, schools and communities can continue to benefit into the future.

CHAPTER 6   TAJIKISTAN: COUNTRY-LEVEL IMPACTS

In this chapter, we present country-level results for Tajikistan, including the need for the intervention; the implementation of the *Getting Ready for School* programme in Tajikistan; programme impacts for young children, families, Young Facilitators and teachers; and programme costs. We conclude the chapter with a discussion of the findings and list of recommendations for the future success of the *Getting Ready for School* programme in Tajikistan.

6.1   Need for the Intervention

Until 1991, Tajikistan was the poorest of the Soviet states. However, due to significant transfers of human and financial resources, Tajikistan enjoyed a level of public services and infrastructure far beyond the actual state of economic development. With centrally supported social sector systems, parents were assured of accessible health care, education, and state support for early child care and development. Severe economic decline after independence in 1991 was compounded by a destructive civil war that lasted until 1997. During this period, real GDP contracted by over 70 percent and social sector spending dropped sharply, especially in sub-sectors not considered part of basic services – such as preschool and visiting nurses. Economic growth resumed at the end of the 1990s, but Tajikistan remains the poorest country in the region, with roughly half of the population still living in poverty and current GDP still at only 75 percent of 1991 levels. With massive migration, remittances accounted for over half of GDP in 2008, though the current economic crisis has already caused a drop in remittance income. Tajikistan's many female-headed households now face declining income in addition to absent fathers, leaving women and children increasingly vulnerable. Complicating the situation is the regularity of natural disasters, which further erode ageing infrastructure and challenge already-weak institutional capacity and low social sector budgets, placing at risk the capacity of every sector to protect and support the development of Tajikistan's youngest citizens.

During Soviet rule, there were 2,000 kindergartens (1990). Fewer than 500 are operating now, serving less than 10 percent of the preschool-age population. Only 4 percent of the national education budget is allocated to preschool. Disparities are significant; access is concentrated among children from urban areas and those able to pay the costs of attendance. And as many as 60 percent of children lack support for early learning at home (UNESCO, 2006).

The UNICEF-sponsored *Getting Ready for School* programme joins a parent-to-child programme supported by Open Society Institute/Step by Step Tajikistan that uses a similar approach. The Aga Khan Foundation has long provided some support to centre-based Grade 0 programmes in one region and is now looking to expand to community-based models in other areas of the country. These present new possibilities not only for expanding access to school readiness programmes, but for creating lasting knowledge on design, implementation, institutionalization and expansion of quality, cost-efficient and sustainable programmes directed at young children and their caregivers (Aga Khan, 2009).

6.2   Nature of the Intervention

The central Ministry of Education in Tajikistan, as well as District Education Departments and local NGOs, has been heavily involved in planning for the *Getting Ready for School* programme. Two rural districts (Rumi and Bokhtar) were chosen to participate in the programme. In each district, 10 schools were randomly assigned as Intervention group schools and 10 were assigned as Control group schools. Given the presence of a Step by Step-supported programme in several schools in Bokhtar district, these schools were eliminated from the sample pool prior to the random selection process.

The programme was designed to involve teachers of grade 4. In the Tajik school system, children remain with the same teacher for the first four years of school. The *Getting Ready for School* programme draws upon current grade 4 teachers who are the teachers of the Young Facilitators and who in the following year will teach the incoming grade 1 children.

Programme implementation began in October of 2008.

6.3   The Evaluation

In this section, we present information on data collection procedures and the evaluation sample in Tajikistan, noting any areas of concern that could influence the interpretation of findings.

6.3.1   Data collection

Baseline data were collected in October of 2008; outcome data for teachers, Young Facilitators and community stakeholders was collected in June and July of 2009; and outcome data for children and their caregivers was collected in October and November of 2009. Data were collected by trained, certified assessors. Data collection quality monitoring was conducted by both UNICEF and the contracting NGO.

6.3.2   Sample

In this section, we present information about the schools, children and families, Young Facilitators and teachers who took part in the evaluation. Of the 600 Young facilitators and 2,500 young children who initially participated in the programme (additional Young Facilitators and young children joined the programme later), a random subset was selected for the evaluation.

Table 38 shows the characteristics of the 20 participating Intervention group schools and 20 Control group schools at the time of the baseline evaluation.

Table 38 School Characteristics at Baseline

	Intervention	Control
Number of students enrolled	M = 907 (Range = 216 - 2,173)	M = 770 (Range = 223 - 1,455)
Number of teachers and educational assistants	M = 55 (Range = 32 - 93)	M = 34 (Range = 12 - 68)
Student/teacher ratio	M = 15:1 (Range = 9:1 – 26:1)	M = 23:1 (Range = 13:1 – 33:1)
Daily absence rate as of 2007/2008 school year	M = 5% (Range = 1 – 12%)	M = 5% (Range = 1 – 13%)
Dropout rate as of 2007/2008 school year	M = 1% (Range = 0 – 2%)	M = 1% (Range = 0 – 3%)

Eighty-four Intervention group teachers participated in the baseline evaluation, and 81 of those also participated in the outcome evaluation (an attrition rate of 4 percent). The Control group was smaller, with 29 Control group teachers participating in the baseline evaluation and 26 of those also participating in the

outcome evaluation (an attrition rate of 10 percent). So we do not have concerns about differential attrition among teachers. Table 39 shows teacher characteristics at baseline. Teachers in the Control group had significantly more years of teaching experience than those in the Intervention group.[148] In light of the substantial difference in sample sizes and the difference in years of teaching experience between the programme and Control groups, programme impacts for teachers must be interpreted with caution.

Table 39 Teacher Characteristics at Baseline

	Intervention	Control
Gender (% female)	80%	76%
Years teaching	$M = 12.8$ $(SD = 9.2)$	$M = 19.1$ $(SD = 9.3)$
Live in school community? (% yes)	90%	81%

Of the 600 children who took part in the baseline evaluation, 599 also took part in the outcome assessment. Among the Intervention group, 300 children completed the baseline assessment and 299 completed the outcome assessment (an attrition rate of less than 1 percent). All 300 Control group children completed both the baseline and outcome assessments.

As shown in Table 40, nearly all children in both groups resided in two-parent households. There was a very high literacy rate among caregivers, and few children in either group lived in a household where there was an out-of-school older child.

Table 40 Child and Family Characteristics at Baseline

	Intervention	Control
Gender of participating child (% female)	50%	45%
Number of household members	$M = 8.6$ $SD = 3.5$	$M = 8.6$ $SD = 3.3$
Number of household members under age 12[149]	$M = 2.5$ $SD = 1.8$	$M = 2.5$ $SD = 1.7$
Two-parent households	97%	98%
Families with out-of-school children[150]	2%	1%
Responding caregiver literacy (% literate)	97%	98%
Family resource level[151] (% low)	29%	38%

A total of 300 Young Facilitators participated in the evaluation, and all 300 completed the Young Facilitator survey at both baseline and outcome. Note that there was no Control group for Young Facilitators. All Young Facilitators were enrolled in grade 4, and 58 percent were female.

Interviews were completed with school heads from all 20 Intervention group schools, and with 20 community leaders – one from each of the Intervention school communities.

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[148] $t(100) = -3.02$, $p < .01$

[149] This does not include the child participating in the evaluation

[150] Among households with one or more older children aged 7-13, percentage of households where at least one of those children was not enrolled in school at the time of the baseline evaluation

[151] Low resource level based on the presence of three or fewer of the following items in the household: Clock, fan, table, television, telephone, mobile telephone, DVD player, video camera, computer

6.4 Programme Implementation

In this section, we provide information regarding the level of participation in the *Getting Ready for School* programme among children assigned to the Intervention group and the Young Facilitators; programme implementation; the extent to which children in both the intervention and Control groups participated in other early childhood development programmes; the success of programme communications in conveying key messages to the community; and stakeholder perceptions of programme strengths, challenges and sustainability.

6.4.1 Participation in *Getting Ready for School* among Intervention group children

There were 35 programme sessions planned, but sessions were suspended for approximately two months in the winter and not all sessions were completed as intended. A total of 300 young children were assigned to the Intervention group, but *Getting Ready for School* programme attendance records were only available for 143 of the children. Among those 143 children, reported programme attendance was very high, with young children attending an average of 33.6 sessions (*SD* = 3.92). Given the reduced number of sessions offered and the reported tendency of school staff in Tajikistan to automatically check off that they did what they were supposed to do, it is unlikely that the average child attended 33 sessions when that many sessions were not offered. So these attendance figures based on teacher records should be treated with extreme caution.

Caregivers reported somewhat lower levels of programme attendance for their children, and this information may be more reliable. Among the 298 caregivers who provided information about their child's attendance, 54 percent (n = 160) reported that their child attended every session or almost every session, and 86 percent (n = 256) reported that their child attended most sessions. Only one caregiver reported that their child did not attend any sessions, and the caregiver stated that the child did not participate because the family had been unaware that the programme was available.

Attendance information was only available for 80 of the 300 Young Facilitators, but we did ask Young Facilitators how often they had worked with their young child(ren) in the *Getting Ready for School* programme. Rates of self-reported participation by Young Facilitators were relatively low, with 30 percent (n = 91) reporting that they never participated, 22 percent that they participated twice per week or more (n = 67), 46 percent (n = 137) that they participated a few times per month, and 2 percent (n = 5) that they participated a few times per semester.

6.4.2 Implementation of the *Getting Ready for School* programme in Tajikistan

The implementation plan involved 35 *Getting Ready for School* sessions, held on a weekly basis. However, several sessions had to be cancelled at all of the schools due to cold weather (there is no heat in the schools). These sessions were not made up later so the programme implementation included less than the full 35 sessions (the exact number of sessions that were held is unclear). Most sessions lasted an hour, but there was substantial variability in the length of each session across teachers, with some teachers reporting typical session lengths of 45 minutes to an hour and others reporting typical sessions lasting 3 or 4 hours. At the conclusion of each session, the teacher completed a session record where he or she indicated whether the instructions in the teacher's guide were clear, whether the teacher felt that literacy and numeracy activities were fun for most of the children, whether the Young Facilitators felt that activities were fun, whether the lessons were at the right level of difficulty for the young children, and whether the Young Facilitators found it easy or difficult to implement the activities. Teachers also provided information about resources they had purchased for the sessions, preparation time, and their recommendations for any needed improvements in the programme.

Teachers reported that their instructions were very clear 97 percent of the time, and somewhat clear the remaining 3 percent. Young Facilitators found their instructions to be easy to follow 93 percent of the time. Teachers and Young Facilitators gave positive ratings for how enjoyable the activities had been for

the young children. Teachers rated the activities as *Very fun* 93 percent of the time, and *Somewhat fun* the remaining 7 percent of the time. Young Facilitators rated the activities as *Very fun* 89 percent of the time, *Somewhat fun* 10 percent of the time, and *Not fun* less than 1 percent of the time. Just 38 percent of activities were rated by teachers as being at the right level of difficulty for children, with 58 percent rated *Very easy* and 4 percent *Too difficult*.

6.4.3   Participation in other early childhood development programmes

Information regarding participation in other early childhood development programmes was only collected from *Getting Ready for School* programme families. All 300 Intervention group families reported that their child did not participate in any other early childhood development programmes.

6.4.4   Programme communications

Through the caregiver supplemental interview, we were also able to evaluate how successfully the *Getting Ready for School* programme communicated with Intervention group families. Four questions were asked, including how well parents understood what the *Getting Ready for School* programme was about, whether other parents in their community knew about *Getting Ready for School*, which methods of advertisement were used in their community, and what messages *Getting Ready for School* conveyed about children's development and school readiness.

Fifty-four percent (n = 160) of caregivers reported that they understood the *Getting Ready for School* programme very well, while 46 percent (n = 137) reported that they only knew a little bit about the programme. When asked whether other parents in their community knew about *Getting Ready for School*, all caregivers thought that other parents were familiar with the programme. The most common form of programme communications observed by caregivers was announcements in local community organizations (e.g., mosque/church, local schools, and health centres; 53 percent, n = 156). Posters, banners and fliers were also reported as a common form of advertisement (47 percent, n = 138). No caregivers reported learning about *Getting Ready for School* through radio or television.

Finally, only 1 percent of caregivers provided information regarding lessons they learned about how to improve young children's development and school readiness from *Getting Ready for School*. It is unclear whether caregivers did not have this information, or if there was an error in data collection and they were not asked the question.

6.4.5   *Getting Ready for School* programme strengths and challenges

All 20 school heads believed that multiple successes were achieved as a result of the *Getting Ready for School* programme, including gains in young children's knowledge and self-confidence; improvements in teachers' knowledge of child development and their skills at working with young children and developing learning support materials; increased school-community connections; and a high level of satisfaction with the programme parents and community members as well as participating teachers, Young Facilitators and the young children themselves. Reports from the field suggest that the programme was very popular, with young learners filling available classrooms when sessions were held.

There were several challenges associated with successful programme implementation during this pilot year. One of the main barriers to successful implementation of the programme was the reduced number of programme sessions offered. Weekly programme sessions were planned, but cold weather and other issues led to the cancellation of several sessions during the winter months. And the programme design in Tajikistan did not include extra sessions to be conducted by Young Facilitators on their own outside of the formal school sessions. This meant that children in Tajikistan received a low programme dosage (both compared with what was planned and compared with what happened in other participating countries). Another area of significant concern involved the level of preparation of implementing teachers. District education departments assigned teachers to participate in the training for *Getting Ready for School*

without regard to their availability to actually participate in the programme or their background (for example, some were secondary school teachers without experience in the development or education of young children). When teachers who had participated in the training were unavailable to carry out the programme, they were replaced with other teachers who had not been trained to implement *Getting Ready for School*. A third area of concern involved the use of traditional Soviet-style (not child-centred) teaching methods employed by the Young Facilitators, limiting the amount of truly interactive learning that was taking place. And finally, both school heads and community leaders indicated that incentives for teachers were needed to encourage their involvement in the programme.

6.5   Programme Impacts on Children

In this section, we present programme impact findings for young children in the area of school readiness. While we also examined on-time enrolment in grade 1 in some other countries, nearly all children enter grade 1 on time in Tajikistan so this outcome is not relevant here. We examined the data for any differential programme effects for children based on what region they lived in, their gender and their household resource level.

6.5.1   School readiness

We examined children's school readiness in the areas of academic skills, perceptual motor development, attention, mastery motivation, and the ability to follow directions. Academic skills included colour naming, pattern recognition, beginning mathematics (including numeral identification, counting and applied addition and subtraction) and beginning literacy (including letter identification, beginning reading and beginning writing).

Colour naming

Children were shown a page with nine coloured flowers (red, blue, green, yellow, black, grey, orange, pink, purple). The children were asked to say the colour name for any colours they knew, and then for any colours they did not recall, children were provided with the name of the colour and then were asked to point to the flower of that colour (recognition). Figure 52 shows the average percentage of colours recognised and recalled by children in each group. There was a small programme effect on children's ability to recognise colour names, and a small-to-medium effect on their ability to recall colours.[152]

Figure 52 Percentage of Colours Identified Correctly
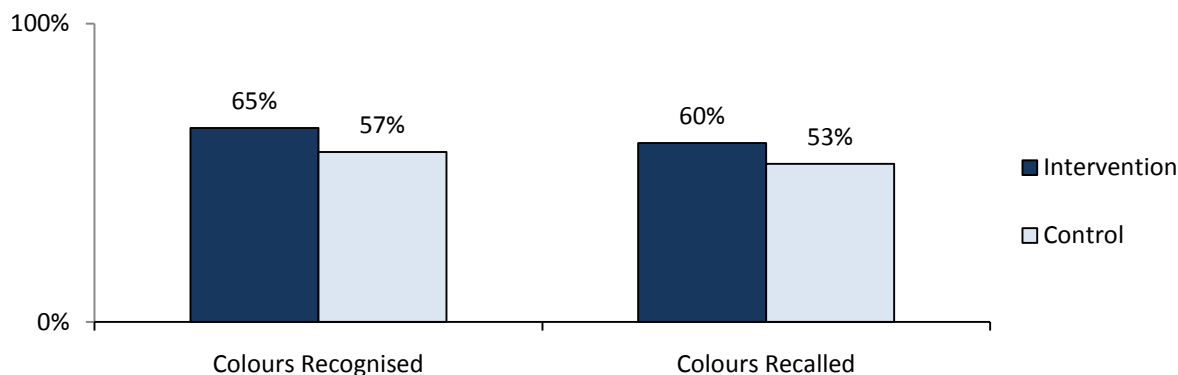
There was a small differential programme effect on children's ability to recall (but not to recognise) colour names, with children from Bokhtar benefiting more in this area from the programme than children from

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[152] With $F = 9.91$, $p = .002$, partial $\eta^2 = .016$ for recognition; $F = 16.68$, $p < .001$, partial $\eta^2 = .027$ for recall

Rumi.[153] There were no differential programme effects on children's ability to recognise or recall colour names based on child gender or household resource level.

Pattern recognition

Children were presented with first a pattern of two alternating colours, then a pattern of three alternating colours. For each, the assessor placed coloured plastic bears one by one in sequence (e.g., red, blue, red, etc.). The child was then asked to choose which of three coloured bears came next. Figure 53 shows the percentage of children in each group who were able to correctly complete the two-colour and the three-colour patterns. There was no significant programme effect on children's ability to complete either pattern.[154]

Figure 53 Percentage of Children who Completed Patterns
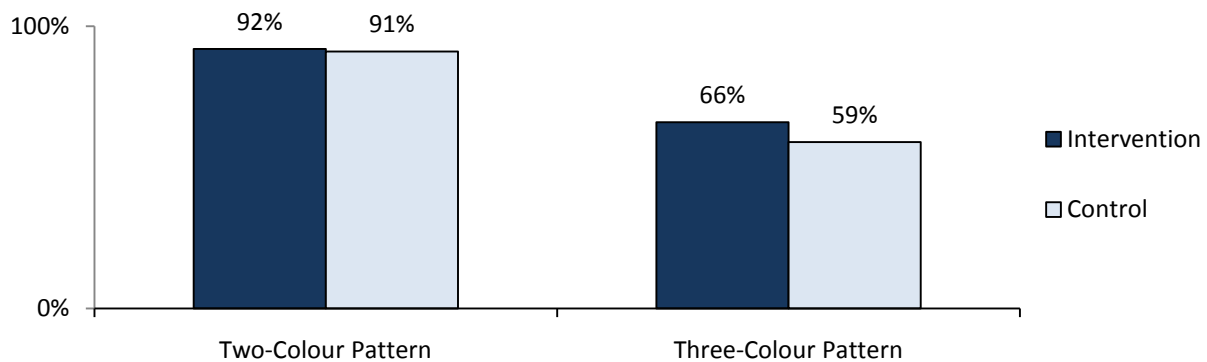
We did not find any differential programme effects on children's ability to complete a two-colour or a three-colour pattern based on region, child gender, or household resource level.

Beginning mathematics

In the area of beginning mathematics, we assessed children's ability to name and recognise written numerals, to count to 10, to count objects with one-to-one correspondence (that is, assign one number name to each object), and to complete simple applied problems in addition and subtraction. Across tasks, there was no significant programme effect on children's school readiness in the area of mathematics.[155,156] We did not find any differential programme effects on children's development in the area of beginning mathematics based on region, child gender, or household resource level. Findings for each beginning mathematics task are presented in more detail below.

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[153] $F = 4.18$, $p = .041$, partial $\eta^2 = .007$

[154] With $F = 0.21$, $p = .649$, partial $\eta^2 < .001$ for two-colour pattern; $F = 0.11$, $p = .746$, partial $\eta^2 < .001$ for three-colour pattern

[155] Cross-task mathematics performance was calculated for each child by summing correct number of responses for numeral recognition, counting to 10, counting with one-to-one correspondence, and the four addition and subtraction tasks

[156] $F = 0.01$, $p = .964$, partial $\eta^2 < .001$

Numeral Recognition and Recall: Children were shown a page with pictures of numerals 0 through 9 and were asked to say the name of any numerals they knew (recalled). Then for any numeral names they did not recall, children were provided with the name of the numeral and then were asked to point to the numeral (recognition). Figure 54 shows the average percentage of numerals recognised and recalled by children in each group. There were no significant programme effects on children's ability to recognise or to recall written numerals.[157]

Figure 54 Percentage of Numerals Identified Correctly
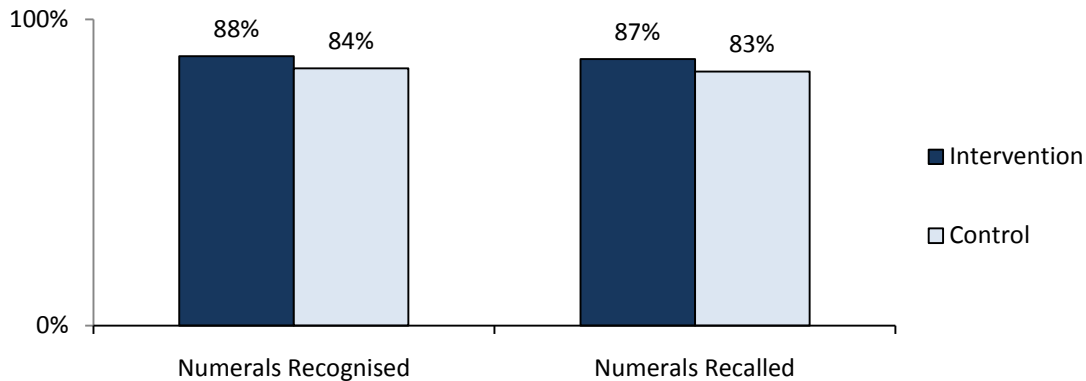
Counting: Children were presented with 10 plastic bears in a line and were asked to count them. Children were scored based on whether they counted to three, counted to 10, and counted with one-to-one correspondence (that is, assigned one number name to each bear). Figure 55 shows the percentage of children in each group who completed each counting task correctly. There was a ceiling effect on children's ability to count to three, with nearly all able to do so at baseline as well as outcome. There was no significant effect on children's ability to count to 10 or on children's ability to count with one-to-one correspondence.[158]

Figure 55 Percentage of Children Counting Correctly
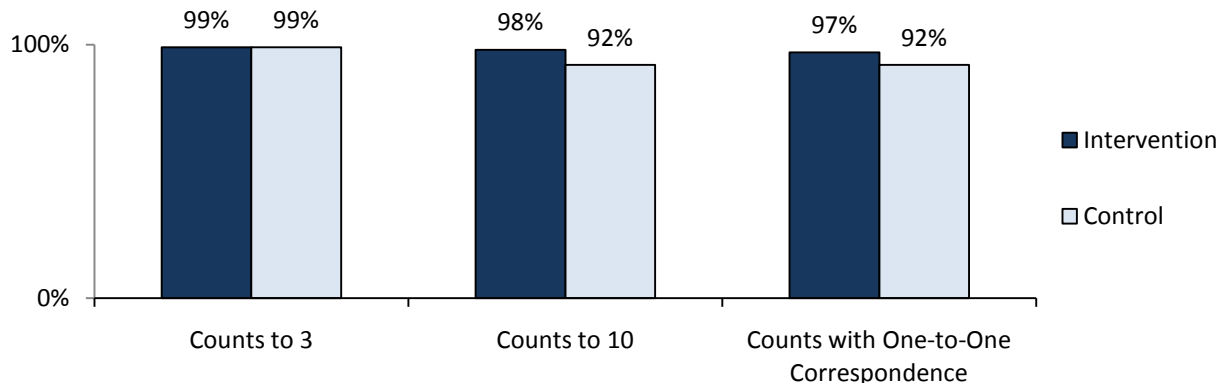
Addition and Subtraction: Children were presented with two problems in addition and two in subtraction. For each problem, the child was presented with plastic bears and asked to state how many bears there would be if a certain number were added or taken away. Children were given credit for either saying the name of the correct number, or showing the correct number with their fingers. Figure 56 shows the percentage of children in each group who completed each addition and subtraction task correctly. There

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[157] With $F = 0.02$, $p = .883$, partial $\eta^2 < .001$ for recognition; $F = 0.09$, $p = .761$, partial $\eta^2 < .001$ for recall
[158] With $F = 0.84$, $p = .360$, partial $\eta^2 = .001$ for counts to 10; $F = 0.66$, $p = .417$, partial $\eta^2 = .001$ for counts with one-to-one correspondence

were no significant programme effects on children's ability to add three, to add one, to subtract one, or to subtract three.[159]

Figure 56 Percentage of Children Solving Applied Problems in Addition and Subtraction
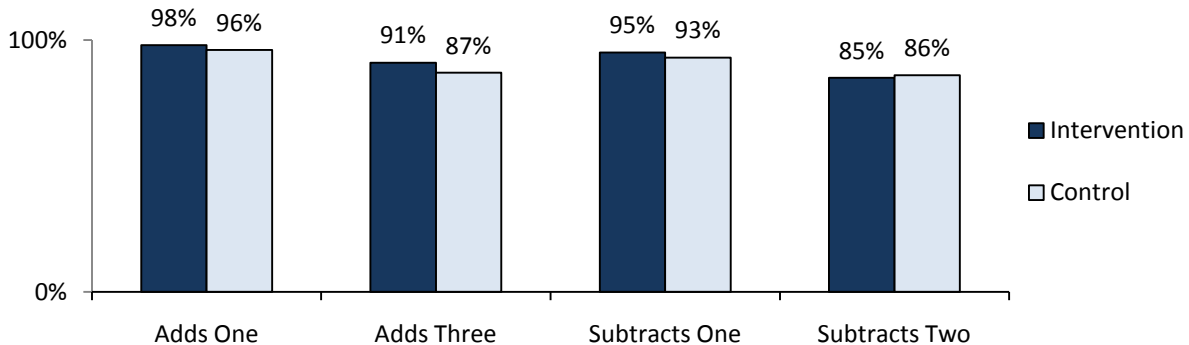
Beginning literacy

In the area of beginning literacy, we assessed children's ability to name and recognise written letters, to read simple words, to write any letters, and to write their name. Across tasks, we found no significant programme effect on children's school readiness in the area of beginning literacy.[160,161] We did not find any differential programme effects on children's development in the area of beginning literacy based on region, child gender or household resource level. Findings for each beginning literacy task are presented in more detail below.

Letter Recognition and Recall: Children were asked to look at a page with approximately nine letters of the alphabet printed on it, and asked if they knew the names of any of those letters (recall). Then for any letter names they did not recall, children were provided with the name of the letter and then were asked to point to that letter on the page (recognition). This procedure was repeated for three pages of letters in Tajik (a total of 35 letters). Figure 57 shows the average percentage of letters recognised and recalled by children in each group. There was no significant programme effect on children's ability to recognise or recall letter names.[162]

Figure 57 Percentage of Letters Identified Correctly

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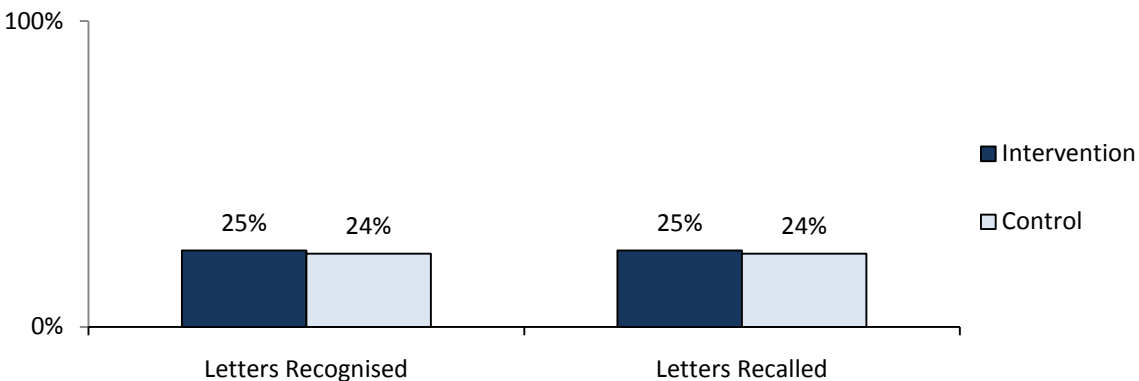
[159] With $F = 0.02$, $p = .892$, partial $\eta^2 < .001$ for adds one; $F = 1.31$, $p = .253$, partial $\eta^2 = .002$ for adds three; $F = 1.14$, $p = .287$, partial $\eta^2 = .002$ for subtracts one; $F = 0.58$, $p = .447$, partial $\eta^2 = .001$ for subtracts three

[160] Cross-task literacy performance was calculated for each child by summing correct number of responses for letter recognition, reading, writing any letters, and writing their whole name

[161] $F = 0.06$, $p = .811$, partial $\eta^2 < .001$

[162] With $F = 0.10$, $p = .6747$, partial $\eta^2 < .001$ for recognition; $F = 0.03$, $p = .867$, partial $\eta^2 < .001$ for recall

Reading: Children were shown 10 words one by one and asked to read each word. Words were selected by project staff or others with expertise in beginning reading in Tajik. The first five words were considered easy beginning reading words, and the second five were more difficult. Children who were unable to read *any* of the five easy words were not asked to read the more difficult words. Figure 58 shows the average percentage of words read by children in the Intervention and Control groups. There was no significant programme effect on children's ability to read words.[163]

Figure 58 Percentage of Words Read
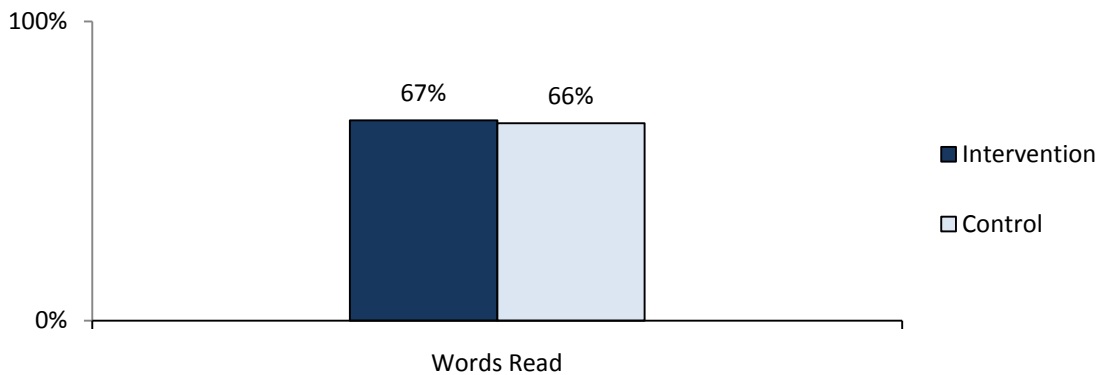
Writing: Children were provided with a sheet of paper with a line on it and a pencil, and asked to write their names. Children's responses were scored based on whether they could write any letters (whether or not these letters were part of their name), whether they could write at least half of the letters in their name, and whether they could write all of the letters of their name in the correct order. Letters were accepted even if they were reversed or poorly formed. Figure 59 shows the percentage of children in each group who performed each writing task correctly. There was no significant programme effect on children's ability to write any letters, to write at least half of the letters in their name, or to write their whole name.[164]

Figure 59 Percentage of Children Giving Correct Responses on Beginning Writing Tasks
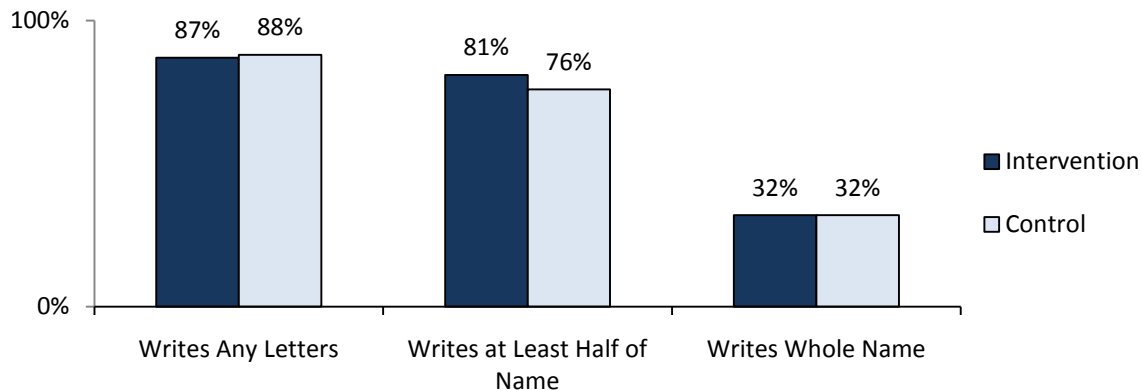
Perceptual motor skills

We measured children's perceptual motor skills with a series of four pencil-and-paper activities. Children were provided with a pencil and a sheet of paper with the dotted outlines of two straight lines, a circle, and a square. The assessor demonstrated how to trace a straight line, and asked the child to trace the

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[163] $F = 0.01$, $p = .983$, partial $\eta^2 < .001$

[164] With $F = 0.01$, $p = .977$, partial $\eta^2 < .001$ for writing any letters; $F = 0.71$, $p = .399$, partial $\eta^2 = .001$ for writing at least half of the letters in their name; $F = 0.02$, $p = .889$, partial $\eta^2 < .001$ for writing all of the letters in their name

remaining straight line, the circle and the square. Assessors noted whether the child knew how to hold a pencil correctly (based on local custom), and whether the child was able to trace each shape, staying on the dotted line at least 50 percent of the time.

Figure 60 shows the percentage of children in each group who performed each perceptual motor task correctly. There no significant programme effect on children's ability to hold a pencil correctly, to trace a line, to trace a circle, or to trace a square.[165]

Figure 60 Percentage of Children Correctly Completing Perceptual Motor Tasks
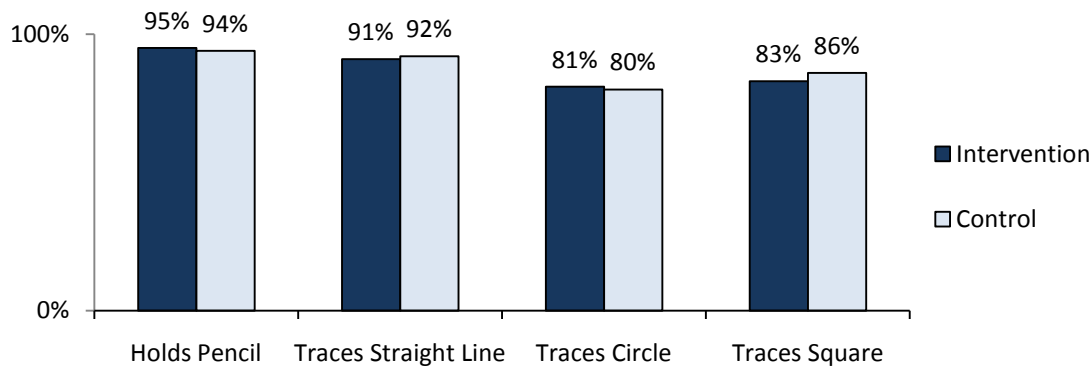
Across the four perceptual motor tasks, there were no significant programme effects on children's perceptual motor skills.[166] There was a small negative programme effect based on household resource level, with children from households with lower level of resources in the Control group gaining more in this area than those in the Intervention group.[167] We did not find any differential programme effects on children's perceptual motor skills based on region or child gender.

Attention

We examined children's attention in three areas: Their ability to sustain attention, their ability to voluntarily focus their attention, and their ability to sit still during the assessment.

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[165] With $F = 1.53$, $p = .217$, partial $\eta^2 = .003$ for holding a pencil; $F = 0.15$, $p = .697$, partial $\eta^2 < .001$ for tracing a line; $F = 0.12$, $p = .730$, partial $\eta^2 < .001$ for tracing a circle; $F = 0.41$, $p = .521$, partial $\eta^2 = .001$ for tracing a square

[166] $F = 0.12$, $p = .734$, partial $\eta^2 < .001$

[167] $F = 4.60$, $p = .032$, partial $\eta^2 = .008$

Sustained Attention: Sustained attention was measured with the Leiter-R sustained attention subtask,[168] a non-verbal task that requires the child to find as many pictures that match as model as they can within 30 seconds. Figure 61 shows the percentage of pictures marked correctly (out of 20 possible) by children in each group. There was no significant programme effect on children's sustained attention.[169] We did not find any differential programme effects on children's sustained attention based on region, child gender, or household resource level.

Figure 61 Percentage of Pictures Marked Correctly
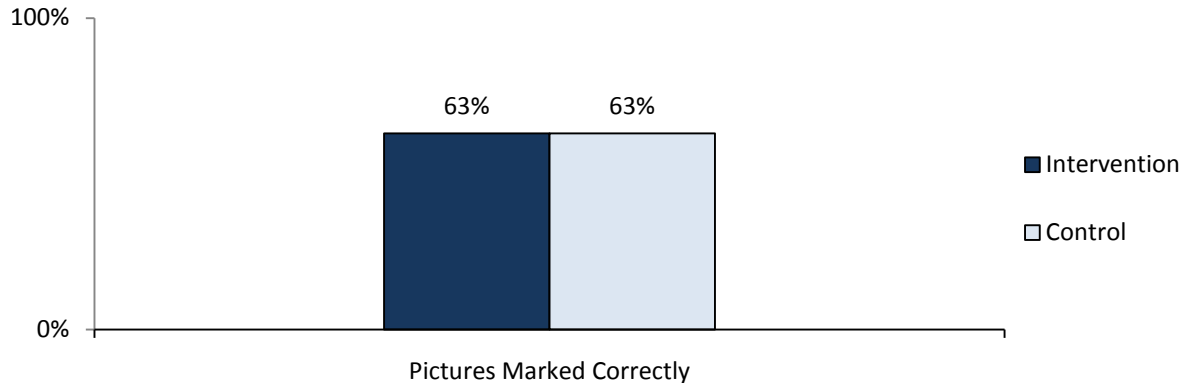
Focused Attention and Body Movement: At the conclusion of the child assessment, assessors rated children's ability to voluntarily focus their attention and their body movement based on their observations of the child's behaviour throughout the assessment. In the area of focused attention, the assessor rated the child's behaviour *Focuses attention voluntarily*; *Attends with assessor direction*; *Some distraction with noise or movement of others*; or *Easily distracted*. In the area of body movement, the assessor rated the child's behaviour *Sits quietly*; *Some squirming*; *Much movement*; or *Out of seat, body in constant motion*. Figure 62 shows the percentage of children in each group who assessors rated as focusing their attention voluntarily on the assessment tasks, and the percentage able to sit quietly during the assessment. There was a no significant programme effect on children's ability to voluntarily focus their attention or to sit quietly while completing tasks.[170] We did not find any differential programme effects on children's focused attention or body movement based on region, child gender, or household resource level.

Figure 62 Focused Attention and Body Movement

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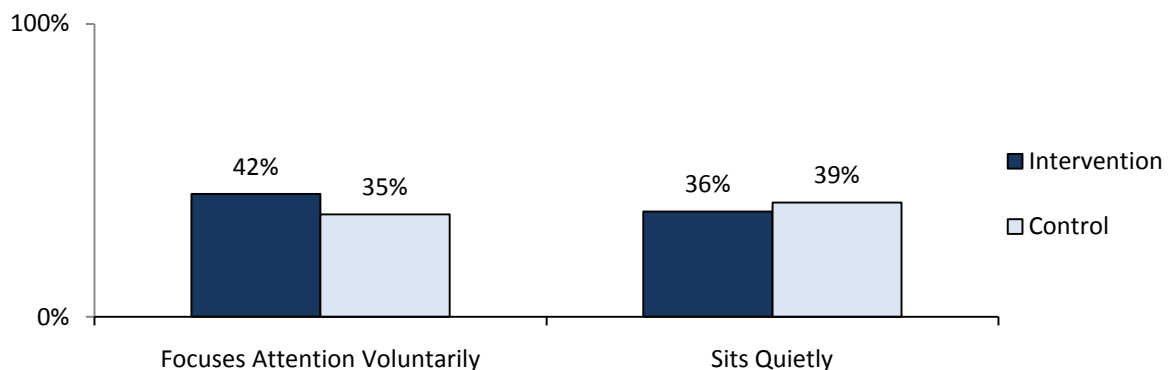
[168] ©Stoelting Co., 1997, used with permission

[169] $F = 2.43$, $p = .119$, partial $\eta^2 = .004$

[170] $F = 0.54$, $p = .462$, partial $\eta^2 = .001$ for voluntary focus; $F = 0.01$, $p = .925$, partial $\eta^2 < .001$ for body movement

Mastery motivation

At the conclusion of the child assessment, the assessor rated the child's task persistence and self-confidence based on his or her observations of the child's behaviour throughout the assessment. In the area of task persistence, the assessor rated the child's behaviour as *Persists with task*; *Attempts task briefly*; *Attempts task after much encouragement*; or *Refuses*. In the area of self-confidence, the assessor rated the child's behaviour as *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*. Figure 63 shows the percentage of children in the Intervention group and in the Control group that assessors rated as persisting with assessment tasks (even if the task was difficult), and the percentage who were very sure of themselves (self-confident). There were no significant programme effects on children's task persistence or their self-confidence while completing academic tasks.[171] We did not find any differential programme effects on task persistence or self-confidence based on region, child gender or household resource level.

Figure 63 Task Persistence and Self-Confidence

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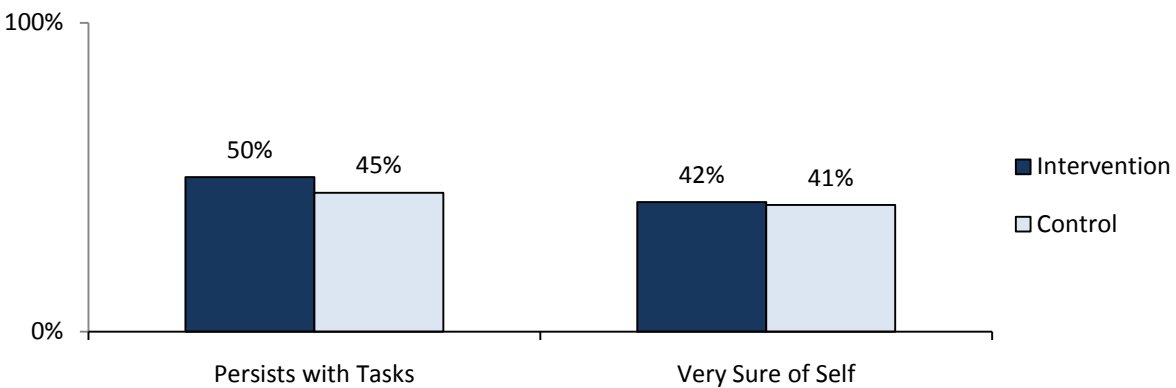
[171] $F = 0.20$, $p = .654$, partial $\eta^2 < .001$ for task persistence, $F = 0.03$, $p = .858$, partial $\eta^2 < .001$ for self confidence

Ability to follow directions

At the conclusion of the child assessment, the assessor rated the child's attention to and comprehension of directions based on their observations of the child's behaviour throughout the assessment. Note that comprehension of directions involves the child understanding what he or she is supposed to do, such as point to something on a page or give a verbal response, regardless of whether he or she provided the correct answer. In the area of attention to directions, the assessor rated the child's behaviour *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 the area of comprehension of directions, the assessor rated the child's behaviour *Rapid comprehension of directions, given age expectations*; *Understands after several repetitions*; *Partial comprehension of directions*; or *Does not appear to comprehend most directions*. Figure 64 shows the percentage of children in the Intervention group and in the Control group that assessors rated as attending to directions, and the percentage who comprehended directions. There were no significant programme effects on children's attention to or comprehension of directions while completing academic tasks.[172]

Figure 64 Attention to and Comprehension of Directions
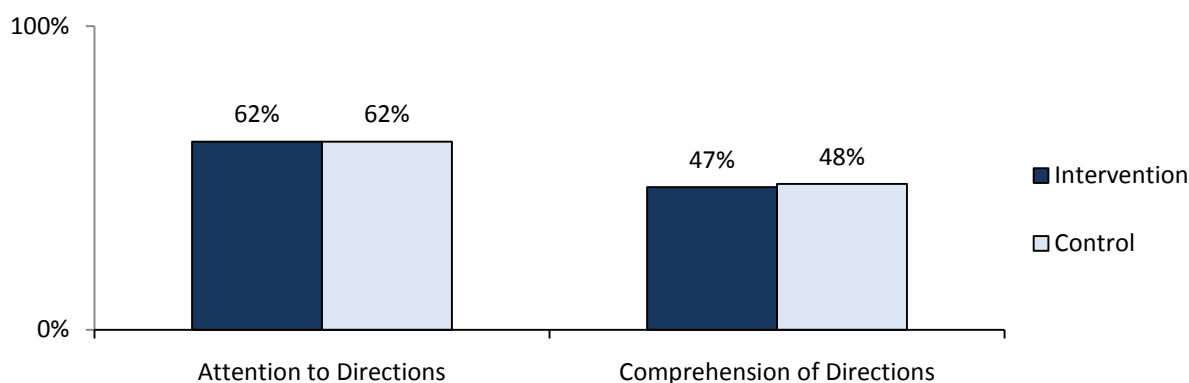
There was a small differential programme effect on children's comprehension of directions (but not on attention to directions), with boys benefiting more from the programme than girls.[173] We did not find any differential programme effects on children's attention to or comprehension of directions based on region or household resource level.

6.5.2   Summary of programme impacts on young children

The *Getting Ready for School* programme had two goals for young children: to increase their school readiness and to increase their on-time enrolment in primary school. In the area of school readiness, we did not find any significant programme effects in any of the areas or school readiness assessed here (colour naming, pattern recognition, beginning mathematics, beginning literacy, perceptual motor skills, attention, mastery motivation, and ability to follow directions). We did not find a consistent pattern of differential programme effects based on child or family characteristics or risk factors. On-time enrolment is rarely an issue in Tajikistan, and a first-grade follow up will later provide more information regarding any programme impacts on children's academic engagement (such as attendance).

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[172] $F = 0.24$, $p = .627$, partial $\eta^2 < .001$ for attention to directions, $F = 0.42$, $p = .519$, partial $\eta^2 = .001$ for comprehension of directions
[173] $F = 4.36$, $p = .037$, partial $\eta^2 = .008$

6.6 Programme Impacts on Families

There were two *Getting Ready for School* programme goals for families: to improve their understanding of the importance of school readiness and to increase their active support for their young children's learning. Outcomes in each of these areas will be presented below.

6.6.1 Caregiver beliefs in the importance of school readiness

We provided caregivers with a list of developmental areas such as health and social and emotional learning, and some specific academic skills. For each item listed in Table 41, caregivers were asked to indicate how important they believed it was for a child to have that characteristic or skills when he or she began first grade. Response choices were *Not at all important*, *Somewhat important*, or *Very important*. These items came together to form an Importance of School Readiness scale.[174] There was no significant programme effect on caregivers' scores on the Importance of School Readiness scale.[175]

Table 41 Percentage of Caregivers who Indicated that It Was Very Important for a Child to Have Each Characteristic or Skill

	Intervention	Control
It is important that the child is in good physical health.	95.3% (n = 283)	96.6% (n = 288)
It is important that the child is confident.	89.5% (n = 263)	89.2% (n = 264)
It is important that the child is curious and explores his/her environment.	77.8% (n = 231)	76.5% (n = 228)
It is important that the child is able to play with other children.	88.9% (n = 263)	85.2% (n = 254)
It is important that the child has good problem-solving skills (for example, tries different ways to solve a problem).	76.4% (n = 227)	78.8% (n = 234)
It is important that the child knows some letters.	92.6% (n = 275)	93.6% (n = 279)
It is important that the child is able to read some words.	88.9% (n = 264)	83.9% (n = 250)
It is important that the child is able to write his/her own name.	84.8% (n = 252)	81.2% (n = 242)
It is important that the child is able to count from one to ten.	95.6% (n = 284)	95.6% (n = 285)
It is important that the child is able to recognise and name shapes.	91.9% (n = 273)	91.6% (n = 273)

Caregivers from households with a lower level of resources experienced a greater programme effect on their understanding of the importance of school readiness than caregivers from households with a higher level of resources, although the magnitude of this differential programme effect was quite small.[176] Families from Rumi had a significantly lower level of household resources than families from Bokhtar, and once household resources had been taken into account, there were no additional differential programme impacts based on region.

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[174] Scale reliability was α = .80 across the full sample at baseline

[175] F = 0.23, p = .663, partial η^2 < .001

[176] F = 4.26, p = .039, partial η^2 = .008

6.6.2 Active family support for young children's learning

We asked caregivers whether within the past week anyone in the household had engaged in the activities listed in Table 42 to support their young child's learning. These items came together to form a Support for Learning scale.[177] There was no significant programme effect on the total number of activities that families engaged in with the child.[178]

Table 42 Family Support for Children's Learning

	Intervention	Control
Told stories to child	80.6% (n = 237)	84.1% (n = 249)
Sang songs with child	80.4% (n = 238)	82.2% (n = 244)
Read books or looked at pictures with child	97.0% (n = 288)	94.6% (n = 280)
Took child out of home/yard/compound	69.3% (n = 205)	66.2% (n = 196)
Played with child	95.6% (n = 282)	94.9% (n = 282)
Spent time with child naming, counting or drawing things	93.4% (n = 271)	87.5% (n = 260)

We did not find any differential programme impacts based on region or household resource level.

6.6.3 Summary of programme impacts on families

There were two *Getting Ready for School* programme goals for families whose young children participated: to improve their understanding of the importance of school readiness and to increase their active support for their young children's learning. We did not find a significant programme effect on caregivers' understanding of the importance of school readiness, although caregivers from households with a lower level of resources did derive a somewhat greater programme benefit in this area than caregivers from households with a higher level of resources. There was no significant programme effect on families' active support for young children's learning.

6.7   Outcomes for Young Facilitators

There were three *Getting Ready for School* programme goals for the Young Facilitators: to improve their educational engagement and performance, to increase their positive attitudes toward learning, and to increase their belief in the importance of supporting young children's learning. Outcomes in each of these three areas will be presented below. We were unable to examine relationships between Young Facilitators' level of participation in the programme and outcomes due to a lack of programme attendance data for most Young Facilitators.

6.7.1   Academic engagement and performance

We looked at student academic engagement in two areas: Student reports of how often they had missed school without permission from the school or their family (truancy), and student reports of whether they

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[177] Scale reliability was α = .70 across the full sample at baseline

[178] F = 0.75, p = .388, partial η^2 = .001

planned to continue their education next year. Note that truancy did not include occasions when the student had to miss school in order to work or to help at home.

There was a significant *increase* in student levels of truancy between the baseline and outcome assessments.[179] At the time of the baseline evaluation, 46 percent of students (n = 138) indicated that they had not been truant at all within the last year, 48 percent (n = 143) that they had been truant from one to five days per month, and 6 percent (n = 19) that they had been truant six days or more per month. At the time of the outcome evaluation, 37 percent of students (n = 110) indicated that they had not been truant at all, 54 percent (n = 162) that they had been truant from one to five days per month, and 9 percent (n = 28) that they had been truant six days or more per month. At both the baseline and the outcome assessments, all Young Facilitators indicated that they planned to continue their education next year.

To measure academic progress, we asked Young Facilitators to indicate what grades they usually received in each of four main academic subjects: language arts, mathematics, science and social studies. Response choices were *Mostly poor/failing, Mostly fair*, *Mostly good*, and *Mostly excellent*. Figure 65 shows the percentage of young facilitators who indicated that their grades were mostly good or excellent at the baseline and outcome assessments. There was a significant improvement in Young Facilitators' self-reported grades in language arts, but not in mathematics, science or social studies.[180]

Figure 65 Young Facilitators Reporting Grades of Good or Excellent by Subject

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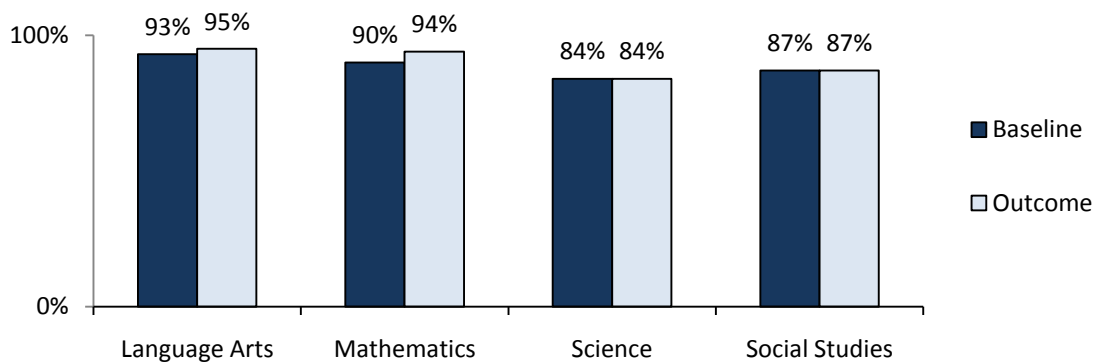
[179] $t(299) = -2.66$, $p < .01$

[180] With $t(299) = -2.71$, $p < .01$ for Language Arts; $t(299) = -1.87$, *ns* for Mathematics; $t(299) = -0.91$, *ns* for Science; $t(299) = -0.62$, *ns* for Social Studies

6.7.2 Positive attitudes toward learning

Young Facilitators were presented with 14 statements regarding their attitudes toward learning, and were asked to indicate whether they agreed, disagreed or were unsure for each. These items combined to form a Positive Attitudes toward Learning scale based on the survey items displayed in Table 43.[181] There was no significant change in Young Facilitators' scale scores for Positive Attitudes toward Learning from baseline to outcome.[182] While girls improved more than boys on this scale, the level of change from baseline to outcome was still not statistically significant among girls.[183]

Table 43 Young Facilitator Positive Attitudes toward Learning

	Baseline	Outcome
I get high marks at school.	79.0% (n = 237)	82.3% (n = 246)
Learning is fun.	93.7% (n = 281)	92.3% (n = 277)
I learn things from other students.	91.7% (n = 275)	64.0% (n = 192)
I learn things by playing with my friends.	85.3% (n = 256)	66.3% (n = 199)
I try to learn new things every day.	83.7% (n = 251)	95.3% (n = 286)
I enjoy solving problems in daily life.	85.0% (n = 255)	80.9% (n = 242)
I am trying my best at school work.	91.3% (n = 274)	87.0% (n = 261)
I like expressing my opinions in class.	84.7% (n = 254)	78.0% (n = 234)
I like teaching my friends or younger children to learn.	89.0% (n = 267)	90.7% (n = 272)
I like sharing my ideas with friends.	95.3% (n = 286)	92.3% (n = 277)
I like leading class activities.	97.3% (n = 292)	90.7% (n = 272)
Helping other students or younger children learn helps me learn as well.	94.7% (n = 284)	94.7% (n = 284)
The subjects I am learning at school will be important for me later in my life.	79.0% (n = 237)	97.3% (n = 292)
I plan to attend secondary school someday.	93.7% (n = 281)	99.3% (n = 298)

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[181] Scale reliability was α = .78 across the full sample at baseline
[182] $t(297) = 0.24$, *ns*
[183] $t(169) = -1.38$, *ns*

6.7.3 Support for young children's school readiness

Young Facilitators were presented with four statements regarding the importance of school readiness, and were asked to indicate whether they agreed, disagreed or were unsure for each. There was one negatively worded item (shown in italics) where agreement shows a *lack* of support for the importance of school readiness. Table 44 displays the percentage of young facilitators who agreed with each statement at baseline and at outcome. Young Facilitators expressed a significantly greater level of belief in the importance of young children's school readiness at outcome than they had at baseline.[184]

Table 44 Young Facilitator Belief in the Importance of School Readiness

	Baseline	Outcome
It is important for young children to learn about their new school before they go to first grade.	90.7% (n = 272)	98.7% (n = 296)
It is a waste of time to teach young children before they go to first grade because they are too young to learn.	*22.3% (n = 67)*	*13.3% (n = 40)*
Young children will have better marks in first grade if they know most letters of the alphabet before they begin school.	91.0% (n = 273)	96.3% (n = 289)
Young children will have better marks in first grade if they have already learned a little bit of mathematics before they go to first grade.	91.3% (n = 274)	97.3% (n = 292)

6.7.4 Summary of outcomes for Young Facilitators

We were unable to isolate specific programme impacts for Young Facilitators due to the lack of a Control group. However, we were able to compare baseline and outcome information at the level of the individual Young Facilitator to note any significant changes. In the area of academic engagement, Young Facilitators reported increased grades in language arts, but not in any other subjects. They also reported *increased* levels of truancy. Young Facilitators did not show any significant change in the level of their positive attitudes toward learning, but did show a significant increase in their level of belief in the importance of young children's school readiness. We were unable to examine relationships between Young Facilitators' level of participation in the programme and outcomes due to a lack of programme attendance data for most Young Facilitators.

6.8 Programme Impacts on Teachers

There were three *Getting Ready for School* programme goals for teachers: to improve their belief in the value of child-centred pedagogy, to increase their understanding of the importance of school readiness, and – for first grade teachers – to raise their expectations regarding the level of school readiness of incoming first grade students at their school. We were unable to examine programme impacts on first grade teacher expectations because only 5 of the 15 Intervention group first grade teachers who participated in the outcome evaluation completed the teacher survey questions regarding their expectations for school readiness. Programme impacts in the areas of child-centred pedagogy and the importance of school readiness are presented below. Results should be interpreted with caution due to the unequal sample size between the Intervention and Control groups and due to the greater years of teaching experience among teachers in the Control group.

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[184] With $t(299) = -4.45$, $p < .001$ for *It is important for young children to learn about their new school before they go to first grade*; $t(299) = 2.67$, $p < .01$ for *It is a waste of time to teach young children before they go to first grade because they are too young to learn; t(299) = -3.18, p < .01$ for *Young children will have better marks in first grade if they know most letters of the alphabet before they begin school*; and $t(299) = -3.52$, $p < .01$ for *Young children will have better marks in first grade if they have already learned a little bit of mathematics before they go to first grade*

6.8.1   Attitudes toward child-centred pedagogy

We asked teachers to respond to 15 survey items regarding their belief in the use of child-centred pedagogy. These items covered issues such as the teacher's role in supporting all children, the importance of a classroom environment where children are encouraged to participate, and the value of students' ideas and experiences outside the classroom. The items did not come together as a group to form a robust scale, so we are presenting findings at the item level in this area. Table 45 shows the percentage of teachers who responded *Mostly true* or *Very true* to each item. Items displayed in italics were negatively worded, so agreement with the item indicates a *lack* of child centeredness. There was a large positive programme impact on teachers' belief that students have better academic achievement in classrooms where the teacher encourages students to participate.[185] There were no other significant programme impacts on teachers' attitudes toward child-centred pedagogy.

Table 45 Attitudes toward Child-Centred Pedagogy

	Intervention	Control
Classroom learning is most effective when based primarily on teacher lectures, with students responding when called on.	75.0% (n = 57)	73.1% (n = 19)
Teachers should give feedback to students on assignments to help them improve their work.	86.9% (n = 66)	96.2% (n = 25)
It is best when students work on assignments alone to show how much they know.	88.1% (n = 67)	84.6% (n = 22)
All students should be helped to participate in class discussions.	98.7% (n = 75)	100.0% (n = 26)
Teachers know more than students. They should just explain the facts to students.	91.2% (n = 72)	84.6% (n = 22)
Teachers should give students problems with specific, correct answers and ideas.	90.8% (n = 69)	92.3% (n = 24)
When students talk with each other during class time they disrupt the flow of class and the learning of other students.	67.1% (n = 51)	80.7% (n = 21)
When students work on projects without the teacher being involved they usually learn "incorrect knowledge."	67.1% (n = 51)	42.3% (n = 11)
Students also learn important information outside the classroom.	86.8% (n = 66)	84.6% (n = 22)
The teacher's role is to help all students in their class be successful.	100.0% (n = 76)	100.0% (n = 26)
Allowing students to talk about their ideas in class takes time away from learning.	56.6% (n = 43)	46.1% (n = 12)
Teachers should not spend too much time helping students at the bottom of the class that do not perform well. It takes too much time away from the good students.	55.3% (n = 42)	42.3% (n = 11)
Teachers should give more time to the best students in the class.	27.6% (n = 21)	23.1% (n = 6)
Students have better academic achievement in classrooms where the teacher encourages students to participate.	98.7% (n = 75)	100.0% (n = 26)
It is the teacher's responsibility to find a way to meet the learning needs of every student in the class.	97.4% (n = 74)	96.1% (n = 25)

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[185] *F* = 7.64, *p* = .007, partial η^2 = .076

6.8.2 Understanding of the importance of school readiness

We asked teachers how important it was for students to have certain skills upon school entry across the range of areas of development shown in Table 46. Teachers responded to a four-point Likert scale (see Table B-1, Appendix B for a description of the individual survey items for each area of school readiness). There were no significant programme effects on teachers' belief in the importance of school readiness overall, or within any specific developmental area.[186]

Table 46 Teacher Belief in the Importance of School Readiness

	Intervention	Control
Importance of school readiness across all areas	M = 3.64 SD = 0.32	M = 3.66 SD = 0.20
Literacy	M = 3.66 SD = 0.39	M = 3.60 SD = 0.31
Mathematics	M = 3.68 SD = 0.42	M = 3.68 SD = 0.30
Motor skills	M = 3.70 SD = 0.37	M = 3.82 SD = 0.24
Behaviour	M = 3.68 SD = 0.37	M = 3.74 SD = 0.24
Social and emotional learning	M = 3.49 SD = 0.42	M = 3.54 SD = 0.42

6.8.3 Summary of programme impacts on teachers

There were three *Getting Ready for School* programme goals for teachers who participated: to improve their belief in the use of child-centred pedagogy, to increase their understanding of the importance of school readiness, and – for first grade teachers – to raise their expectations regarding the level of school readiness of incoming first grade students at their school. In the area of child-centred pedagogy, there was a large programme effect on teachers' belief that students have better academic achievement in classrooms where the teacher encourages students to participate. There were no significant programme effects on any other aspects of teachers' beliefs in the value of child-centred pedagogy, nor any impacts on teachers' beliefs in the importance of school readiness. We were unable to examine programme effects on first grade teacher expectations for school readiness due to the low number of Intervention group first grade teachers who responded to questions in that area. Note that these results for teachers should be interpreted with caution due to the low number of teachers in the Control group and their significantly higher average years of teaching experience relative to teachers in the Intervention group.

6.9   Discussion and Recommendations for Tajikistan

There were several areas of success in the pilot implementation of the *Getting Ready for School* programme in Tajikistan. The programme proved to be very popular with Young Facilitators, young learners and teachers, with additional Young Facilitators and young children joining in the programme during the year. School heads reported increased levels of school-community connections, high levels of satisfaction with the programme among school staff and increased understanding of young children's

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[186] With F = 0.17, p = .686, partial η^2 = .002 across all areas; F = 0.08, p = .774, partial η^2 = .001 for literacy; F = 0.03, p = .867, partial η^2 < .001 for mathematics; F = 1.89, p = .173, partial η^2 = .019 for motor skills; F = 0.38, p = .538, partial η^2 = .004 for behavior; F = 3.40, p = .068, partial η^2 = .034 for social and emotional learning

development among teachers. Teachers and Young Facilitators rated nearly all of the activities very fun for the children.

There were several weaknesses with the programme implementation in this pilot year, and these issues may well explain the low level of programme impacts. First, the teachers selected for training in the *Getting Ready for School* programme were often not the teachers who implemented the programme, leaving untrained teachers leading *Getting Ready for School* sessions in many schools. Second, the programme design in Tajikistan called for weekly programme sessions (compared with at least twice weekly in most other countries). This schedule, combined with not-unexpected school closures in the winter due to cold weather, meant that children in Tajikistan received a low programme dosage. Children need frequent and ongoing reinforcement for new concepts and new knowledge to take hold, and this low programme dosage would have made the acquisition of new knowledge quite challenging for the children. High variability in session length also meant that while some children attended weekly programme sessions lasting two or three hours, others attended sessions lasting less than one hour per week.

It is worth noting that children in both the Control group and the Intervention group showed large gains in mathematics over the course of the school year. This tells us that children acquire mathematics skills and information in their homes and communities, regardless of any programme participation. The same is not true for beginning literacy (despite high levels of parental literacy) or other areas of development.

The high level of interest and enthusiasm for the programme means that it may be worth addressing the weaknesses of the programme implementation of the first year and examining the programme again to determine whether these changes lead to desired impacts.

Several recommendations emerge from this pilot programme evaluation:

- UNICEF (or whoever is implementing the programme) should increase communication with the educational system to ensure that the teachers selected for training will be the same teachers who implement the programme.
- Programme dosage should be increased through the provision of sessions of an hour or more at least twice per week. These sessions can be supplemented by home-based activities to support learning – a model that has been successful in other countries.
- While children seem to acquire many of the math skills taught in the programme anyway in the course of their lives in their homes and communities, the programme sessions could be revised to either focus on higher level mathematics skills (if these are expected at the time of school entry in Tajikistan), or to focus more on those skills that children do not seem to acquire in their daily lives, such as literacy.

In sum, the *Getting Ready for School* programme has been greeted with great enthusiasm in Tajikistan, and changes in programme design and focus may help *Getting Ready for School* better achieve the desired outcomes in Tajikistan.

CHAPTER 7   YEMEN: COUNTRY-LEVEL IMPACTS

In this chapter, we present country-level results for Yemen, including the reason for the intervention; the implementation of the *Getting Ready for School* programme in Yemen; programme impacts for young children, families, Young Facilitators, and teachers; and programme costs. We conclude the chapter with a discussion of the findings and a list of recommendations for the future success of the *Getting Ready for School* programme in Yemen.

7.1   Need for the Intervention

The modern education system in Yemen is relatively young, having begun in 1962 when the Yemen Arab Republic was established. During 1970's, Yemen witnessed an expansion of basic education, although there were great disparities in educational policies between the regions in the North and the South until their unification in 1990. Traditionally, North Yemen has been a relatively closed society where education has been limited only to religious schools, or to small, community-based schools, and the majority of the students have been boys. Tradition dictates that parents are not obliged to send girls to school. Many girls only attend school if that school is close to their home, equipped with separate lavatories, well supervised and staffed with female teachers. The opportunity costs associated with educating girls are also an important consideration for many families. Girls represent a valuable source of household labour, which is lost when girls are at school or studying. This is particularly the case in rural households. With the migration of male adults in the last 25 years to neighbouring oil-rich countries, rural women now constitute the majority of the agricultural labour force, leaving daughters to carry out many of the domestic chores (Noman, 1995).

The unified Yemen of the 1990s faced several problems, including a weak education system, low levels of teacher training and qualification, gaps in enrolment between boys and girls, weak institutional capacity from the Ministry to school levels and low community participation (World Bank, 2002). However, in recent years the provision of universal and high quality early education has become a policy priority for the government. Even though the General Law of Education defines pre-primary education as the first stage of education and designates nursery schools and kindergartens as providers of education to children three to six years old, preschool programs are not compulsory (UNESCO, 2006). Further, one of the Ministry of Education's recent goals, as stated in the five-year plan for the period 2001-2005, has been to pay more attention to pre-primary education and to extend pre-school services across all governorates of the country. The government's plan was to provide funds for cost-effective construction of appropriate buildings and ensure the personnel and financial requisites for pre-primary education, while at the same time encouraging private sector investment. However, progress towards these goals has been slow. The *Getting Ready for School* programme is viewed as an important steppingstone in pushing forward the agenda to provide universal access to high quality early interventions for young children that will, in turn, boost their readiness for formal schooling.

7.2   Nature of the Intervention

A general Inception Meeting was held in March 2008 to orient a steering committee to the concept, objectives and project framework of the *Getting Ready for School* programme and to agree on the national management structure of the project. It was decided that the programme would be implemented in three districts in the Taiz Governorate: Haifan, Al-Makha, Mawza. Fifteen Intervention Schools and 15 Control Schools were identified within the Taiz Governorate, with 5 Intervention and Control Schools respectively from each pilot district.

Getting Ready for School focal points at Taiz Governorate Education Office, District Education Offices (DEO) and the UNICEF Taiz office jointly conducted school visits in July 2008 to discuss the *Getting Ready for School* programme and its evaluation with headmasters and teachers.

Teachers were provided with general guidance on how to identify eligible Young Facilitators among their students. The matching process between Young Facilitators and young children was completed by the UNICEF Taiz Office with support from DEO, Intervention Schools and Field Coordinators. The *Getting Ready for School* programme began in February 2009 and concluded in August 2009.

7.3   The Evaluation

In this section, we present information on data collection procedures and the evaluation sample in Yemen, noting any areas of concern that could influence the interpretation of findings.

7.3.1   Data collection

Baseline data were collected in September of 2008; outcome data for teachers, Young Facilitators and community stakeholders were collected in July of 2009; and outcome data for children and their caregivers were collected in October of 2009. Data were collected by trained, certified assessors. Data collection quality monitoring was conducted by both UNICEF and the contracting evaluation consulting group. There were no significant data collection issues reported, and the data sent from the field was of high quality.

7.3.2   Sample

In this section, we present information about the schools, children and families, Young Facilitators and teachers who took part in the evaluation. A total of 83 teachers, 183 Young Facilitators and 581 young children participated in the programme. A random subset of these participants formed the Intervention group sample.

Table 47 shows the characteristics of the 15 participating Intervention group schools and 15 Control group schools at the time of the baseline evaluation.

Table 47 School Characteristics

	Intervention	Control
Number of students enrolled	M = 428 (Range 151 – 1,359)	M = 339 (Range 81 – 744)
Number of teachers and educational assistants	M = 16 (Range 7 – 37)	M = 14 (Range 3 – 41)
Student/teacher ratio	M = 28:1 (Range 5:1 – 43:1)	M = 31:1 (Range 6:1 – 58:1)
Daily absence rate as of 2007/2008 school year	M = 14% (Range 4% – 30%)	M = 11% (Range 2% – 21%)
Dropout rate as of 2007/2008 school year	M = 7% (Range 0% – 19%)	M = 9% (Range 0% – 40%)

At the baseline evaluation, 81 teachers were in the Intervention group and 19 in the Control group. At the outcome evaluation, three additional Intervention group teachers took part in the teacher survey (for a total of 84), and 18 Control group teachers participated. There were no concerns about differential attrition among teachers. Table 48 shows the characteristics of teachers in the programme and Control groups (as reported at baseline). Teachers in the Control group had significantly more years of teaching

than did teachers in the Intervention group.[187] However, teachers in the Intervention group had a significantly higher level of education.[188] We did not find significant variation in teachers' years of experience or educational levels between the three participating districts (Haifan, Al-Makha and Mawza).

Table 48 Teacher Characteristics at Baseline

	Intervention	Control
Gender (% female)	30%	26%
Years teaching	M = 10.8 SD =5.3	M = 13.4 SD = 4.7
Live in school community? (% yes)	81%	90%

At the baseline evaluation, 301 children and their families were in the Intervention group and 300 in the Control group. Outcome evaluations were completed for 297 children and families in the Intervention group and 297 in the Control group. This attrition rate was very low for both Intervention and Control group families, and there were no concerns about differential attrition. Children in the Control group were more likely than children in the Intervention group to reside in a two-parent household.[189] There were no other significant differences between Intervention and Control group families based on these characteristics. Table 49 summarizes child and caregiver characteristics at baseline.

Table 49 Child and Family Characteristics at Baseline

	Intervention	Control
Gender of participating child (% female)	50%	44%
Number of household members	M = 7.5 (SD = 2.7)	M = 7.8 (SD = 2.6)
Number of household members under age 12	M = 2.8 (SD = 1.6)	M = 2.9 (SD = 1.6)
Two-parent households	91%	96%
Families with out-of-school children[190]	17%	17%
Responding caregiver literacy (% literate)	50%	60%
Family resource level[191] (% low)	51%	48%

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[187] $t(101) = –2.02, p < .05$
[188] $t(37.79) = 2.78, p < .01$
[189] $t(542.3) = –2.29, p < .05$
[190] Among households with one or more older children aged 7-13, percentage of households where at least one of those children was not enrolled in school at the time of the baseline evaluation
[191] Low resource level based on the presence of three or fewer of the following items in the household: Bed, radio, living room, television, satellite receiver, mobile telephone, gas cooker, refrigerator or washing machine, car

A total of 174 Young Facilitators participated in the intervention sample. Of those, 173 were retained for the outcome evaluation – an extremely low level of attrition. Note that there was no Control group for Young Facilitators. Table 50 shows the characteristics of the Young Facilitators.

Table 50 Young Facilitator Characteristics at Baseline

Gender (% female)	40%
Grade	
Four	8%
Five	9%
Six	36%
Seven	31%
Eight	14%
Nine	1%

Community leader interviews were completed with school heads and with members of the school council from each of the 15 Intervention group schools.

7.4   Programme Implementation and Participation

In this section, we provide information regarding the level of participation in the *Getting Ready for School* programme among children assigned to the Intervention group and the Young Facilitators; programme implementation; the extent to which children in both the intervention and Control groups participated in other early childhood development programmes; the success of programme communications in conveying key messages to the community; and stakeholder perceptions of programme strengths, challenges and sustainability.

7.4.1   Participation in *Getting Ready for School*

There were 35 programme sessions offered. A total of 301 young children were assigned to the Intervention group, and, according to programme records, young children attended an average of 25.2 sessions (SD = 11.36). Forty-four children (15 percent) had perfect attendance. Thirty-four of the programme children (11 percent) did not attend any sessions (according to programme records). However, in the course of parent interviews, only nine programme families reported that their child never attended the programme. Of those, six stated that they had been unaware that the *Getting Ready for School* programme was available to them.

Among the six families who reported that their child had only attended the *Getting Ready for School* programme once or twice, two reported that the low attendance was because the child's behaviour made him or her too difficult to take places; one reported that the programme was not interesting to the child or the child did not wish to go; one reported that there was no one available to take the child to the programme, and one reported that the programme was inaccessible due to location and/or lack of transportation. The sixth respondent did not provide a reason for the low attendance.

Among the three regions participating in the programme, Mawza had the highest average attendance rate for young children (76 percent), closely followed by Haifan (74 percent), with a lower 66 percent attendance rate in Al-Makha. When children had lower attendance rates, their attendance tended to be sporadic throughout the duration of the programme rather than them dropping out completely. Reports from the field suggest that lower attendance in Al-Makha may be primarily due to the long distances that some children had to travel to participate in the programme. We did not find significant differences in child

attendance rates based on children's gender, household resource level, whether older children in the household were in school or out of school, or whether the caregiver who completed the baseline interview self-identified as literate or illiterate.[192]

The 153 Young Facilitators attended an average of 88 percent of sessions, with 52 (35 percent) having perfect attendance. As with the young children, Young Facilitators from Mawza had a significantly higher level of attendance than Young Facilitators from the other two regions, with an average attendance rate of 96 percent in Mawza, 87 percent in Haifan and 84 percent in Al-Makha.[193] We did not find significant differences in Young Facilitator attendance based on their gender.

7.4.2 Implementation of the *Getting Ready for School* programme in Yemen

As intended, the *Getting Ready for School* programme was implemented across 35 sessions, with each session lasting approximately an hour and a half. At the conclusion of each session, the teacher completed a session record where he or she indicated whether the instructions in the teacher's guide were clear, whether the teacher felt that literacy and numeracy activities were fun for most of the children, whether the Young Facilitators felt that activities were fun, whether the lessons were at the right level of difficulty for the young children, and whether the Young Facilitators found it easy or difficult to implement the activities. Teachers also provided information about resources they had purchased for the sessions, preparation time, and their recommendations for any needed improvements in the programme.

Teachers reported that their instructions were *Very clear* 90 percent of the time, *Somewhat clear* 8 percent of the time, and *Not Clear* just 2 percent of the time. Likewise, the Young Facilitators found their instructions to be easy to follow 91 percent of the time.

Teachers and Young Facilitators gave similar ratings for how fun the activities were for the young children. Teachers rated the activities as *Very fun* 76 percent of the time, *Somewhat fun* 22 percent of the time, and *Not fun* just one percent of the time. Young Facilitators rated the activities as *Very fun* 76 percent of the time, *Somewhat fun* 21 percent of the time, and *Not fun* one percent of the time. Thirty-six percent of activities were rated by teachers as being at the right level of difficulty for children, with a much higher 62 percent rated *Very easy* and less than 3 percent *Too difficult*.

7.4.3 Participation in other early childhood development programmes

Only nine of the children in the evaluation took part in any other early childhood development programme. All nine were from the Intervention group. Four participated in a public preschool, two participated in private preschools, one took part in educational sessions provided once or twice per week by an organization such as a community organization or religious group, and one took part in an unspecified programme type.

7.4.4 Programme communications

Through the caregiver supplemental interview, we were also able to evaluate how successfully the *Getting Ready for School* programme communicated with Intervention group families. Four questions were asked, including how well parents understood what the *Getting Ready for School* programme was about, whether other parents in their community knew about *Getting Ready for School*, which methods of advertisement were used in their community and what messages *Getting Ready for School* conveyed about children's development and school readiness.

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[192] With $t(297) = -1.21$, *ns* for gender; $t(296.1) = 1.55$, *ns* for resource level; $t(225) = -1.28$, *ns* for older child in school or out of school; $t(273) = 1.02$, *ns* for caregiver literacy
[193] $F(2,146) = 7.45$, $p < .01$

Forty-five percent (n = 131) of caregivers reported that they understood the *Getting Ready for School* programme very well, while 35 percent (n = 102) reported that they only knew a little bit about the programme and 16 percent (n = 46) of caregivers reported that they did not understand what *Getting Ready for School* was about. When asked whether other parents in their community knew about *Getting Ready for School*, 79 percent (n = 229) of caregivers thought that other parents were familiar with the program, while 12 percent (n = 36) of caregivers did not think that other parents were familiar with the programme (8 percent, n = 23, did not know). The most common methods of programme communications observed by caregivers were announcements in local community organizations (e.g., mosque/church, local schools, and health centres; 69 percent (n = 193) and word of mouth (e.g., personal communication with family members, neighbours and friends; 36 percent, n = 102. Less than 5 percent (n = 12) of caregivers reported learning about *Getting Ready for School* through posters, banners or fliers, radio or television.

Finally, 84 percent (n = 244) of caregivers reported learning more than one lesson about how to improve young children's development and school readiness from *Getting Ready for School*. While one answer did not capture the majority, the following were frequently cited as lessons learned by caregivers: *Children learn through play*; *Children's early experiences can help their brains develop well*; *What you say and do can help your child learn/your child learns from you*; *Children can learn a lot/you help your child learn through every day activities such as eating and going to the market*; *When you take time to talk with your child and listen to him/her, this helps your child feel good about himself/herself and want to learn*; *Children learn best when family members take an interest in their games and activities at home*; *Learning can help a child succeed*; *Older children can help younger children learn/get ready for school*; *Children feel good about themselves/proud when they learn new things* and *Learning now can help a child succeed in school and improve a child's future*.

7.4.5   *Getting Ready for School* programme strengths and challenges

School heads and community leaders noted several strengths of the *Getting Ready for School* programme in their communities. All school heads reported a high level of interest in and enthusiasm for the programme among school staff and participating children. Several school heads also indicated that the programme was beneficial at their school because it increased young children's school readiness and reduced their fear of school, increased community concern for young children's development, strengthened school-community relationships, engaged teachers, and generated enthusiasm for learning among Young Facilitators as well as the young children. Community leaders corroborated this information from school heads, reporting that the introduction of *Getting Ready for School* had increased the level of awareness of the importance of children's early learning, increased awareness of the importance of on-time enrolment (with some parents who had not enrolled children on time previously now expressing regret that they had not done so), and increased school-community connections so that parents were now more likely to visit the school to discuss their child's progress.

While stakeholders did not identify any serious difficulties in programme implementation, they did identify several challenges. Most school heads reported difficulty finding adequate space for the programme in their school, and several lacked adequate numbers of teachers to facilitate the programme. About half of the school heads indicated that the amount of supplies (e.g., teaching aids, school bags, pencils, scissors) allocated for the programme was insufficient and many thought that there could have been more financial support or other incentives provided for implementing teachers.

7.5   Programme Impacts on Children

In this section, we present programme impact findings for young children in the areas of school readiness and on-time enrolment in first grade. We examined the data for any differential programme impacts for children based on what region they lived in, their gender, their household resource level, and whether the caregiver who completed the baseline interview self-identified as literate or illiterate. Among young children who lived with an older school-age child, we looked for differential programme impacts based on whether that older child was enrolled in school or not. And among children in the Intervention group, we

looked at whether there were any significant relationships between the number of *Getting Ready for School* sessions they participated in and their acquisition of school readiness skills and behaviours.

7.5.1   School readiness

We examined children's school readiness in the areas of academic skills, perceptual motor development, attention, mastery motivation, and the ability to follow directions. Academic skills included colour naming, pattern recognition, beginning mathematics (including numeral identification, counting and applied addition and subtraction) and beginning literacy (including letter identification, beginning reading and beginning writing).

Colour naming

Children were shown a page with nine coloured flowers (red, blue, green, yellow, black, grey, orange, pink, purple). The children were asked to say the colour name for any colours they knew. Then for any colour names that they did not recall, children were provided with the name of the colour and then were asked to point to the flower of that colour (recognition). Figure 66 shows the average percentage of colours recognised and recalled by children in each group. There was a small programme effect on children's ability to recall colour names, but no significant effect on children's ability to recognise colour names.[194]

Figure 66 Percentage of Colours Identified Correctly
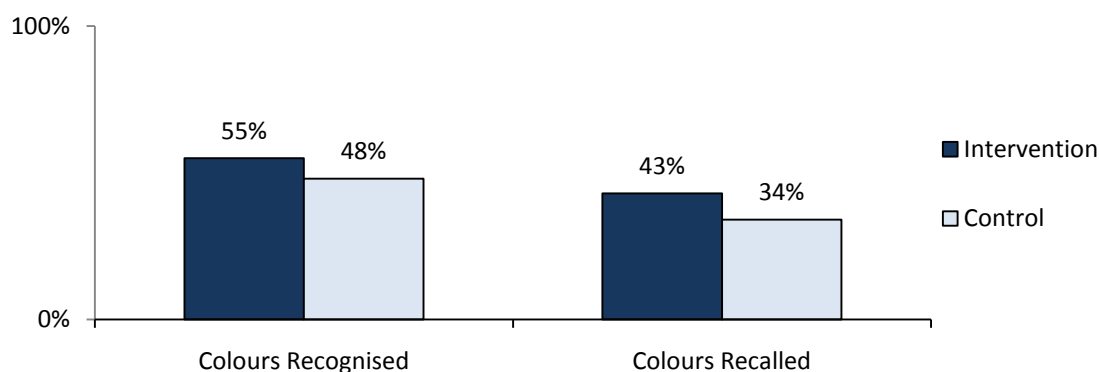
There was a small differential programme effect by region in the area of colour recognition (but not recall), with children from Mawza showing greater programme benefits in this area than children from Haifan or Al-Makha.[195] There were no differences in programme effects based on child gender, household resource level, whether older children in the household were in school or out of school, or whether the caregiver who completed the baseline family interview self-identified as literate or illiterate. Among children in the Intervention group, the number of *Getting Ready for School* sessions attended had a large effect on both the percentage of colours they could recognise and the percentage of colours they could recall.[196]

Pattern recognition

Children were first presented with a pattern of two alternating colours, then a pattern of three alternating colours. For each, the assessor placed coloured plastic bears one by one in sequence (e.g., red, blue, red, etc.). The child was then asked to choose which of three coloured bears came next. Figure 67 shows the percentage of children in each group who were able to correctly complete the two-colour and the

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[194] With $F = 2.88$, $p = .090$, partial $\eta^2 = .005$ for recognition; $F = 6.41$, $p = .012$, partial $\eta^2 = .011$ for recall
[195] $F = 5.71$, $p = .003$, partial $\eta^2 = .019$
[196] With $F = 4.83$, $p < .001$, partial $\eta^2 = .336$ for recognition; $F = 4.34$, $p < .001$, partial $\eta^2 = .312$ for recall

three-colour patterns. There were no significant programme effects on children's ability to complete a two-colour pattern or a three-colour pattern.[197]

Figure 67 Percentage of Children who Completed Patterns
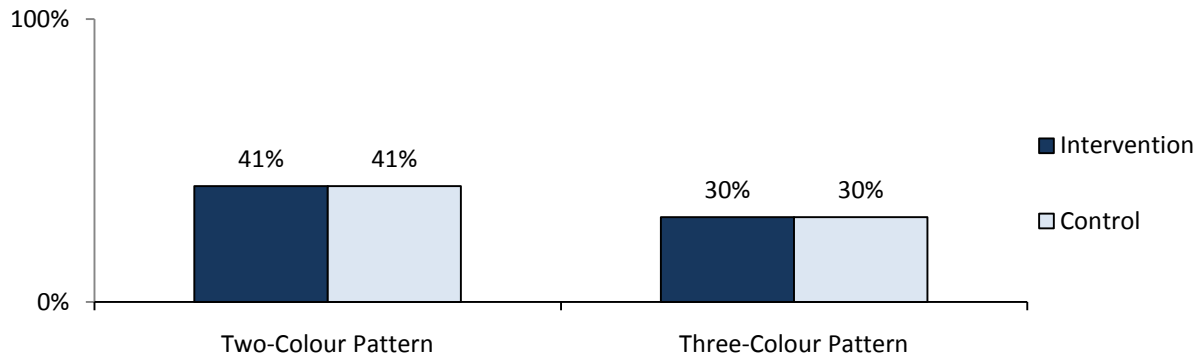
There were no differential programme effects based on region, child gender, household resource level, whether older children in the household were in school or out of school, or whether the caregiver who completed the baseline interview self-identified as literate or illiterate. Among children in the Intervention group, the number of *Getting Ready for School* sessions attended had a small-to-medium effect on their ability to complete a three-colour pattern (but not on their ability to complete a two-colour pattern).[198]

Beginning mathematics

In the area of beginning mathematics, we assessed children's ability to name and recognise written numerals, to count to 10, to count objects with one-to-one correspondence (that is, assign one number name to each object), and to complete simple applied problems in addition and subtraction. Across tasks, there was a small positive programme effect on children's school readiness in the area of mathematics.[199,200] There were no differences in programme effects based on region, child gender, household resource level, whether older children in the household were in school or out of school, or whether the caregiver who completed the baseline interview self-identified as literate or illiterate. Among children in the Intervention group, the number of *Getting Ready for School* sessions attended did not have any significant effect on their school readiness in the area of mathematics. Findings for each beginning mathematics task are presented in more detail below.

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[197] With $F = 0.59$, $p = .445$, partial $\eta^2 = .001$ for two-colour pattern; $F = 2.09$, $p = .149$, partial $\eta^2 < .001$ for three-colour pattern

[198] $F = 7.77$, $p < .006$, partial $\eta^2 = .026$ for three-colour pattern

[199] Cross-task mathematics performance was calculated for each child by summing correct number of responses for numeral recognition, counting to 10, counting with one-to-one correspondence, and the four addition and subtraction tasks

[200] $F = 17.90$, $p < .001$, partial $\eta^2 = .029$

Numeral Recognition and Recall: Children were shown a page with pictures of numerals 0 through 9 and were asked to say the name of any numerals they could recall. Then, for any numeral names they did not recall, children were provided with the name of the numeral and then were asked to point to the numeral (recognition). Figure 68 shows the average percentage of numerals recognised and recalled by children in each group. We found small programme effects on children's ability to both recognise and recall written numerals.[201]

Figure 68 Percentage of Numerals Identified Correctly
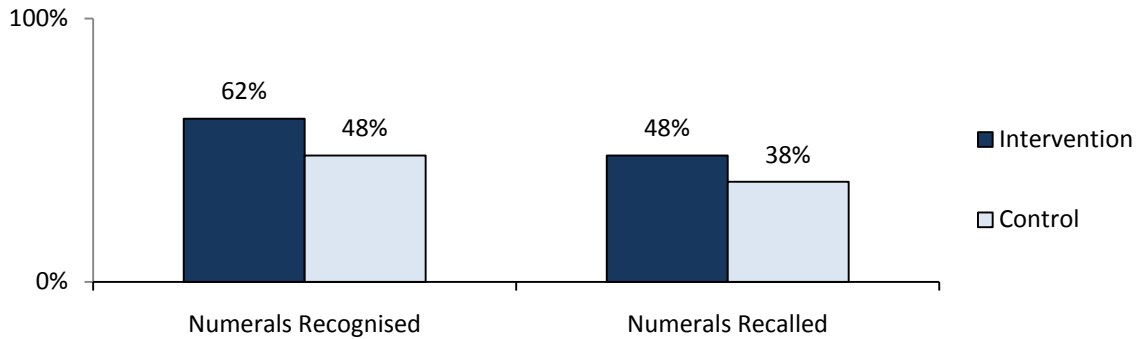
Counting: Children were presented with 10 plastic bears in a line and were asked to count them. Children were scored based on whether they counted to three, counted to 10, and counted with one-to-one correspondence (that is, assigned one number name to each bear). Figure 69 shows the percentage of children in each group who completed each counting task correctly. There was a small programme effect on children's ability to count to 10, but no significant effect on children's ability to count to three or on children's ability to count with one-to-one correspondence.[202]

Figure 69 Percentage of Children Counting Correctly
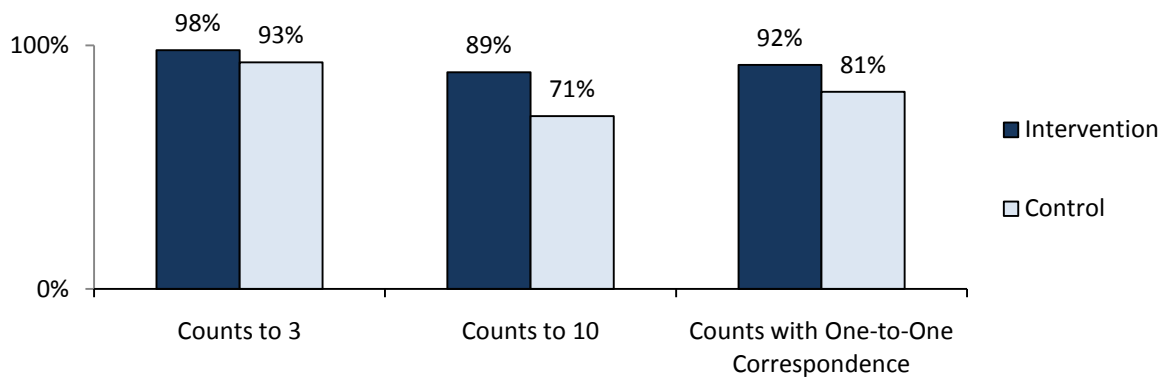
Addition and Subtraction: Children were presented with two problems in addition and two in subtraction. For each problem, the child was presented with plastic bears and asked to state how many bears there would be if a certain number were added or taken away. Children were given credit for either saying the name of the correct number, or showing the correct number with their fingers. Figure 70 shows the percentage of children in each group who completed each addition and subtraction task correctly. There

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[201] With $F = 17.90$, $p < .001$, partial $\eta^2 = .029$ for recognition; $F = 13.19$, $p < .001$, partial $\eta^2 = .022$ for recall

[202] With $F = 0.03$, $p = .870$, partial $\eta^2 < .001$ for counts to three; $F = 7.83$, $p = .005$, partial $\eta^2 = .013$ for counts to 10; $F = 1.49$, $p = .223$, partial $\eta^2 = .003$ for counts with one-to-one correspondence

was a small programme effect on children's ability to add one, to subtract one, and to subtract two but no significant effect on their ability to add three.[203]

Figure 70 Percentage of Children Solving Applied Problems in Addition and Subtraction
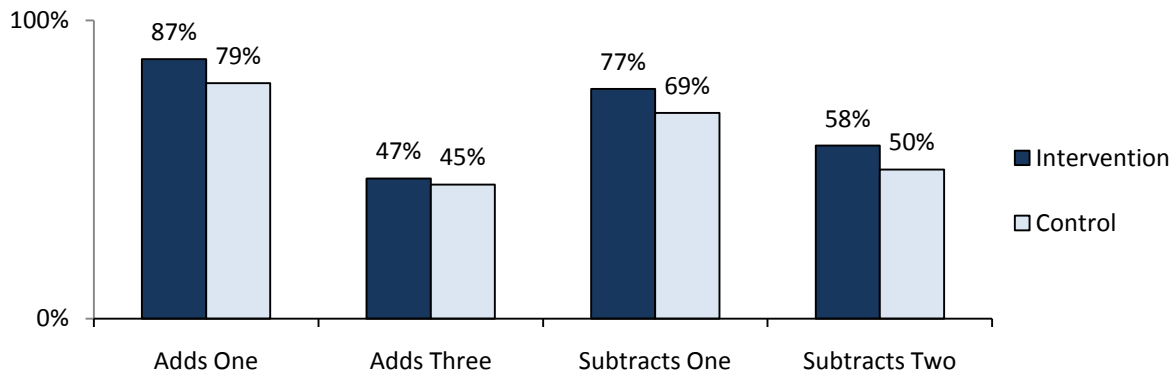
Beginning literacy

In the area of beginning literacy, we assessed children's ability to name and recognise written letters, to read simple words, to write any letters, and to write their name. Across tasks, we found a small programme effect on children's school readiness in the area of beginning literacy.[204,205] We found small differential programme effects based on the number of activities families had been engaging in to support their children's learning at baseline (e.g., telling stories, singing songs).[206] Children whose families had engaged in a high number of activities to support their learning showed the greatest programme benefit when compared with the Control group, followed by children from the families who had engaged in few or no activities. There was no significant programme effect on literacy among children whose families had engaged in a moderate number of literacy support activities. There were no differences in programme effects based on region, child gender, household resource level, whether older children in the household were in school or out of school, or whether the caregiver who completed the baseline interview self-identified as literate or illiterate. Among children in the Intervention group, the number of *Getting Ready for School* sessions attended had a medium-sized effect on their school readiness in the area of beginning literacy.[207] Findings for each beginning literacy task are presented in more detail below.

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[203] With $F = 6.18$, $p = .013$, partial $\eta^2 = .011$ for adds one; $F = 0.12$, $p = .732$, partial $\eta^2 < .001$ for adds three; $F = 4.21$, $p = .041$, partial $\eta^2 = .007$ for subtracts one; $F = 7.09$, $p = .008$, partial $\eta^2 = .012$ for subtracts three

[204] Cross-task literacy performance was calculated for each child by summing correct number of responses for letter recognition, reading, writing any letters, and writing their whole name

[205] $F = 9.69$, $p = .002$, partial $\eta^2 = .017$

[206] $F = 3.76$, $p = .024$, partial $\eta^2 = .013$

[207] $F = 8.83$, $p < .003$, partial $\eta^2 = .030$

Letter Recognition and Recall: Children were asked to look at a page with approximately nine letters of the alphabet printed on it, and asked if they knew the names of any of those letters (recall). Then for any letter names they did not recall, children were provided with the name of the letter and then were asked to point to that letter on the page (recognition). This procedure was repeated for three pages of letters in Arabic (a total of 28 letters). Figure 71 shows the average percentage of letters recognised and recalled by children in each group. There was a small programme effect on children's ability to recognise and to recall letter names.[208]

Figure 71 Percentage of Letters Identified Correctly
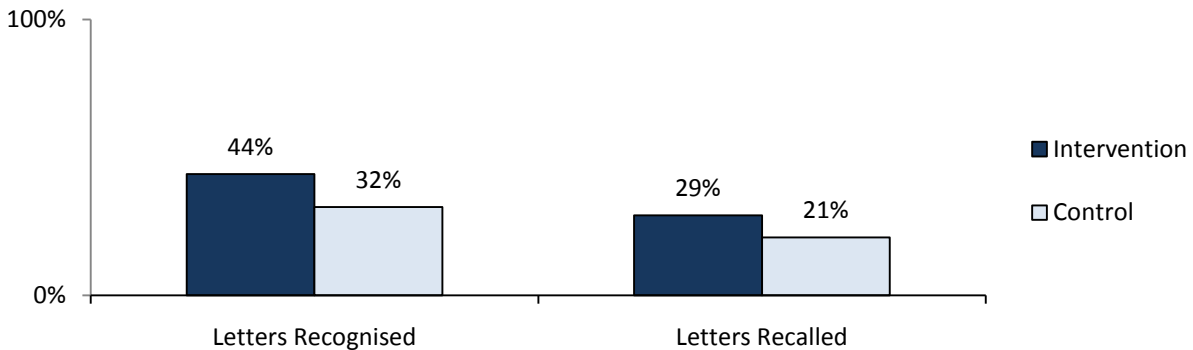
Reading: Children were shown 10 words one by one and asked to read each word. Words were selected by project staff or others with expertise in beginning reading in Yemen. The first five words were considered easy beginning reading words, and the second five were more difficult. Children who were unable to read *any* of the five easy words were not asked to read the more difficult words. Figure 72 shows the average percentage of words read by children in each group. Few children were able to read any words, and there was no significant programme effect.[209]

Figure 72 Percentage of Words Read
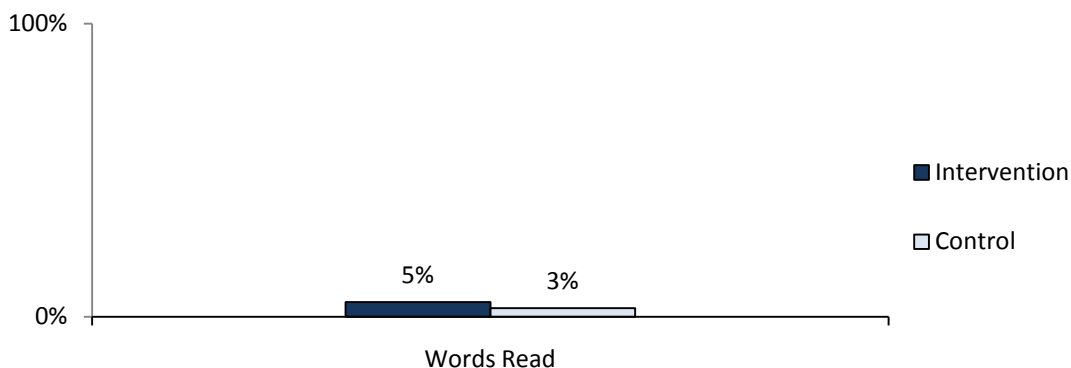
Writing: Children were provided with a sheet of paper with a line on it and a pencil, and asked to write their names. Children's responses were scored based on whether they could write any letters (whether or not these letters were part of their name), whether they could write at least half of the letters in their name, and whether they could write all of the letters of their name in the correct order. Letters were accepted even if they were reversed or poorly formed. Figure 73 shows the percentage of children in each group who performed each writing task correctly. There were no significant programme effects on

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[208] With $F = 9.86$, $p = .002$, partial $\eta^2 = .016$ for recognition; $F = 12.01$, $p = .001$, partial $\eta^2 = .020$ for recall
[209] $F = 3.09$, $p = .079$, partial $\eta^2 = .005$

children's ability to write any letters, to write at least half of the letters in their name, or to write their whole name.[210]

Figure 73 Percentage of Children Giving Correct Responses on Beginning Writing Tasks

Perceptual motor skills

We measured children's perceptual motor skills with a series of four pencil-and-paper activities. Children were provided with a pencil and a sheet of paper with the dotted outlines of two straight lines, a circle, and a square. The assessor demonstrated how to trace a straight line, and asked the child to trace the remaining straight line, the circle and the square. Assessors noted whether the child knew how to hold a pencil correctly (based on local custom), and whether the child was able to trace each shape, staying on the dotted line at least 50 percent of the time.

Across the four perceptual motor tasks, although the Intervention group performed better than the Control group at the outcome assessment, the Intervention group had also performed somewhat better at the baseline assessment. We found no significant programme effects on children's perceptual motor skills across all four tasks combined.[211]

Figure 74 shows the percentage of children in each group who performed each perceptual motor task correctly. There was no significant programme effect on children's ability to trace a line, to trace a circle or to trace a square.[212]

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[210] With F = 1.73, p = .189, partial η^2 = .003 for writing any letters; F = 3.85, p = .050, partial η^2 = .007 for writing at least half of the letters in their name; F = 1.33, p = .250, partial η^2 = .002 for writing all of the letters in their name

[211] F = 0.00, p = .996, partial η^2 < .001

[212] With F = 1.11, p = .294, partial η^2 = .002 for holding a pencil; F = 1.97, p = .161, partial η^2 = .003 for tracing a line; F = 0.02, p = .900, partial η^2 < .001 for tracing a circle; F = 0.06, p = .813, partial η^2 < .001 for tracing a square

Figure 74 Percentage of Children Correctly Completing Perceptual Motor Tasks
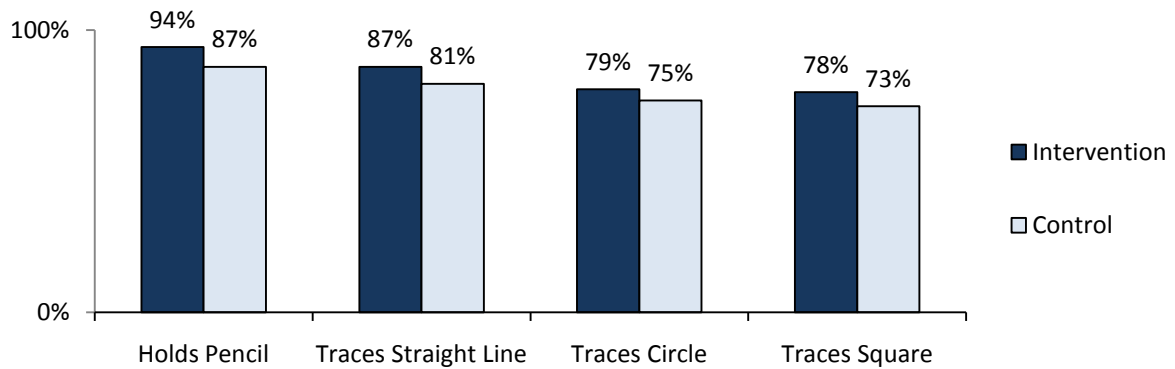
There were no differences in programme effects across the combined perceptual motor skills tasks based on region, child gender, household resource level, whether older children in the household were in school or out of school, or whether the caregiver who completed the baseline interview self-identified as literate or illiterate. Among children in the Intervention group, the number of *Getting Ready for School* sessions attended did not have any significant effect on their perceptual motor skills.

Attention

We examined children's attention in three areas: heir ability to sustain attention, their ability to voluntarily focus their attention, and their ability to sit still during the assessment.

Sustained Attention: Sustained attention was measured with the Leiter-R sustained attention subtask,[213] a non-verbal task that requires the child to find as many pictures that match as model as they can within 30 seconds. Figure 75 shows the percentage of pictures marked correctly (out of 20 possible) by children in each group. There was no significant programme effect on children's sustained attention overall.[214]

Figure 75 Percentage of Pictures Marked Correctly
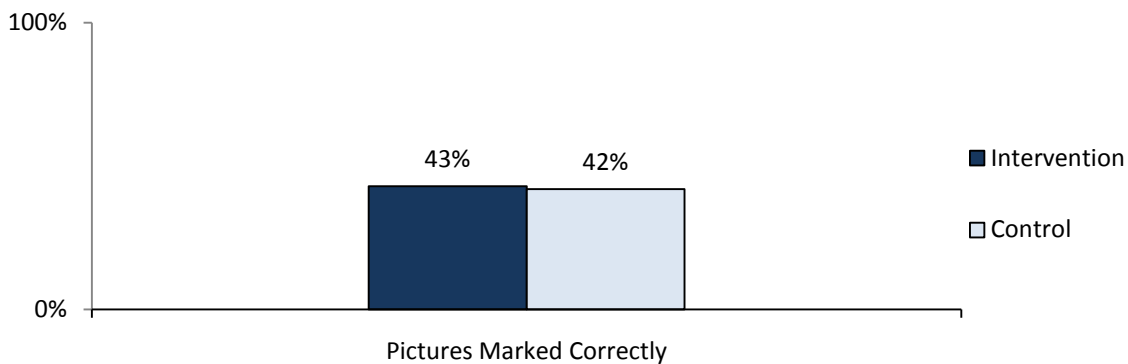
There was a small differential programme effect by region, with children from Mawza showing greater programme benefits in this area than children from Haifan or Al-Makha.[215] We also found a small programme effect based on gender, with boys in the Intervention group improving more on this task from

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[213] ©1997 Stoelting Co., used with permission
[214] $F = 0.04$, $p = .852$, partial $\eta^2 < .001$
[215] $F = 4.31$, $p = .014$, partial $\eta^2 = .015$

baseline to outcome when compared with girls in the Intervention group or children of either gender in the Control group.[216] There were no differences in programme effects based on household resource level, whether older children in the household were in school or out of school, or whether the caregiver who completed the baseline interview self-identified as literate or illiterate. Among children in the Intervention group, the number of *Getting Ready for School* sessions attended did not have any significant effect on their sustained attention.

Focused Attention and Body Movement: At the conclusion of the child assessment, the assessor rated the child's focused attention and body movement based on their observations of the child's behaviour throughout the assessment. In the area of attention span, the assessor rated the child's behaviour *Focuses attention voluntarily*; *Attends with assessor direction*; *Some distraction with noise or movement of others*; or *Easily distracted*. In the area of body movement, the assessor rated the child's behaviour *Sits quietly*; *Some squirming*; *Much movement*; or *Out of seat, body in constant motion*. Figure 76 shows the percentage of children in each group who assessors rated as focusing their attention voluntarily on the assessment tasks, and the percentage who were able to sit quietly during the assessment. Programme staff reported observing an improvement in Intervention group children's focused attention and body movement, but Control group children made similar gains during this time period. So there were no significant programme effects on children's ability to voluntarily focus their attention on academic tasks or on children's ability to sit quietly while completing academic tasks.[217]

Figure 76 Focused Attention and Body Movement
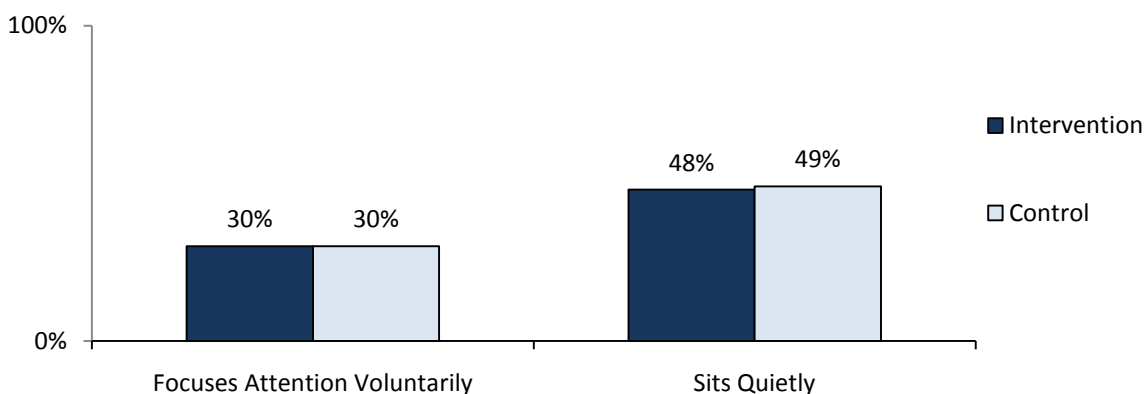
In the area of focused attention, children from Mawza benefited more from the intervention when compared with children from Haifan or Al-Makha.[218] There were no significant regional differences in programme effects in the area of body movement. There were no significant differences in programme effects on children's focused attention or body movement based on child gender, household resource level, whether older children in the household were in school or out of school, or whether the caregiver who completed the baseline interview self-identified as literate or illiterate. Among children in the Intervention group, the number of *Getting Ready for School* sessions children attended did not have any significant effect on their attention span or body movement.

Mastery motivation

At the conclusion of the child assessment, the assessor rated the child's task persistence and self-confidence based on their observations of the child's behaviour throughout the assessment. In the area of task persistence, the assessor rated the child's behaviour *Persists with task*; *Attempts task briefly*; *Attempts task after much encouragement*; or *Refuses*. In the area of self-confidence, the assessor rated the child's behaviour *Very sure of self*, *Confident with things known, attempts new things with*

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[216] $F = 4.13$, $p = .042$, partial $\eta^2 = .007$

[217] $F = 0.24$, $p = .626$, partial $\eta^2 < .001$ for voluntary focus; $F = 0.23$, $p = .634$, partial $\eta^2 < .001$ for body movement

[218] $F = 5.16$, $p = .006$, partial $\eta^2 = .018$

encouragement; *Reluctant to try new or difficult things*; or *Very uncertain, needs much encouragement*. Figure 77 shows the percentage of children in each group who assessors rated as persisting with assessment tasks (even if the task was difficult) and the percentage who were very sure of themselves (self-confident). Overall, there were no significant programme effects on children's task persistence or self-confidence while completing academic tasks.[219] Programme implementation staff reported that they did see significant improvement in Intervention group children's task persistence, and the Intervention group did make larger gains in their task persistence than the Control group, but these between-group differences did not quite reach the level of statistical significance.

Figure 77 Task Persistence and Self-Confidence
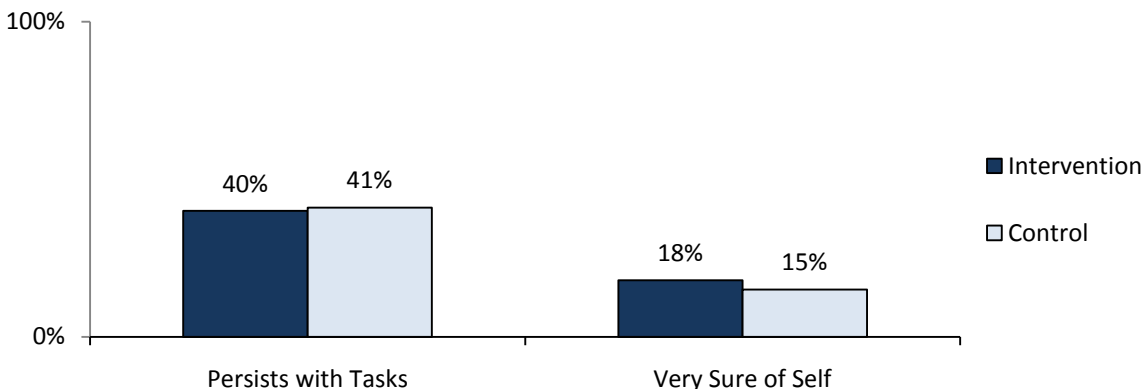
Children from Mawza benefited more from the intervention in both task persistence and self-confidence when compared with children from Haifan or Al-Makha.[220] We also found a small differential programme effect on children's self-confidence based on whether the caregiver who completed the baseline interview self-identified as literate or illiterate.[221] Children whose caregivers had self-identified as illiterate gained more self-confidence from participating in the programme than did children whose caregivers were literate. There was no differential programme effect in the area of task persistence based on caregiver literacy. There were no significant differences in programme impacts on children's task persistence or self-confidence based on child gender, household resource level or whether older children in the household were in school or out of school. Among children in the Intervention group, the number of *Getting Ready for School* sessions attended had a small, significant effect on their task persistence (but not on their self-confidence).[222]

Ability to follow directions

At the conclusion of the child assessment, the assessor rated the child's attention to and comprehension of direction based on their observations of the child's behaviour throughout the assessment. Note that comprehension of directions involves the child understanding what he or she is supposed to do, such as point to something on a page or give a verbal response, regardless of whether he or she provided the correct answer. In the area of attention to directions, the assessor rated the child's behaviour *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 the area of comprehension of directions, the assessor rated the child's behaviour *Rapid comprehension of directions, given age expectations*; *Understands after several repetitions*; *Partial comprehension of directions*; or *Does not appear to*

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[219] $F = 3.13$, $p = .077$, partial $\eta^2 = .005$ for task persistence, $F = 1.86$, $p = .174$, partial $\eta^2 = .003$ for self confidence

[220] With $F = 3.67$, $p = .026$, partial $\eta^2 = .013$ for task persistence; $F = 11.95$, $p < .001$, partial $\eta^2 = .041$ for self-confidence

[221] $F = 5.09$, $p = .024$, partial $\eta^2 = .010$

[222] $F = 5.38$, $p = .021$, partial $\eta^2 = .018$ for task persistence

comprehend most directions. Figure 78 shows the percentage of children in each group who assessors rated as attending to directions well, and the percentage comprehending directions rapidly. Overall, there was no significant programme effect on children's attention to directions or comprehension of directions to complete an academic task.[223]

Figure 78 Attention to and Comprehension of Directions
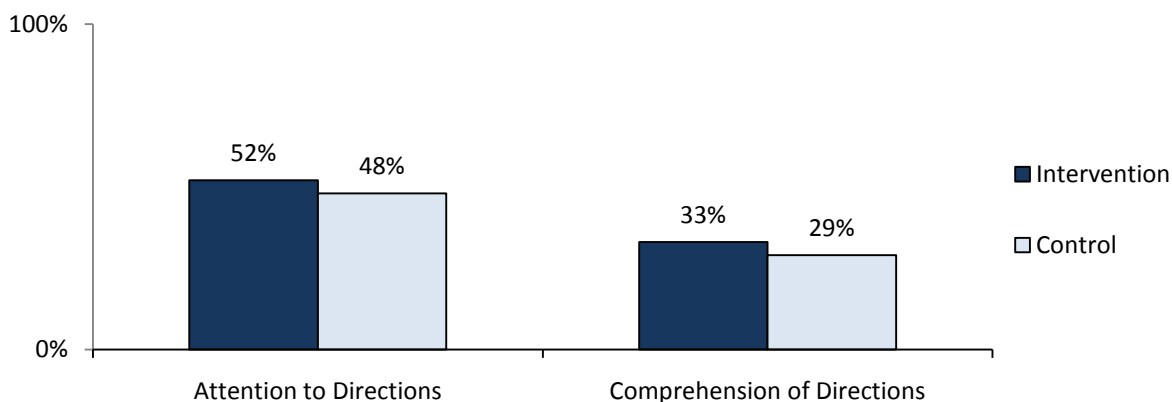
Children from Mawza benefited more from the intervention in their attention to directions when compared with children from Haifan or Al-Makha.[224] There were no significant regional differences in programme effects on children's comprehension of directions. There were no significant differences in programme effects on children's attention to directions or comprehension of directions based on child gender, household resource level, whether older children in the household were in school or out of school, or whether the caregiver who completed the baseline interview self-identified as literate or illiterate. Among children in the Intervention group, the number of *Getting Ready for School* sessions attended did not have any significant effect on their attention to directions or on their comprehension of directions.

7.5.2   On-time enrolment in primary school

There was a significant programme impact on young children's enrolment in primary school. Among children in the Intervention group, 96 percent (n = 288) enrolled by the first week of school, 1 percent (n = 4) enrolled after the first week in school, and 3 percent (n = 9) had not enrolled in any school within the first four months of the school year. Among children in the Control group, 64 percent (n = 189) enrolled by the first week of school, 20 percent (n = 58) enrolled after the first week in school, and 16 percent (n = 48) had not enrolled in any school within the first four months of the school year. Programme implementation staff in Yemen also reported that they observed a high level of commitment and enthusiasm among Intervention group parents to enrol their children in school on time.

There was an especially strong programme impact in Al-Makha. In the Al-Makha Intervention group, 98 percent of the enrolled on time (n = 98), no children enrolled late, and only 2 percent (n = 2) did not enrol at all. And in the Al-Makha Control group, only 26 percent of the children enrolled on time (n = 25), 52 percent enrolled late (n = 50) and 22 percent (n = 21) did not enrol. Enrolment rates were similar for boys and for girls within both the Intervention and Control groups.

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[223] F = 1.41, p = .235, partial η^2 = .002 for attention to directions, F = 1.97, p = .161, partial η^2 = .003 for comprehension of directions
[224] With F = 3.18, p = .042, partial η^2 =.011

7.5.3   Summary of programme impacts for young children in Yemen

The *Getting Ready for School* programme had two goals for young children: to increase their school readiness and to increase their on-time enrolment in primary school. In the area of school readiness, we found small programme impacts in the areas of colour naming, beginning mathematics and beginning literacy. We did not find significant programme effects in the areas of pattern recognition; perceptual motor skills; sustained attention; or children's attention, mastery motivation, or ability to follow directions while completing academic tasks. There was a differential programme impact whereby children from Mawza benefited more from the programme in the area of school readiness than children from Haifan or Al-Makha. We did not find any other consistent patterns of differential programme impacts based on child or family characteristics or risk factors.

There was a significant programme effect on children's on-time enrolment in school, with nearly all children in the Intervention group enrolling in school on time but less than two-thirds of the Control group doing so. And the percentage of children who did not enrol in primary school at all during the first four months was 10 times higher in the Control group than in the Intervention group. There was a particularly strong positive effect on children's enrolment in primary school within the Al-Makha region.

7.6   Programme Impacts on Families

There were two *Getting Ready for School* programme goals for families whose young children participated: to improve their understanding of the importance of school readiness and to increase their active support for their young children's learning. Outcomes in each of these areas are presented below.

7.6.1 Caregiver beliefs in the importance of school readiness

We provided caregivers with a list of developmental areas such as health and social and emotional learning, and some specific academic skills. For each item listed in Table 51, caregivers were asked to indicate how important they believed it was for a child to have that characteristic or skill when he or she began first grade. Response choices were *Not at all important*, *Somewhat important*, or *Very important*. These came together to form an Importance of School Readiness scale.[225] We did not find a significant programme impact on caregivers' Importance of School Readiness scale scores.[226]

Table 51 Percentage of Caregivers who Indicated that It Was Very Important for a Child to Have Each Characteristic or Skill

	Intervention	Control
It is important that the child is in good physical health.	91.8% (n = 267)	95.9% (n = 279)
It is important that the child is confident.	83.0% (n = 239)	88.5% (n = 254)
It is important that the child is curious and explores his/her environment.	56.7% (n = 160)	54.5% (n = 151)
It is important that the child is able to play with other children.	69.9% (n = 202)	69.6% (n = 199)
It is important that the child has good problem-solving skills (for example, tries different ways to solve a problem).	49.3% (n = 133)	42.8% (n = 118)
It is important that the child knows some letters.	90.2% (n = 257)	83.9% (n = 240)
It is important that the child is able to read some words.	85.7% (n = 245)	83.7% (n = 207)
It is important that the child is able to write his/her own name.	86.7% (n = 248)	80.2% (n = 227)
It is important that the child is able to count from one to ten.	89.9% (n = 259)	89.6% (n = 259)
It is important that the child is able to recognise and name shapes.	69.3% (n = 192)	65.7% (n = 182)

We found a differential programme impact by region. Caregivers from Haifan whose children participated in the programme increased their understanding of the importance of school readiness more than caregivers from other regions or caregivers in the Control group.[227] We did not find any differential programme impacts based on child gender, household resource level, or whether the caregiver who completed the baseline family interview self-identified as literate or illiterate.

7.6.2   Active family support for young children's learning

We asked caregivers whether, within the past week, anyone in the household had engaged in the activities listed in Table 52 to support their young child's learning. These items came together to form a

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[225] Scale reliability was α = .80 across the full sample at baseline
[226] $F = 2.49$, $p = .115$, partial $\eta^2 = .006$
[227] $F = 6.55$, $p = .002$, partial $\eta^2 = .029$

Support for Learning scale.[228] There was a small programme effect on the total number of activities that families engaged in with the child.[229]

Table 52 Family Support for Children's Learning

	Intervention	Control
Told stories to child	67.7% (n = 193)	65.1% (n = 185)
Sang songs with child	53.1% (n = 152)	48.2% (n = 137)
Read books or looked at pictures with child	73.8% (n = 211)	70.3% (n = 201)
Took child out of home/yard/compound	71.0% (n = 203)	71.5% (n = 208)
Played with child	96.2% (n = 278)	95.5% (n = 276)
Spent time with child naming, counting or drawing things	82.9% (n = 233)	76.0% (n = 215)

We did not find any differential programme impacts based on region, household resource level, or whether the caregiver who completed the baseline family interview self-identified as literate or illiterate.

7.6.3 Summary of programme impacts on families

There were two *Getting Ready for School* programme goals for families: to improve their understanding of the importance of school readiness and to increase their active support for their young children's learning. While we did not find any programme impacts on caregiver attitudes toward the importance of early learning, we did find a small programme impact on the number of activities families had participated in with the child to support their learning. We did not find differential programme impacts for any subgroups.

7.7   Outcomes for Young Facilitators

There were three *Getting Ready for School* programme goals for the Young Facilitators: to improve their educational engagement and performance, to increase their positive attitudes toward learning, and to increase their belief in the importance of supporting young children's learning. Outcomes in each of these three areas will be presented below.

7.7.1   Academic engagement and performance

We looked at student academic engagement in two areas: student reports of how often they had missed school without permission from the school or their family (truancy) and student reports of whether they planned to continue their education next year. Note that truancy did not include occasions when the student had to miss school in order to work or to help at home.

We did not find significant differences in Young Facilitators' levels of truancy between the baseline and outcome assessments.[230] At the time of the baseline evaluation, 82 percent (n = 125) indicated that they

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[228] Scale reliability was α = .70 across the full sample at baseline

[229] $F = 5.28$, p = .022, partial η^2 = .009

[230] $t(152) = 0.52$, *ns*

had not been truant at all within the last year, 16 percent (n = 25) that they had been truant one to five days per month, and two percent (n = 3) that they had been truant six days or more per month. At the time of the outcome evaluation, 80 percent of Young Facilitators (n = 123) indicated that they had not been truant at all, 18 percent (n = 27) that they had been truant one to five days per month, and 2 percent (n = 3) that they had been truant six days or more per month. All young facilitators indicated at both baseline and outcome that they planned to continue their education next year.

To measure academic progress, we asked Young Facilitators to indicate what grades they usually received in each of four main academic subjects: language arts, mathematics, science and social studies. Response choices were *Mostly poor/failing, Mostly fair*, *Mostly good*, and *Mostly excellent*. Figure 79 shows the percentage of young facilitators who indicated that their grades were mostly good or excellent at the baseline and outcome assessments. There was a significant improvement in Young Facilitators' self-reported grades in language arts, but changes in mathematics, science and social studies did not reach the level of statistical significance.[231]

Figure 79 Young Facilitators Reporting Grades of Good or Excellent by Subject

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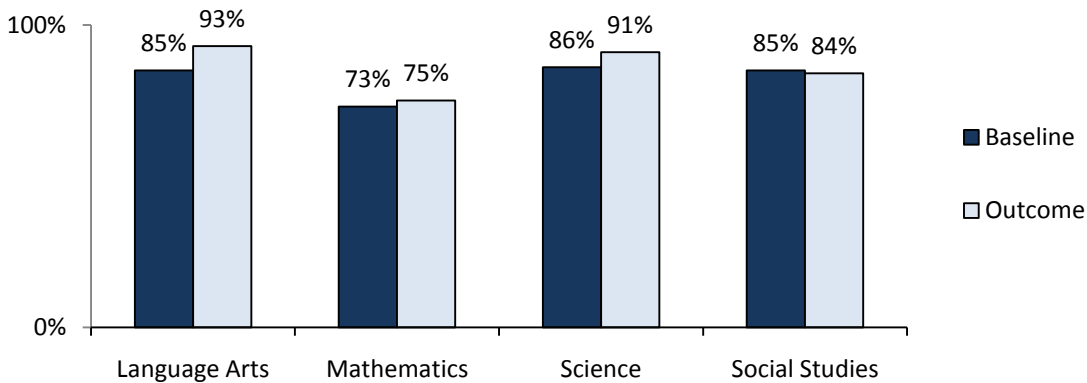
[231] With $t(152) = 2.04$, $p < .05$ for language arts; $t(152) = 0.35$, *ns* for mathematics; $t(152) = 0.78$, *ns* for science; $t(152) = -0.62$, *ns* for social studies

7.7.2 Positive attitudes toward learning

Young Facilitators were presented with 14 statements regarding their attitudes toward learning, and were asked to indicate whether they agreed, disagreed or were unsure for each. These items combined to form a Positive Attitudes toward Learning scale based on the survey items displayed in Table 53.[232] There was a significant increase in Young Facilitators' scale scores for Positive Attitudes toward Learning from baseline to outcome.[233] However, there were decreases on certain items, and the reason for this is unclear based on the information available. There were no significant differences in the degree of change scale scores based on the region where the Young Facilitator lived, their gender, or the number of *Getting Ready for School* sessions attended.

Table 53 Young Facilitator Positive Attitudes toward Learning

	Baseline	Outcome
I get high marks at school.	96.7% (n = 148)	92.2% (n = 141
Learning is fun.	88.9% (n = 136)	96.7% (n = 148)
I learn things from other students.	91.7% (n = 110)	73.9% (n = 113)
I learn things by playing with my friends.	61.8% (n = 94)	77.0% (n = 117)
I try to learn new things every day.	94.1% (n = 144)	94.7% (n = 144)
I enjoy solving problems in daily life.	75.2% (n = 115)	72.4% (n = 110)
I am trying my best at school work.	88.9% (n = 136)	88.9% (n = 136)
I like expressing my opinions in class.	77.8% (n = 119)	88.2% (n = 135)
I like teaching my friends or younger children to learn.	98.0% (n = 150)	97.4% (n = 149)
I like sharing my ideas with friends.	85.6% (n = 131)	96.1% (n = 147)
I like leading class activities.	88.9% (n = 136)	73.9% (n = 113)
Helping other students or younger children learn helps me learn as well.	94.8% (n = 145)	96.1% (n = 147)
The subjects I am learning at school will be important for me later in my life.	94.1% (n = 144)	96.1% (n = 147)
I plan to attend secondary school someday.	79.1% (n = 121)	83.0% (n = 127)

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[232] Scale reliability was α = .78 across the full sample at baseline
[233] $t(148) = 2.68$, $p < .01$

7.7.3   Support for young children's school readiness

Young Facilitators were presented with four statements regarding the importance of school readiness, and were asked to indicate whether they agreed, disagreed, or were unsure for each. There was one negatively worded item (shown in italics) where agreement shows a *lack* of support for the importance of school readiness. These items did not come together to form a reliable scale, so they were examined individually. Table 54 displays the percentage of young facilitators who agreed with each statement at baseline and at outcome. Young Facilitators were more likely at the baseline assessment than the outcome assessment to believe that it was a waste of time to teach young children before they went to first grade.[234]

Table 54 Young Facilitator Belief in the Importance of School Readiness

	Baseline	Outcome
It is important for young children to learn about their new school before they go to first grade.	93.5% (n = 143)	94.1% (n = 144)
It is a waste of time to teach young children before they go to first grade because they are too young to learn.	*23.5% (n = 36)*	*11.1% (n = 17)*
Young children will have better marks in first grade if they know most letters of the alphabet before they begin school.	93.5% (n = 143)	96.7% (n = 148)
Young children will have better marks in first grade if they have already learned a little bit of mathematics before they go to first grade.	89.5% (n = 137)	88.2% (n = 135)

7.7.4   Summary of Outcomes for Young Facilitators in Yemen

We were unable to isolate specific programme impacts for Young Facilitators due to the lack of a Control group. However, we were able to compare baseline and outcome information at the level of the individual Young Facilitator to note any significant changes. In the area of academic engagement and performance, Young Facilitators showed a significant improvement in their self-reported grades in language arts. We did not find significant changes in levels of truancy or in grades in other academic subjects. There was a significant improvement in Young Facilitators' positive attitudes toward learning. And in the area of belief in the importance of young children's learning, after participating in the *Getting Ready for School* programme Young Facilitators were less likely to believe it was a waste of time to teach young children before they go to first grade.

7.8   Programme Impacts on Teachers

There were three *Getting Ready for School* programme goals for teachers who participated: to improve their belief in the use of child-centred pedagogy, to increase their understanding of the importance of school readiness, and – for first grade teachers – to raise their expectations regarding the level of school readiness of incoming first grade students at their school. Programme impacts in each of these three areas will be presented below. Note that due to the small number of teachers in the Control group (n = 18), it was not feasible to examine differential programme impacts based on teacher characteristics.

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[234] $t(152) = -3.38$, $p < .01$

7.8.1 Attitudes toward child-centred pedagogy

We asked teachers to respond to 15 survey items regarding their belief in the use of child-centred pedagogy. These items covered issues such as the teacher's role in supporting all children, the importance of a classroom environment where children are encouraged to participate, and the value of students' ideas and experiences outside the classroom. The items did not come together as a group to form a robust scale, so we are presenting findings at the item level in this area. Table 55 shows the percentage of teachers who responded *Mostly true* or *Very true* to each item. Items displayed in italics were negatively worded, so agreement with the item indicates a *lack* of child centeredness. We did not find any significant programme impacts on teachers' responses to any of these items.

Table 55 Attitudes toward Child-Centred Pedagogy

	Intervention	Control
Classroom learning is most effective when based primarily on teacher lectures, with students responding when called on.	13.1% (n = 10)	11.1% (n = 2)
Teachers should give feedback to students on assignments to help them improve their work.	92.1% (n = 70)	88.9% (n = 16)
It is best when students work on assignments alone to show how much they know.	61.8% (n = 47)	44.4% (n = 8)
All students should be helped to participate in class discussions.	90.8% (n = 69)	88.9% (n = 16)
Teachers know more than students. They should just explain the facts to students.	44.8% (n = 34)	38.9% (n = 7)
Teachers should give students problems with specific, correct answers and ideas.	84.2% (n = 64)	61.1% (n = 11)
When students talk with each other during class time they disrupt the flow of class and the learning of other students.	76.4% (n = 58)	88.9% (n = 16)
When students work on projects without the teacher being involved they usually learn "incorrect knowledge."	39.4% (n = 30)	50.0% (n = 9)
Students also learn important information outside the classroom.	42.1% (n =32)	55.6% (n =10)
The teacher's role is to help all students in their class be successful.	86.8% (n = 66)	94.5% (n = 17)
Allowing students to talk about their ideas in class takes time away from learning.	39.5% (n = 30)	38.9% (n = 7)
Teachers should not spend too much time helping students at the bottom of the class that do not perform well. It takes too much time away from the good students.	27.7% (n = 21)	16.7% (n = 3)
Teachers should give more time to the best students in the class.	13.1% (n =10)	11.2% (n = 2)
Students have better academic achievement in classrooms where the teacher encourages students to participate.	85.5% (n = 65)	88.9% (n = 16)
It is the teacher's responsibility to find a way to meet the learning needs of every student in the class.	69.7% (n = 53)	72.3% (n = 13)

7.8.2 Understanding of the importance of school readiness

We asked teachers how important it was for students to have certain skills upon school entry across the range of developmental domains shown in Table 56. Teachers responded to a four-point Likert scale (see Table B-1, Appendix B for a description of the individual survey items for each area of school readiness). There was a small-to-medium positive programme impact on teachers' belief in the importance of school readiness across all five areas combined.[235] We did not find a significant programme impact on teachers' belief in the importance of school readiness within any one developmental domain.

Table 56 Teacher Belief in the Importance of School Readiness

	Intervention	Control
Importance of school readiness across all areas	M =3.43 SD = 0.34	M = 3.06 SD = 0.42
Literacy	M = 3.37 SD = 0.43	M = 2.93 SD = 0.53
Mathematics	M = 3.42 SD = 0.45	M = 3.02 SD = 0.59
Motor skills	M = 3.39 SD = 0.42	M = 3.09 SD = 0.59
Behaviour	M = 3.60 SD = 0.44	M = 3.40 SD = 0.37
Social and emotional learning	M = 3.32 SD = 0.56	M = 2.93 SD = 0.51

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[235] F = 4.44, p = .038, partial η^2 = .047

7.8.3   First grade teacher expectations for school readiness

Eighteen teachers in the Intervention group and 16 in the Control group indicated that they taught first grade. We asked first grade teachers whether they expected their students to have certain skills upon school entry in the areas of literacy, mathematics, motor skills, behaviour, and social and emotional learning. Teachers responded to a four-point Likert scale, with response options ranging from *Do not have the skill* to *Very prepared* (see Table B-2, Appendix B for a description of the individual survey items for each area of school readiness). Table 57 shows the average level of expectations for school readiness in each developmental area (with possible scores ranging from a low of 1 to a high of 4). There were no significant programme impacts on first grade teachers' expectations for school readiness among children entering first grade at their school.

Table 57 Grade One Teacher Expectations for School Readiness

	Intervention	Control
Expectations for school readiness across all areas	*M* = 3.38 *SD* = 0.47	*M* = 2.59 *SD* = 0.74
Literacy	*M* = 3.18 *SD* = 0.66	*M* = 2.51 *SD* = 0.79
Mathematics	*M* = 3.50 *SD* = 0.58	*M* = 2.59 *SD* =0.83
Motor skills	*M* = 3.46 *SD* = 0.54	*M* = 2.44 *SD* = 0.86
Behaviour	*M* = 3.60 *SD* = 0.56	*M* = 2.98 *SD* = 0.71
Social and emotional learning	*M* = 3.28 *SD* = 0.68	*M* = 2.44 *SD* = 0.83

7.8.4   Summary of programme impacts on teachers in Yemen

There were three *Getting Ready for School* programme goals for teachers who participated: to improve their belief in the use of child-centred pedagogy, to increase their understanding of the importance of school readiness, and – for first grade teachers – to raise their expectations regarding the level of school readiness of incoming first grade students at their school. Programme impacts in each of these three areas varied. We found a small-to-medium sized programme effect on teachers' belief in the importance of school readiness across developmental areas, although these programme effects were not significant within any single area of development. We did not find any significant programme effects on teachers' beliefs in the importance of child-centred pedagogy or in first grade teachers' expectations for school readiness among young children enrolling at their school. Due to the small number of teachers in the Control group, it was not feasible to examine differential programme impacts based on teacher characteristics.

7.9   Programme Costs and Benefits

There are two aspects of cost in the implementation of a pilot programme or any new programme – the cost of developing and launching the programme in the country or region and the cost of implementing the programme. Launching a programme is generally expected to be the most costly in the first year as there may be start-up costs associated with advocacy for the program, the development of the programme design and materials, the establishment of systems to meet the programme's need (such as printing and distributing materials), and the training of key staff. These costs may be incurred again on a

smaller scale within a country if the programme expands to a new region or significant changes are made in programme design. The cost of implementing the programme would be expected to be similar from year to year as long as the programme continues to function in the same regions of the country, or expands to other regions with similar characteristics (e.g., similar teacher salaries, similar accessibility of programme sites).

7.9.1 Costing assumptions

In order to complete this cost analysis, several assumptions or decisions were made that may influence how these results should interpreted. First, while school staff who implemented the programme were not paid directly for their time by the programme, there is what is known as an "opportunity cost" associated with their service: A teacher's time has a certain value, which is reflected in his or her salary. It is standard practice in cost assessments to include these "donated" hours as having a cost equivalent to the teacher's hourly wage. When a teacher spends his or her time involved with the programme, that teacher is not available to do other things during that time – he or she has taken one opportunity over another. His or her time as a teacher is being used by the programme. So while teachers volunteered their time for the programme, their time is factored into this cost evaluation as if they had been paid. While children who participated in this programme as Young Facilitators also donated their time to the programme – time that could have been spent in other activities with value for their families, such as providing child care or helping with chores – these opportunity costs are not included here because the Young Facilitator was also expected to benefit from the programme, and also because determining the alternate uses of Young Facilitator time and the value of that time is beyond the scope of this cost evaluation.

Second, there are similar opportunity costs for the use of space in schools and other buildings where the programme was implemented. There are costs associated with maintaining that space and the resources within that space (e.g., desks). The calculation of the opportunity cost for the use of this space requires information regarding the costs of school infrastructure and maintenance that can be broken down to levels such as an hourly rate per classroom. The scope of this evaluation does not allow us to collect this information (if it is indeed available), so we cannot factor in these costs here. Programme implementation did not involve any direct costs (e.g., rent) for the use of these spaces.

Third, we are assuming that the development of an orientation for children and families and the development of a training programme for teachers and Young Facilitators was a start-up cost, but that the orientations and trainings would need to be repeated within each community or school catchment area on an annual basis – that is, the actual orientations and trainings are an ongoing cost.

Costs were incurred in Yemen's currency, the Yemeni Rial (YER), and are reported here in US dollars (USD) at an exchange rate of USD 1 = YER 200.

In the remainder of this section, we will focus on the costs that were associated with the development and launch of the pilot programme (the "start-up" costs) and the costs that were associated with running the programme on an ongoing basis (the "ongoing costs").

7.9.2 Start-Up Costs

Start-up costs in Yemen included advocacy to get approval and buy-in for the programme among education officers and others; planning, adaptation and translation of programme materials; and the design of communications materials. Table 58 shows a summary of costs associated with each activity.

Table 58 In-Country Start-Up Costs

Activity	Total Cost
Programme advocacy	
Informational discussions with education officers and others for buy-in and planning	$7,769.23
Materials	
Adaptation and translation of materials by materials working group	$4,604.00
Communications	
Design of communication materials	$100.00
Total	**$12,473.23**

7.9.3 Ongoing Costs

Ongoing costs in Yemen that we would expect to incur on an annual basis include training of implementing teachers and Young Facilitators; printing, distribution and storage of teaching-learning materials; the purchase of learning materials such as pencils; printing and distribution of communications materials; teacher and school head time to implement the programme; and ongoing programme monitoring and support. Note that some of these costs are estimates – UNICEF staff costs were estimated based on the average hourly rate for staff who would have been involved, apportioned according to the balance of time each person (with their own hourly rate) has allotted to the programme overall since is it unclear from aggregate task hours exactly how many hours each specific staff person worked. Table 59 shows the ongoing costs incurred in the first year of this programme.

Table 59 Ongoing Costs

Activity	Total Cost
Planning and Orientation Workshops and Events	
Workshops and trainings for teachers and Young Facilitators	$10,771.57
Preparation for workshops and trainings for teachers and Young Facilitators	$320.11
Preparation of workshop and training materials	$160.05
Materials for orientation workshops and trainings	$790.00
Materials	
Printing, delivery and storage of teaching-learning materials	$14,865.00
Procured learning materials and incentives (e.g., bags and stationery sets for children)	$9,925.11
Communications	
Printing, production and delivery of communications materials	$2,750.00
Teacher and School Head Services	
School head programme implementation	$1,021.23
Teacher programme implementation	$9,655.46
Other School-Level Costs	
Snacks for participating children[236]	$75.50
Transportation and photocopies	$57.50
Communications with NGO and UNICEF	$117.50
Programme Monitoring	
Ongoing programme oversight by NGO	$15,840.00
Ongoing programme implementation by UNICEF	$29,108.32[237]
Overall Total	**$95,457.35**
Cost per School	**$6,363.82**
Cost per Young Learner	**$164.30**

This programme has been very cost-effective in Yemen, particularly in the area of on-time enrolment. Young children who had the programme made available to them had a 32 percent higher on-time enrolment rate than children who did not have the programme available. So among the 581 children who had the programme available, 186 children who would not have been expected to enrol on time did so (based on rates among the Control group). If the programme costs were examined solely in regard to the

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[236] A few teachers reported occasionally purchasing small incentives for children such as chocolates, but costs are unknown.

[237] A portion of this time may have been dedicated to programme start-up, but the percentage is unknown

benefit of on-time enrolment, the cost would be $513 for each additional child enrolled in school. That is, an investment of $513 in implementing the *Getting Ready for School* programme would be expected to lead to on-time enrolment for a child who would not otherwise have enrolled. There were in fact other benefits of the programme, as discussed above. These benefits are more difficult to quantify (e.g., the "payoff" for increased parent learning support activities with their child). However, a planned follow-up of these children at the end of first grade will allow us to examine more areas of potential benefit, such as increased attendance and improved academic performance.

7.10   Discussion and Recommendations for Yemen

The *Getting Ready for School* programme seems to have had a very successful implementation in this pilot year. There was a high level of enthusiasm for the programme among participants, school administrators and community members. The programme evaluation in Yemen was in the form of a well-run randomized controlled trial, so evaluation findings can be viewed with confidence.

There were several positive programme impacts. The most significant impact is the 32 percent increase in on-time enrolment among children who had the *Getting Ready for School* programme available to them. On-time enrolment is a significant concern within Yemen's educational system, so this impact has positive implications for the educational system as well as for individual children. While we did not find a special programme benefit for on-time enrolment among girls, the rates of on-time enrolment were not very different for boys and girls in the programme communities to begin with. School heads and community leaders in the programme communities also reported observing a significant increase in parental awareness of the importance of on-time enrolment, as well as increased school-community communication.

We found small-scale but significant positive programme impacts on children's beginning literacy and beginning mathematics skills. There was also a small but significant impact on the number of learning support activities that parents engaged in with their children (such as telling stories). Given the relatively low level of programme dosage (just a few hours a week), achieving any impact on children's skills and on parental behaviour can be counted as a success.

We found small but significant increases in belief in the importance of school readiness among both Young Facilitators and teachers. In the absence of a Control group, however, we cannot be certain that these increases are a direct result of the programme.

In general, programme impacts tended to be greater in Mawza than in the other two participating regions. UNICEF country office staff attribute this higher level of success to the presence of a highly active and enthusiastic programme focal point in Mawza who kept in very close contact with schools, teachers and communities through ongoing monitoring and support.

There were two main weaknesses in the programme as it was implemented during this pilot year. First, fewer than half of the parents in the Intervention group reported that they felt they had understood what the *Getting Ready for School* programme was about after it had first been introduced to them. Second, the best students were selected to become Young Facilitators, and becoming a Young Facilitator was therefore a mark of approval from school staff. Reports from the field suggest that this selection process had an unintended negative consequence whereby children who were not chosen felt bad about themselves as a result.

School heads reported some challenges in implementing the programme. The first was a lack of available space at school to house the programme. The second challenge was finding enough teachers who were willing to implement the programme because this created additional work for them in the absence of any incentives. Third, although schools had been provided with supplies for the programme such as pencils and bags, school heads reported that they did not feel that they had received enough of these materials to meet all of the needs of the programme at their school. An fourth challenge included the long distances

some children had to travel to participate in the programme, resulting in reduced attendance in some cases.

The recommendations to emerge from this evaluation are as follows:

- Parents need to be better informed about the programme prior to its implementation.
- The selection of Young Facilitators should be made on a more equitable basis. While not all students will be suited to taking on this role, students who are not at the top of their class may gain a special benefit from participation in the programme, increasing their self-confidence and own knowledge through teaching others.
- Ongoing efforts should be made to identify ways that teachers can be encouraged and rewarded for participating in the *Getting Ready for School* programme. In the absence of monetary incentives, school heads and other education officials may be able to make the programme attractive to teachers through other benefits such as professional development credits.
- Where adequate school space is an issue, other community venues and/or children's homes should be considered as potential places for children to meet.
- Programme impacts on children's early learning were significant in several areas. Where children still did not achieve school readiness skills or behaviours at the desired level, programme developers may want to consider ways to better encourage those areas of development through programme activities.

In sum, Yemen had an extremely successful pilot implementation of the *Getting Ready for School* programme, and the programme seems to be on a very positive path toward future success in Yemen.

CHAPTER 8   SUMMARY OF CROSS-SITE FINDINGS

In this chapter, we summarize cross-site quantitative programme impact information. We present a discussion of programme findings in Chapter 9.

Table 62 shows the level of programme impact on young children in the areas of school readiness and on-time enrolment. In this table, ◦ = no impact; s = small or small-to-medium positive programme effect; L = medium-to-large or large positive programme effect; n/a = impact could not be measured

Table 60 Summary of Programme Impacts on Young Children

	Bangladesh	China	DRC	Ethiopia	Tajikistan	Yemen
School Readiness						
Colour Naming						
Colour name recognition	s	s	s	◦	s	◦
Colour name recall	s	s	s	◦	s	s
Pattern Recognition						
Two-colour pattern	s	◦	◦	◦	◦	◦
Three-colour pattern	◦	◦	s	◦	◦	◦
Beginning Mathematics	s	◦	◦	s	◦	s
Numeral recognition	s	◦	◦	s	◦	s
Numeral name recall	s	◦	◦	◦	◦	s
Counts to 3	◦	◦	◦	◦	◦	◦
Counts to 10	s	◦	s	s	◦	s
1-to-1 correspondence	◦	◦	◦	L	◦	◦
Adds 1	◦	◦	s	◦	◦	s
Adds 3	s	◦	◦	◦	◦	◦
Subtracts 1	◦	◦	◦	s	◦	s
Subtracts 2	◦	◦	◦	◦	◦	s
Beginning Literacy	◦	◦	L	L	◦	s
Letter recognition	◦	n/a	L	L	◦	s
Letter name recall	◦	n/a	L	s	◦	s
Reading	◦	◦	s	◦	◦	◦
Writes any letters	s	n/a	n/a	s	◦	◦
Writes at least half of name	s	◦	L	s	◦	◦
Writes whole name	s	◦	L	◦	◦	◦
Perceptual Motor Skills	s	◦	◦	◦	◦	◦
Holds pencil	s	◦	◦	◦	◦	◦
Traces straight line	s	◦	◦	◦	◦	◦
Traces circle	s	◦	◦	◦	◦	◦
Traces square	s	◦	◦	◦	◦	◦
Attention						
Sustained attention	◦	◦	◦	◦	◦	◦
Focused attention	s	n/a	◦	s	◦	◦
Body movement	◦	n/a	◦	s	◦	◦

	Bangladesh	China	DRC	Ethiopia	Tajikistan	Yemen
School Readiness, continued						
Mastery Motivation						
Task persistence	s	n/a	○	○	○	○
Self confidence	s	n/a	○	○	○	○
Ability to Follow Directions						
Attention to directions	s	n/a	○	s	○	○
Comprehension	○	n/a	○	s	○	○
On-Time Enrolment						
Enrolled on time	n/a	n/a	n/a	n/a	n/a	X
Enrolled at all (even if late)	n/a	n/a	n/a	n/a	n/a	X

Table 63 summarizes the programme impacts on caregivers by country. In this table, ○ = no impact; s = small or small-to-medium positive programme effect; L = medium-to-large or large positive programme effect; n/a = impact could not be measured

Table 61 Summary of Programme Impacts on Caregivers

	Bangladesh	China	DRC	Ethiopia	Tajikistan	Yemen
Belief in school readiness	○	○	○	○	○	○
Support for learning	s	s	s	○	○	s

Table 64 summarizes programme outcomes for Young Facilitators. In this table, ○ = no significant change; X = Significant positive change from baseline to outcome; n/a = change could not be measured.

Table 62 Summary of Outcomes for Young Facilitators

	Bangladesh	DRC	Ethiopia	Tajikistan	Yemen
Academic engagement	X	X	n/a	○	○
Positive attitudes toward learning	X	X	n/a	○	X
Belief in school readiness	X	○	n/a	○	○

Table 65 summarizes programme impacts on teachers. In this table, ○ = no impact; s = small or small-to-medium positive programme effect; L = medium-to-large or large positive programme effect; n/a = impact could not be measured.

Table 63 Summary of Impacts on Teachers

	Bangladesh	DRC	Ethiopia	Tajikistan	Yemen
Attitudes toward child-centred pedagogy	○	n/a	n/a	○	○
Belief in school readiness	○	n/a	n/a	○	s
School readiness expectations grade one	○	n/a	n/a	n/a	○

CHAPTER 9   DISCUSSION AND RECOMMENDATIONS

The purpose of this evaluation is to provide UNICEF with an independent assessment of whether and to what extent the *Getting Ready for School* programme achieved its desired results based on programme implementation during this pilot year. The findings from this evaluation are intended to identify programme strengths, weaknesses, challenges and best practices to guide future implementation and expansion of this programme.

The evaluation was structured in the form of country-level randomised controlled trials – the most rigorous type of evaluation design. A mixed-methods approach was used whereby quantitative data (such as children's scores on school readiness assessments) were combined with qualitative data (such as interviews with community leaders) to provide measures of programme impacts as well as essential information regarding conditions that seem to have contributed to or detracted from the success of the programme. The use of a common evaluation framework and tools across countries enables us to draw conclusions about the success of this pilot programme overall and allows us to formulate general recommendations to guide future programme implementation and expansion across countries as well as within them.

Four of the six participating countries were able to implement a randomised controlled trial, despite some initial concern on the part of country representatives that randomised controlled trials might not be feasible due to logistical and political concerns. Where country representatives had concerns that the use of a control group could cause problems because a community would be told about a programme but then not allowed to receive it, a staggered implementation approach worked well; in this approach, control group communities from the pilot year received the programme the following year. China and Ethiopia were unable to implement a randomised controlled trial, due to pre-identification of programme sites. A matched-community approach seems to have worked well in China, and a matched-school approach seems to have worked well in Ethiopia.

Across all six countries, there was a high degree of interest in and enthusiasm for the *Getting Ready for School* programme within communities where it was introduced, and programme attendance was very high. Challenges associated with programme implementation in this pilot year were mostly in the form of logistical concerns rather than issues with acceptance of the programme among stakeholders. Logistical issues common to most participating countries included the late delivery of programme materials, teaching and learning materials that were not physically suited to the needs of young learners (e.g., many separate pieces that could get lost, materials that did not work well outdoors when it was windy), and inadequate supplies (such as pencils). While most counties provided snacks to the children, in some cases this happened inconsistently and children were therefore hungry during programme sessions.

The *Getting Ready for School* programme had two main goals for young children: to increase their school readiness and to increase their rate of on-time enrolment in first grade. To examine programme impacts on school readiness, we evaluated changes in young children's performance on measures of colour naming, pattern recognition, beginning mathematics, beginning literacy, perceptual motor skills, attention, mastery motivation, and ability to follow directions. On-time enrolment information was gathered directly from schools where available. The *Getting Ready for School* programme involves far fewer hours of direct support for young children's learning than most formal early childhood education programmes, and children require ongoing exposure and support to master need information and skills. One of the main reasons for this impact evaluation was to determine whether this lower-cost programme structured with much less "programme time" could indeed make an impact on children's school readiness. Programme participation among young children was very high. In cases where attendance was not high for individual children, it was more often a case of them attending sporadically than beginning the programme and then dropping out entirely.

There were at least some significant programme impacts on children's school readiness in all six countries. While children in all countries learned a great deal during the course of the pilot year, children in the Intervention group learned more and gained more school readiness skills than children in the

control group. There were significant programme impacts on children's beginning literacy and beginning mathematics in four of the six countries. Impacts on non-academic skills, such as the ability to follow directions, were less consistent across countries. Programme impacts were most apparent in countries where children had a higher programme dosage (such as extra home- or community-based sessions).

Children's on-time enrolment information has only become available from some countries. In Yemen, there was a substantial 32 percent increase in children's on-time enrolment in first grade. Nearly all children in the Intervention group enrolled in first grade within the first week of school, but less than two-thirds of the Control group did so. Enrolment rates were similar for boys and girls within both groups. In Ethiopia, there was 100 percent on-time enrolment in the Intervention group. While on-time enrolment information was unavailable for the Control group, this figure compares very favourably with Ethiopia's typical net primary enrolment rate of 78 percent and an overage enrolment rate of 19 percent (UNESCO, 2008). While information from the DRC suggests a 12 percent increase in on-time enrolment among Intervention group children, we cannot be certain of this figure due to unequal availability of enrolment information for Intervention versus Control group children. For all three of these countries, increasing on-time enrolment is a critical component of achieving universal primary completion. Over-age enrolment and failure to enrol entirely is a very costly problem to society in many countries, so programmes that increase on-time enrolment in school provide a tangible benefit.

Countries varied with regard to how much they communicated with and actively involved parents in the programme, and five of the six participating countries had some degree of family participation or support. Only Tajikistan did not establish home-programme or community-programme connections. This was due to a combination of a post-Soviet culture in which parents viewed education as something separate from family life, and a programme design that in this pilot year was exclusively school based and school focused. In the other five countries, parent support for the programme took the form of parents taking an interest in the programme in general, sometimes included parents taking the initiative to advocate for the programme (for example, in the DRC, parents of some young learners requested additional programme sessions during school breaks, and other parents from the community approached the school to make sure the programme would be available to their young child next year), and in at least one country (Bangladesh) included practical parent support for the programme such as supplying snacks for the children. While we would not expect to find substantial changes in parents' beliefs or behaviour in the absence of direct intervention with them, we did explore whether the programme achieved any secondary benefits in these areas. In four countries, the programme did have a small but significant impact on parents' practical support for children's learning (e.g., parents telling their children stories).

Young Facilitators had very high programme attendance overall, despite the heavy programme demands on their time. In some of the countries, children that age are a valuable resource in helping support their families. However, the Young Facilitators were eventually seen as providing value to their communities through their support for young children's learning. For example, in both the DRC and Ethiopia, families initially expressed concern about their children's participation as Young Facilitators because they would be less available to help at home. During the course of the pilot year, Young Facilitators in both of these countries eventually gained a great deal of attention and a high degree of respect within their communities for their efforts. There were issues in some countries around the selection of Young Facilitators; some school staff very publicly chose those students they felt were the best, leaving their peers feeling bad about themselves and about how they were viewed by school staff.

School heads and community leaders reported observing an increase in self-confidence and enthusiasm for school among children who served as Young Facilitators. Information from the field indicates that Young Facilitators as a group took their roles very seriously. In some countries (such as the DRC), Young Facilitators have reportedly become interested in teaching as a possible career as a result of their participation in the programme. Young Facilitators from all countries were observed to use pedagogical methods that were familiar to them from their own teachers, but that were not always child friendly or child centred, such as rote learning, heavily directed activities, and (in some cases) corporal punishment. While we found increases in Young Facilitators' academic engagement, positive attitudes toward learning, and/or an increase in their understanding of the importance of school readiness, the lack of a Control group means that we cannot be certain how much these attributes would have typically changed (or not)

over the course of a school year in the absence of the intervention. However, these findings are encouraging.

Programme impacts on teachers were also a desired secondary benefit of the programme. It was hoped that through training and programme participation, teachers would make some gains in their belief in the value of child-centred pedagogy, belief in the importance of school readiness and (for first grade teachers) expectations for children's school readiness upon enrolment. We found little programme impact in any of these areas.

Programme cost information was available for three countries, although a full cost-benefit analysis was not possible due to the unavailability of some information (e.g., value of Young Facilitators' time while helping their families – something they had to give up to participate in the programme) and the fact that economic benefits of improved early childhood education are typically not apparent until those children reach adulthood. Costs per pupil varied widely based on country-level economics and based on the scale of the programme, with a cost of $57 per child in Ethiopia and $63 in Bangladesh, but a higher $164 in Yemen. Further follow-up of these children at the end of first grade will provide more information regarding some outcomes that could be expected to lead to longer-term benefits for school systems and communities (e.g., higher enrolment in and completion of grade 1).

The six participating countries varied widely in their views regarding the long-term sustainability of the programme – especially in the form of financial sustainability. Sustainability tended to be most assured in countries where government education officials had been involved in the programme and viewed it as a potential means to help meet the country's educational goals. Sustainability was less assured in countries where early childhood educational initiatives largely take place independent of government involvement, and are dependent on NGOs an other outside sources of support. Other challenges to programme sustainability included difficulty in all countries in securing ongoing teacher involvement in the absence of incentives. Several countries also had difficulty finding classrooms or other appropriate space to implement the programme.

Based on the evaluation findings, the following recommendations are presented for the future development, sustainability and expansion of *Getting Ready for School*:

- Young learners need to have repeated and ongoing experiences and support to acquire school readiness skills. Every effort should be made to ensure that the *Getting Ready for School* programme is provided to children as often as possible – preferable twice a week or more, supplemented by extra practice at home or in the community.
- Countries should follow through on current plans to make programme materials more child friendly and (in some cases) more culturally relevant.
- Where children's school readiness outcomes were not at the desired level based on a country's own expectations or goals for early learning, programme developers should examine programme session notes, lesson plans and materials to identify where improvements can be made. Likewise, where programme sessions cover skills that children seem to acquire in their homes and communities anyway, programme developers may wish to increase the level of programme lessons to teach new skills and/or may wish to focus more efforts on skills not typically acquired.
- Selection of Young Facilitators should be done in a more inclusive manner so that students who are not selected do not feel rejected by school staff. The inclusion of a more diverse group of Young Facilitators may also provide an opportunity for students who are not already "stars" to build their skills and confidence.
- Future development of training and support for Young Facilitators should include building their skills in the use of more child-centred pedagogy and positive methods to manage young children's behaviour.
- Programme staff should explore creative ways to increase the availability of suitable places and times for children to participate in the programme where classroom space and teacher time are limited.

- Programme staff should meet with parents and community members to explore how to build on their enthusiasm for the programme to help meet programme needs (e.g., provision of some supplies or snacks, volunteer time to help organize additional sessions in the community).
- Further expansion of *Getting Ready for School* into new regions within countries or into new countries should wherever possible include early advocacy with government educational officials to situate the programme within the country's early childhood education goals and/or country goals to increase on-time enrolment in primary school. This course of action up front will increase the chances of long-term programme sustainability and may increase more immediate practical support for the programme.

In conclusion, the *Getting Ready for School* programme enjoyed a highly successful pilot implementation in several countries. The programme was extremely well received by stakeholders and achieved key goals. Continued development and expansion of the programme, combined with efforts at securing sustainability, could make *Getting Ready for School* a valuable resource for countries and communities seeking to increase opportunities for their young children to have better educational outcomes.

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Appendix A-1: Child Assessment Instructions

Before we start, I want to tell you my name. I'm _____. Now I have some things to show you and some activities I will ask you to do. Please listen carefully and do the best you can. Some of the things I will ask you are difficult even for older children, so don't worry if you're not sure about them. Just give it your best try.

When we are finished, you can have some stickers as a gift, okay?

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

Reminders for Assessors:

*Administer <u>all</u> of the items in the <u>exact</u> order they appear in this booklet. Never assume that a child knows or does not know an answer. Only skip items or parts of items when the written instructions tell you to do so.

*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 <u>not</u> 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, <u>always</u> 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 as incorrect 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!

1. Colour Naming

Materials: Flowers Plate

Place the Flowers Plate in front of the child.

Say, *"Here are some collared flowers. Do you know the names of any of these colours?"*

If the child answers "Yes", say, *"Point to all of the colours that you know and tell me the name of each one. Show me which colour flower you are naming."*

When child stops naming colours, say, *"Look carefully at all of them. Do you know any others?"*

Keep asking until all have been named correctly <u>or</u> the child does not know the names of any more colours.

Scoring #1a
Circle "1" in the "Names" column for each colour the child correctly names. Circle "0" in the "Names" column for each colour the child does not name correctly <u>or</u> does not name at all.

If child names <u>all</u> 10 colours correctly, proceed to the next task.

Then <u>for each colour *not* named,</u> say the names of the remaining colours one by one <u>in the order they appear on the scoring form</u> and ask the child to point to that colour flower on the page.

For example, say to the child, *"Now show me the ___ flower."*

Scoring #1b
Circle "1" in the "Points To" column for each colour the child correctly points to. Circle "0" in the "Points To" column for each colour the child does not point to correctly or does not point to at all.
For each colour, if the child has already named it correctly in #1a, then #1b should be left blank because child will not need to be asked #1b for that colour.

2. Numeral Identification

Materials: Number Plate

Place Number Plate in front of the child.

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

If the child answers "Yes", say, *"Point to all of the numbers that you know and tell me the name of each one. Show me which number you are naming."*

When child stops naming numbers, say, *"Look carefully at all of them. Do you know any others?"*

Keep asking until the child has named them all correctly <u>or</u> does not know the names of any more numbers.

Scoring #2a
Circle "1" in the "Names" column for each number the child correctly names. Circle "0" in the "Names" column for each number the child does not name correctly <u>or</u> does not name at all.

If child names <u>all</u> numbers on Number Plate correctly, proceed to the next task.

Then <u>for each number *not* named</u>, say the names of the remaining numbers individually <u>in the order they appear on the scoring form</u> and ask the child to point to that number on the page.

For example, say to the child, *"Now show me the ___."*

Scoring #2b
Circle "1" in the "Points To" column for each number the child correctly points to. Circle "0" in the "Points To" column for each number the child does not point to correctly or does not point to at all. **For each number, if the child has already named it correctly in #2a, then #2b should be left blank because child will not need to be asked #2b for that number.**

3. Makes Patterns

Hold 7 counting bears in your hand (4 blue, 3 yellow, 1 red).

Say to the child, *"Watch, I'm going to make a pattern."* Place the bears in a line in front of the child as you say: *"I'm putting a blue bear, then a yellow bear, then a blue bear, then a yellow bear, then a blue bear."*

Hand the remaining 3 bears (1 blue, 1 yellow, 1 red) to the child. Point to the space after the last bear you placed and say, *"Now show me which bear comes next."*

* If the child's home language is read from right to left, place first the bear to the <u>child's</u> right and proceed to line the bears up from right to left. If child's home language is read from left to right, place the first bear to the <u>child's</u> left and proceed to line the bears up from left to right.

Scoring #3a
Assign 1 point if the child indicates that the yellow bear comes next.

Pick up all of the bears (and take back any the child is holding) while saying*, "Great! Let's make another pattern."* Hold 8 bears in your hand (2 blue, 3 yellow, 3 red).

Place the bears in a line in front of the child as you say: *"Now I'm putting a yellow bear, then a red bear, then a blue bear, then a yellow bear, then a red bear."*

Hand the remaining 3 bears (1 blue, 1 yellow, 1 red) to the child. Point to the space after the last bear you placed and say, *"Now show me which bear comes next."*

Scoring #3b
Assign 1 point if the child indicates that the blue bear comes next.

4. Beginning Mathematics 1

Place 10 small counting bears (all of the same colour) in a row in front of the child.

Say to the child, *"I want you to count these bears for me. Start with this one,"* point to the bear at the beginning of the row,* *"and go all the way to the end."* Sweep your finger down the rest of the row.

If the child says he/she does not know how to count say, *"Just go ahead and do the best you can."*

Do not assist the child in any way.

Materials: 10 Small Counting Bears (all the same colour)

* If the child's home language is read from right to left, start with the bear to the child's right. If child's home language is read from left to right, start with the bear to the child's left.

Scoring #4a
Assign 1 point if at any time during counting the child says the numbers 1, 2, 3 in the correct order.

Scoring #4b
Assign 1 point if the child says the numbers 1 through 10 in the correct order.

Scoring #4c
Assign 1 point if the child counts the bears with one-to-one correspondence (assigns one number name for each bear counted), even if the number names are incorrect.

Scoring #4d
Assign 1 point if the child counts the bears with one-to-one correspondence and says the correct number names.

5. Beginning Mathematics 2

Materials: 8 Counting Bears (3 Red, 3 Blue, 2 Yellow)

Place one red bear in front of the child and say, ***"There is one bear here. If we added one more bear, how many bears would we have then?"***

Do not assist the child in any way.

Scoring #5a
Assign 1 point if the child responds "two" or "two bears." Give credit if the child responds by showing you the correct number of fingers instead of saying the number name.

Take the bear off the table. Place two yellow bears in front of the child and say, ***"There are two bears here. If we added three more bears, how many bears would we have then?"***

Scoring #5b
Assign 1 point if the child responds "five" or "five bears." Give credit if the child responds by showing you the correct number of fingers instead of saying the number name.

Take all of the bears off the table. Place three blue bears in front of the child and say, ***"There are three bears here. If we took one away, how many bears would we have then?***

Scoring #5c
Assign 1 point if the child responds "two" or "two bears." Give credit if the child responds by showing you the correct number of fingers instead of saying the number name.

Take all of the bears off the table. Place three red and two blue bears on the table in a group (not in a row) and say, ***"How many of these bears are not collared blue?"***

Scoring #5d
Assign 1 point if the child responds "three" or "three bears." Give credit if the child responds by showing you the correct number of fingers instead of saying the number name.

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6a. Applied Problems Practice

Place the Tangram Practice Plate in front of the child, leaving enough space between the child and the Practice Plate for the child to work with the pieces on the table directly in front of him/her. H<u>and</u> the child one square and one triangle shape.

Say to the child, *"Here are some shapes."* Point to the Practice Tangram and say, *"I want you to put these shapes together to make this picture."* Point to the space on the table in front of the child.

If the child begins to place the pieces on top of the design, redirect him/her to work on the table. Encourage the child to work with the shapes flat on the table if needed.

If the child completes the task <u>correctly</u>, say, *"That's right. Those two shapes go together just like that to make the picture."* Then proceed to test items.

If child completes the task <u>incorrectly</u> or indicates that he/she doesn't know how to do the task, show the child how to complete this practice task saying, *"See? These two shapes go together like this to make the picture."* Point back and forth between the assembled shapes and the design on the practice plate.

No scoring. Practice Item Only.

Materials: Tangram Plates 1 and 2
Tangram Pieces – 1 Square, 2 Triangles

Place Tangram Plate 1 in front of the child, and hand the child 1 square and 1 triangle**.**

Say to the child, *"Here are some more shapes."* Point to Tangram 1 and say, *"I want you to put these shapes together to make this picture."*

If the child begins to place the pieces on top of the design, redirect him/her to work on the table. Encourage the child to work with the shapes flat on the table if needed.

Allow the child time to work until he/she indicates that he/she is finished. Do not give the child any further feedback on his/her performance.

Repeat the above task with Tangram Plate 2, taking away the shapes from the previous task and giving the child 1 square and 2 triangles.

Scoring #6b
Assign 1 point if child correctly copies the 2-piece puzzle with the shape pieces.

Scoring #6c
Assign 1 point if child correctly copies the 3-piece puzzle with the shape pieces.

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7. Letter Identification Task 1

Materials: Letter Plate 1

Place Letter Plate 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 <u>or</u> does not know the names of any more letters.

Scoring #7a
Circle "1" in the "Names" column for each letter the child correctly names. Circle "0" in the "Names" column for each letter the child does not name correctly <u>or</u> does not name at all.

If child names <u>all</u> letters on Plate 1 correctly, proceed to the next page.

Then <u>for each letter *not* named,</u> say the names of the remaining letters one by one <u>in the order they appear on the scoring form</u>, and ask the child to point to that letter on the page.

For example, say to the child, *"Now show me the ___."*

Scoring #7b
Circle "1" in the "Points To" column for each letter the child correctly points to. Circle "0" in the "Points To" column for each letter the child does not point to correctly or does not point to at all.
For each letter, if the child has already named it correctly in #7a, then #7b should be left blank because child will not need to be asked #7b for that letter.

8. Letter Identification Task 2

Materials: Letter Plate 2

Place Letter Plate 2 in front of the child.

Say to the child, *"Here are some more 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 <u>or</u> does not know the names of any more letters.

Scoring #8a
Circle "1" in the "Names" column for each letter the child correctly names. Circle "0" in the "Names" column for each letter the child does not name correctly <u>or</u> does not name at all.

If child names <u>all</u> letters on Plate 2 correctly, proceed to the next page.

Then <u>for each letter *not* named</u>, say the names of the remaining letters one by one <u>in the order they appear on the scoring form</u>, and ask the child to point to that letter on the page.

For example, say to the child, *"Now show me the ___."*

Scoring #8b
Circle "1" in the "Points To" column for each letter the child correctly points to. Circle "0" in the "Points To" column for each letter the child does not point to correctly or does not point to at all. **For each letter, if the child has already named it correctly in #8a, then #8b should be left blank because child will not need to be asked #8b for that letter.**

9. Letter Identification Task 3

| Materials: Letter Plate 3 |

Place Letter Plate 3 in front of the child.

Say to the child, *"And here are some more 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 #9a
Circle "1" in the "Names" column for each letter the child correctly names. Circle "0" in the "Names" column for each letter the child does not name correctly or does not name at all.

If child names all letters on Plate 3 correctly, proceed to the next page.

Then for each letter *not* named, say the names of the remaining letters one by one in the order they appear on the scoring form, and ask the child to point to that letter on the page.

For example, say to the child, *"Now show me the ___."*

Scoring #9b
Circle "1" in the "Points To" column for each letter the child correctly points to. Circle "0" in the "Points To" column for each letter the child does not point to correctly or does not point to at all. **For each letter, if the child has already named it correctly in #9a, then #9b should be left blank because child will not need to be asked #9b for that letter.**

10. Beginning Reading

Place Word Plate 1 in front of the child.

Say, *"Read this word for me."*

If child says he/she does not know how to read, say, *"Just go ahead and try. Do the best you can."*

Repeat the instructions for Plates 2 through 5.

If child does not read any words in Plates 1 through 5, discontinue this item and say to the child, *"A lot of these words are for older kids. You're doing a great job!"*

If child reads any words in Plates 1 through 5, continue on and administer Plates 6 through 10. When child is finished say, *"A lot of these words are for older kids. You did a great job!"*

Scoring #10
Assign 1 point for each word the child reads correctly. If Plates 6 through 10 were not administered, circle "Not Administered" for these items on the scoring form.

11. Beginning Writing

Materials: Sheet of paper with line
                 Pencil

Place paper and pencil in front of child. Do <u>not</u> hand the pencil to the child.

Point to the line on the sheet of paper and say, ***"I want you to write your name here for me."***

If child says he/she does not know how to write, say, ***"Just go ahead and try. Do the best you can."***

If child's handwriting is unclear, ask the child to tell you the names of the letters he/she wrote.

Scoring #11a
Assign 1 point 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.

Scoring #11b
Assign 1 point if child is able to write at least half of the letters in his/her name, even if they are poorly formed or reversed.

Scoring #11c
Assign 1 point 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.

Scoring #11d
Assign 1 point if child is able to write all of the letters in his/her name in the correct order, with no letters reversed (may be poorly formed).

12. Perceptual Motor Skills

Take a pencil and trace the straight line at the top of the page while saying to the child, *"See what I'm doing? I'm tracing this line."*

Place a pencil in front of child. Do <u>not</u> hand the pencil to the child.

Point to the other straight line on the sheet of paper and say, *"Now I want you to trace this line for me."*

When child has finished, point to the circle on the sheet of paper and say, *"Now I want you to trace this shape for me."* Do <u>not</u> say the name of the shape.

When child has finished, point to the square on the sheet of paper and say, *"Now I want you to trace this shape for me."* Do <u>not</u> say the name of the shape.

Scoring #12a
Assign 1 point if the child holds the pencil correctly for writing ("correct" based on local practices at school).

Scoring #12b
Assign 1 point if child is able to trace the line and stay on the line at least 50% of the time.

Scoring #12c
Assign 1 point if child is able to trace the circle and stay on the line at least 50% of the time.

Scoring #12d
Assign 1 point if child is able to trace the square and stay on the line at least 50% of the time.

13a. Leiter-R Sustained Attention[238] Practice Items

Materials: Leiter-R Practice Page
2 Markers

Take out 2 markers of different colours and say to the child, *"Now we're going to do something using these markers. Which colour would you like to use?"*

Allow child to choose a marker.

Point to the image at the top of the box on the practice page and say to the child, *"See this?"*

Point to a few of the matching images, then put a mark through one of them, saying, *"See what I am doing?"*

Point to the top image, give the child the marker and say, *"Now you do it. Mark a line through all the ones that look like this. Do as many as you can as fast as you can until I tell you to stop."*

Take up to 2 minutes to teach child the task. During this practice:
-If child scribbles or colours, say, *"No colouring, just mark a line like this."*
-If child misses some objects, point to an object and say, *"Make a line through all of them. This one too."*
-If child draws one continuous line, show child how to pick up the marker and then how to find another target object.
-If child draws a line through a different picture, point to the example at the top of the pages and say, *"No, not that one, just these."*

Make sure the child understands the task before you go to the test item.

Scoring #13a
If child cannot perform this practice, score "0" and do not go on to administer the test item (13b). Otherwise, continue on to test item.

13b. Leiter-R Sustained Attention Test

Materials: Timer
            Leiter-R Pages
            2 Markers

Place test page in front of child and say, *"Now go ahead and do the same thing on this page. Do as many as you can until I tell you to stop."*

Start timing immediately and stop child after 30 seconds.

If child does not begin, point back and forth between target picture and one correct answer. Do not demonstrate crossing out this item.

If child stops before time is up, prompt him/her to continue. Say, *"Mark a line through all the pictures that look like this. Do as many as you can before I say stop."*

At the end of the 30 seconds, say, *"That's all the time we have. You did a great job!"*

Circle with your pen (not the marker the child used) any objects the child has marked after time is up.

*Note: If child requires prompts, give them while you continue timing. Do not restart the timing.

Scoring #13b and c
Indicate the total number marked (13b) and the number correct (13c) on the scoring form.

Write end time on scoring form.

Appendix A-2: Child Assessment Scoring Sheet

UNICEF Getting Ready for School Evaluation
Child Assessment Scoring Form

A. Child ID: _____   **B. Child Date of Birth:** _____/_____/_____ Day/Month/Year

C. Assessment Date: _____/_____/_____ Day/Month/Year

D. Start Time: _____   **E. End Time:** _____

ITEM	DESCRIPTION	SCORING			
1	**Colour Naming**	**Names (a)**		**Points to (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
2	**Numeral Identification**	**Names (a)**		**Points to (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
3	**Makes Patterns**	**Score**			
	a. Makes two colour pattern	1	0		
	b. Makes three colour pattern	1	0		
4	**Beginning Mathematics 1**	**Score**			
	a. Knows number order 1 through 3	1	0		
	b. Knows number order 1 through 10	1	0		
	c. Counts with 1-to-1 correspondence	1	0		
	d. Counts 10 objects correctly	1	0		
5	**Beginning Mathematics 2**	**Score**			
	a. Adds 1	1	0		
	b. Adds 3	1	0		
	c. Subtracts 1	1	0		
	d. Subtracts 2	1	0		

6	**Applied Problems**		Score	
	a. (Practice)		(not scored)	
	b. Solves two-piece problem		1	0
	c. Solves three-piece problem		1	0

7	**Letter Identification 1**	Names (a)		Points to (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

8	**Letter Identification 2**	Names (a)		Points to (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

9	**Letter Identification 3**	Names (a)		Points to (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

10	**Beginning Reading**	**Score**	
	a. (word determined by country/ local language)	1	0
	b. (word determined by country/ local language)	1	0
	c. (word determined by country/ local language)	1	0
	d. (word determined by country/ local language)	1	0
	e. (word determined by country/ local language)	1	0
	f. (word determined by country/ local language)	1	0
	g. (word determined by country/ local language)	1	0
	h. (word determined by country/ local language)	1	0
	i. (word determined by country/ local language)	1	0
	j. (word determined by country/ local language)	1	0
11	**Beginning Writing**	**Score**	
	a Writes any letters	1	0
	b. Writes some letters of name	1	0
	c. Writes all letters of name in correct order	1	0
	d. Writes all letters of name in correct order and in correct orientation	1	0
12	**Perceptual Motor Skills**	**Score**	
	a. Holds pencil correctly	1	0
	b. Traces line	1	0
	c. Traces circle	1	0
	d. Traces square	1	0
13	**Sustained Attention**	**Score**	
	a. (Practice) - Circle "0" if child is **unable** to understand task based on practice item	0	
	b. Number marked (write in)		
	c. Number correct (write in)		

Upon completion of the entire assessment, think about the child's behaviour and attitude overall during the assessment. Circle a score for each of the following items:

14a. Task Persistence

Persists with task…………………………………….…….……….	4
Attempts task briefly………………………………………………..	3
Attempts task after much encouragement………………………………..	2
Refuses……………………………………………………...............	1

14b. Attention Span

Focuses attention voluntarily……….………………………………	4
Attends with assessor direction………………………………………....	3
Some distraction with noise or movement of others……………………………..	2
Easily distracted……………………………………………….............	1

14c. Body Movement

Sits quietly……....………………………………………………	4
Some squirming……....……………………………………………..	3
Much movement………………………………………………………..	2
Out of seat, body in constant motion………………………………............	1

14d. Attention to Directions

Listens carefully to entire direction………………………………………….	4
Attends only to brief directions……………………………………………..	3
Starts activity after hearing only a portion of directions…………………………….	2
Starts activity immediately without waiting for directions………………..........	1

14e. Comprehension of Directions

Rapid comprehension of most directions, given age expectations…..………....	4
Understands after several repetitions…………………………………………….	3
Partial comprehension of directions…………………………………………	2
Does not appear to comprehend most directions……………………….............	1

14f. Confidence

Very sure of self………………………………………………………….	4
Confident with things known, attempts new things with encouragement……..	3
Reluctant to try new or difficult things……………………………..............	2
Very uncertain, needs much encouragement………………………………..	1

Comments:

Appendix A-3: Caregiver Interview One

Introduction for Data Collectors:

*This questionnaire is designed to be read aloud to the parent/caregiver. You must read instructions, questions, and response options presented in **bold** lettering aloud, making sure that the interviewees understand what is being asked of them. Each question <u>allows only one answer</u> otherwise instructed to "<u>circle all that apply</u>". Take care to speak slowly enough that participants understand. For each section, specific instructions for you, the interviewer, are presented in light italics.*

In many questions "[child]" indicates when you should use the name of the child that is the focus of the study. Since families may have other children who are not part of the study it is important to specify that you are interested in the child participating in the study.

Greeting to Parent/Caregiver:

"We are from [country-specific affiliation]. We are working on a project concerned with education for young children. This study is sponsored by UNICEF and is being conducted in six countries in different regions of the world. UNICEF is trying to improve education for families like yours around the world and it is important for us to talk directly with families to get a better understanding education in [country]. I would like to learn more about [*child*], your family, what you and your child do together and your opinions on educational programs and schools in this area. The interview will take about 45-60 minutes. All the information we obtain will remain strictly confidential and your answers will never be identified. There are no right or wrong answers to these questions. Also, you do not have to answer any question you do not want to. May I start now?"

If permission is given, ask if there is a place where you could sit down with the participant and begin the interview. If the respondent does not agree to continue, thank him/her and go to the next part of the family visit. Discuss the result with your supervisor for a future revisit.

Household Membership
I am going to ask you for information about the members of this household. Please tell me the name of each person who lives here. *List the names of each household member (A.1), their relationship to [child] (A.2), and their sex (A.3). For each person, ask questions A.4-A.6. Each row is associated with a specific individual. After you get answers to all of the questions about one family member, move on the then next one and repeat the same process until everyone in the household has been accounted for. Say aloud the text that is bolded. Note that A.6 does not apply to children under the age of 5. Please write answers clearly within the boxes.*

For questions A.2, A.3, and A.5, write the number that corresponds with the answer given by the interviewee. For example, in A.2, if the interviewee answers father, write the number "2" in the box.

Line #	Name	What is the relationship to [*child*]? 1 mother 2 father 3 stepmother 4 stepfather 5 grandparent 6 brother 7 sister 8 other relative 9 other non-relative	Is \<name\> male or female? 1 male 2 female	How old is \<name\>? *If necessary, clarify by saying:* How old was \<name\> on his/her last birthday? *Record in completed years (round down to whole number)*	What is **\<name's\>** highest level of education attended? *1 preschool* **2 primary** **3 secondary** **4 post-secondary/ higher education** **5 non-standard curriculum** **6 no school** 99 don't know	For ages 5-24 During the 2007-2008 school year, did [*name*] attend school? Which grade?	
						Yes / No	Grade (#)
1							
2							
3							
4							
5							
6							
7							
8							
9							

Line #	Name	What is the relationship to [child]? 1 mother 2 father 3 stepmother 4 stepfather 5 grandparent 6 brother 7 sister 8 other relative 9 other non-relative	Is <name> male or female? 1 male 2 female	How old is <name>? *If necessary, clarify by saying:* How old was <name> on his/her last birthday? *Record in completed years (round down to whole number)*	What is *<name's>* highest level of education attended? *1 preschool* **2 primary** **3 secondary** **4 post-secondary/ higher education** **5 non-standard curriculum** **6 no school** 99 don't know	For ages 5-24 During the 2007-2008 school year, did [*name*] attend school? Which grade?	
						Yes / No	Grade (#)
10							
11							
12							
13							
14							
15							
16							
17							
18							

Interviewer: Please fill out the questions below based on the household information you have collected in Section A. Ask the interviewee for the information if you are unsure.

A.7   Is <child's> natural mother alive?
1. Yes
No
Don't know

A.8   Does <child's> natural mother live in the household?
1. Yes
No
Don't know

A.9   Is <child's> natural father alive?
1. Yes
No
88. Don't know

A.10   Does <child's> natural father live in the household?
1. Yes
No
Don't know

For questions A.11 through A.12, read aloud the question and responses shown in bold and circle the number that corresponds to the given answer.

A.11   Are you the primary caregiver of [*child*]?
1. Yes
2. No
99. No response

A.12   What is your relationship to [*child*]?
1. Mother
2. Father
3. Stepmother
4. Stepfather
5. Grandparent
6. Other relative (specify) _____
7. Other non-relative (specify) _____
99. No response

Neighbourhood Context

Now I am going to ask you some questions about your community.

Is your neighbourhood safe enough for children to play outside?
1. Yes
2. No
99. No response

On the whole, do you like or dislike your community as a place to live? *Read aloud each response option shown in bold.*

1. **Like it a lot**
2. **Like it**
3. **Dislike it**
4. **Dislike it a lot**
99. No response

Child's Behaviours

Now I'm going to read you a list of some activities or behaviours. Please tell me how often [child] does these things. *Read aloud each activity/behaviour and the response options shown in bold.*

	Never or Hardly Ever	Sometimes	Most of the Time	Don't know	No response
Takes care of personal belongings	1	2	3	88	99
Follows safety rules such as crossing the street safely	1	2	3	88	99
Asks for help with difficult tasks such as picking up heavy items, putting on clothes, or locating lost items	1	2	3	88	99
Expresses feelings	1	2	3	88	99
Expresses needs to adults	1	2	3	88	99
Helps with simple household tasks	1	2	3	88	99
Offers comfort when others are in distress	1	2	3	88	99
Gets along with other family members	1	2	3	88	99
Shares newly learned ideas	1	2	3	88	99

Child Health and Development

Now I am going to ask you a series of questions about [*child's*] health. Please answer the questions with either YES or NO. *Read aloud each question.*

	Yes	No	Don't know	No response
Is there a place within a reasonable distance where you can take [*child*] for routine medical care?	1	2	88	99
Do you have any serious concerns about [*child's*] development or behaviour?	1	2	88	99
Does [*child*] have difficulty hearing or understanding speech in a normal conversation?	1	2	88	99
Does [*child*] have difficulty with [his /her] vision (in the distance or close up)?	1	2	88	99
Does [*child*] know how to wash [his/her] hands?	1	2	88	99
Does [*child*] know how to brush [his/her] teeth?	1	2	88	99

Now I am going to read some characteristics and skills of children in general. For each, tell me how important you think it is for a child to have it when he/she <u>begins first grade</u>. *Read aloud each statement and the response options shown in bold.*

It is important that the child…	Not At All Important	Somewhat Important	Very Important	No response
is in good physical health.	1	2	3	99
is confident.	1	2	3	99
is curious and explores his/her environment.	1	2	3	99
is able to play with other children.	1	2	3	99
has good problem-solving skills (for example, tries different ways to solve a problem).	1	2	3	99
knows some letters.	1	2	3	99
is able to read some words.	1	2	3	99
is able to write his/her own name.	1	2	3	99
is able to count from 1 to 10.	1	2	3	99
is able to recognise and name shapes.	1	2	3	99

Support for Learning

Now I am going to read some statements about learning. For each, tell me if you agree with it. *Read aloud each statement and the response options shown in bold.*

	Agree	Undecided	Disagree	No response
I would like to help my child learn, but I don't know how.	1	2	3	99
I am my child's most important teacher.	1	2	3	99
Schools are responsible for teaching children, parents are not.	1	2	3	99
Parents need to be involved in their children's education.	1	2	3	99
Children do better in school when their parents also teach them things at home.	1	2	3	99
Children learn new words, colours, names, and other things from books.	1	2	3	99
Stories help build children's imaginations.	1	2	3	99
Children learn important life skills from books.	1	2	3	99
Playing does not help children to learn how to think well.	1	2	3	99
Teaching children colours, numbers and letters before they go to school is a waste of time.	1	2	3	99

Expectations for child's education

Now I am going to ask you some questions about your child's future education.

Will you enrol your child in school next year?

1. Yes
2. No
3. Maybe
88. Don't know
99. No response

How far in school do you want your child to go? *Read aloud each bolded option.*

1. **Some <<ISCED 1>>**
2. **Finish <<ISCED 1>>**
3. **Some <<ISCED 2>>**
4. **Finish <<ISCED 2>>**
5. **Some <<ISCED 3>>**
6. **Finish <<ISCED 3>>**
7. **Some <<ISCED 4>>**
8. **Finish <<ISCED 4>>**
9. **Some or finish <<ISCED 5 or higher>>**
10. **No school**
88. Don't know
99. No response

> *Countries: Replace what is in << >> with the appropriate term for each ISCED level in your country. See the ISCED document provided.*

Now I am going to read some statements about the school in your community that your child will attend in the future, and about school in general. For each statement, tell me if you agree with it. ***Read aloud each statement and the response options shown in bold.***

	Agree	Undecided	Disagree	Don't know	No response
The school will be a good place for [him/her] to be.	1	2	3	88	99
The school does a good job preparing children for their futures.	1	2	3	88	99
Going to the school will expose my child to harmful people or ideas.	1	2	3	88	99
The school will meet [his/her] academic needs.	1	2	3	88	99
The school will meet [his/her] social and behavioural needs.	1	2	3	88	99
Doing well in school will improve [Child]'s chances of having a good life when [he/she] grows up.	1	2	3	88	99

Home Literacy Environment

For G.1 through G.6, a "yes" response requires that you ask a follow-up question and circle the number that corresponds with the participant's response.

I am now going to ask you some questions about what you and your family do at home.

In the past week, did you or any household member do any of the following activities with [child]? Read each activity aloud. For each activity, if YES, ask: Who engaged in this activity with the child – the mother, the child's father, or another member of the household (including older children)? For the individuals who may have engaged in the activity, circle all that apply.

	Yes	No	Don't know	No response	If responds YES		
					Mother	Father	Other
tell stories to [*child*]	1	2	88	99	M	F	O
sing songs with [*child*]	1	2	88	99	M	F	O
read books or look at pictures with [*child*]	1	2	88	99	M	F	O
take [*child*] outside of the home/compound/yard/enclosure	1	2	88	99	M	F	O
play with [*child*]	1	2	88	99	M	F	O
spend time with [*child*] naming, counting, or drawing things	1	2	88	99	M	F	O

What does *[child]* play with when he/she is at home? Does he/she play with [*circle all that apply*]:

1. objects and materials found outside the living quarters, such as sticks, rocks?
2. household objects such as bowls, plates, cups or pots?
3. animals, shells, or leaves?
4. homemade toys, such as dolls, cars and other toys made at home?
5. toys that came from a store or local market?
6. other (specify) _____
7. No play-things mentioned
88. Don't know
99. No response

Do you know how to read?
　　1. Yes　　　　　→ *Continue on G.9*
　　2. No　　　　　→ *Go to G.10*
　　88. Don't know　→ *Go to G.10*
　　99. No response　→ *Go to G.10*

How often do <u>you</u> read a book, newspaper or magazine?
　　1. Almost every day
　　2. At least once a week
　　3. Less than once a week
　　4. Never
　　88. Don't know
　　99. No response

Which of the following items does your family have in your home? *Circle all that apply.*

    1. Books for children (including school books)

    2. Books for adults

    3. Religious books

    4. Newspapers

    5. Other books

    6. No books

    88. Don't know

    99. No response

In the past month, did your family borrow any books from a library (including a mobile van that acts as a lending library)?

    1. Yes

    2. No

    3. Not applicable because there is no available library

    88. Don't know

    99. No response

Household

Now I am going to ask you some questions about your household and the home you live in.

H.1   Which best describes your <u>current</u> employment situation? *Read aloud each bolded option.*

    1. Working full-time for pay at a business or away from your home? (this could be one or more full-time jobs or several part-time jobs that add up to full-time work)

    2. Working part-time for pay at a business or away from your home

    3. Earning pay through a business run from within your home

    4. Not working for pay but looking for work

    5. Not working for pay, but take care of the household and children

    6. Not working for pay and not looking for work

    7. Not working for pay but in school or a job training program

    8. Other (specify) _____

    99. No response

H.2   Do any other members of the household work for pay?

    1. Yes

    2. No

    3. Not applicable (there are no additional adults or older children)

    88. Don't know

    99. No response

H.3   Does any member of this household own any land that is used for agriculture?

    1. Yes

    2. No

    88. Don't know

    99. No response

H.4   Does any member of this household own any livestock, herds, or farm animals?
1. Yes
2. No
88. Don't know
99. No response

H.5   Do you or someone in this household own this dwelling, or do you rent this dwelling?
1. Rent
2. Own
3. Other _____
88. Don't know
99. No response

H.6   Does your household have the following items? *Read each item aloud.*

		Yes	No	Don't know	No response	
a.	<country-specific>	1	2	88	99	Countries:
b.	<country-specific>	1	2	88	99	Please list the items you used in the pilot. Include three items for low-income, three items for middle income, and three items for high-income
c.	<country-specific>	1	2	88	99	
d.	<country-specific>	1	2	88	99	
e.	<country-specific>	1	2	88	99	
f.	<country-specific>	1	2	88	99	
g.	<country-specific>	1	2	88	99	
h.	<country-specific>	1	2	88	99	
i.	<country-specific>	1	2	88	99	

Tracking Information
Do you have plans to move to a different home within next 12 months?
1. Yes
2. No

Can you suggest ways we can contact you, or someone else who could help us find you, next year if you are no longer at this address?

_____

_____

_____

Thank you for taking the time to speak with me today.

END OF PARENT INTERVIEW

Appendix A-4: Supplemental Parent Interview

We would like to learn about any educational experiences your child may have had since last year. There are no right or wrong answers to these questions. All the information is confidential. Your participation is voluntary and appreciated.

A. Child Participation in Early Childhood Education Programs

A.1 **Since September of last year (2008), did your child participate in *any* formal or informal learning or early childhood education program, such as a kindergarten or parent-child learning group?** *For programme families:* **Do not include the Getting Ready for School programme. We will talk about that later. This question is about any** *additional* **programs your child may have participated in.**

      1. Yes [*Go to question A.2*]
      2. No [*If this is a Treatment Group family, go to Section C (even if child never participated in the program). If this is a Control Group family, you are finished with this instrument.*]
     88. Don't know
     99. No response

A.2 **What type of programme was this?**

      1. **Public preschool (run by national, regional/state or local government)**
      2. **Private preschool (run by religious organization, community group, NGO, etc.)**
      3. **Public kindergarten (run by national, regional/state or local government)**
      4. **Private kindergarten (run by religious organization, community group, NGO, etc.)**
      5. **Grade zero at public or private school**
      6. **Educational sessions provided once or twice per week through a local community centre, religious organization, NGO, etc.**
      7. **Parent-child educational play group**
      8. **Other:** _____
     88. Don't know
     99. No response

A.3	**How many hours per week did your child participate in this programme while he/she was attending?** _____
	88. Don't know
	99. No response
	Note: Assist parent/caregiver in calculating hours per week if needed by breaking it down to hours per day times number of days per week.

A.4	**Since last September (2008), which months did your child participate in this program?** *Circle all that apply.*		
	1. September 2008	5. January 2009	9. May 2009
	2. October 2008	6. February 2009	10. June 2009
	3. November 2008	7. March 2009	11. July 2009
	4. December 2008	8. April 2009	12. August 2009
	88. Don't know		
	99. No response		

B. Evaluation of Programme

B.1	**How much do you think [child] learned from this program?**
	Would you say that he/she…
	1. Did not learn much at all
	2. Only learned a little
	3. Learned a lot
	88. Don't know
	99. No response

B.2	**How much do you think [child] enjoyed attending this program?**
	Would you say that he/she…
	1. Did not enjoy the programme at all
	2. Only enjoyed the programme a little
	3. Enjoyed the programme very much
	88. Don't know
	99. No response

For Control Group families, this is the end of this interview.

*The questions below for Programme Intervention Group families should be asked of **ALL** families underlined assigned to the programme intervention group, even if their child never actually participated in the Getting Ready for School programme.*

Now we would like to ask you to share your thoughts and opinions about the Getting Ready for School programme.

C. Child Participation

C.1   **Your family was given the opportunity for your child to participate in the Getting Ready for School programme. Did [child] *ever* participate in the programme (even once)?**
     1. Yes [*Go to question C.3*]
     2. No [*Go to question C.2*]
     88. Don't know [*Go to Section D, Question D.3*]

C.2   **What was the main reason your child never participated in the Getting Ready for School program?**
[Circle response that most closely matches reason stated by participant. If participant gives more than one reason, probe to find out the main reason]
     1. Did not know programme was available [*Go to Section E*]
     2. Did not understand what programme was about
     3. Did not believe that this programme would benefit [child]
     4. Child participated in a different school readiness programme or kindergarten instead
     5. Did not have someone available (adult/older child) to take [child] to/from the program
     6. Lack of transportation/inconvenient location
     7. Safety concern (e.g., programme in unsafe area, child would be out after dark, etc.)
     8. [Child] was needed to assist at home
     9. [Child] had health issue or disability that prevented him/her from participating
     10. [Child] is too difficult to take places due to misbehaviour
     11. Other: _____
     88. Don't know
     99. No response
 	
[Skip to Section D, question D.3]

C.3
I   **How often did [child] participate in the Getting Ready for School program? Would you say t was…**
     1. Every session or almost every session [*Go to Section D*]
     2. Most sessions [*Go to Section D*]
     3. About half of the sessions [*Go to Section D*]
     4. Less than half of the sessions [*Go to question C.4*]
     5. Very rarely, or only once or twice [*Go to question C.4*]
     88. Don't know [*Go to Section D*]

C.4 **What was the main reason [child] did not often participate in the Getting Ready for School program?**

Circle response that most closely matches reason stated by participant. If participant gives more than one reason, probe to find out the main reason.

1. Did not believe that this programme was benefiting [child]
2. Child participated in a different school readiness programme or kindergarten
3. This programme was not interesting to the [child]/ [child] did not wish to continue
4. Safety concern (e.g., programme in unsafe area, child would be out after dark, etc.)
5. Child and/or family was not treated well by others at the program
6. Did not have someone available (adult/older child) to take [child] to the program
7. Lack of transportation/inconvenient location
8. [Child] was needed to assist at home
9. [Child] had health issue or disability that prevented him/her from participating
10. [Child] is too difficult to take places due to misbehaviour
11. Other: _____
88. Don't know
99. No response

D. Evaluation of Programme

D.1 **How much do you think [child] learned at the Getting Ready for School program? Would you say that he/she…**
   1. **Did not learn much at all**
   2. **Only learned a little**
   3. **Learned a lot**
   88. Don't know
   99. No response

D.2 **How much do you think [child] enjoyed the Getting Ready for School program? Would you say that he/she…**
   1. **Did not enjoy the programme at all**
   2. **Only enjoyed the programme a little**
   3. **Enjoyed the programme very much**
   88. Don't know
   99. No response

D.3 **If the *Getting Ready for School* programme was offered again in your community, would you recommend it to other families with young children?**
   1. Yes
   2. No
   88. Don't know
   99. No response

E. Effectiveness of Communications

E.1 **When the Getting Ready for School programme was first introduced to your family, how well would you say your family understood program? Would you say that your family…**
    1. Did not understand what the *Getting Ready for School* programme was about
    2. Only knew a little bit about the program
    3. Understood the programme very well
    88. Don't know
    99. No response

E.2 **Do you think that other parents in your community know about the *Getting Ready for School* program?**
    1. Yes
    2. No
    88. Don't know
    99. No response

E3. **Have you seen or heard about the Getting Ready for School programme in your community from any of these sources?** *Circle all that apply.*
    1. Posters, banners or fliers
    2. Announcements in local community organizations (mosque/church, local school, health centre, etc.)
    3. Radio
    4. Television
    5. Heard about it from family members, neighbours, and/or friends
    88. Don't know
    99. No response

E4. **What have you learned about improving young children's development and school readiness from the Getting Ready for School program?** *Circle all that apply. When respondent stops identifying messages, ask, "Anything else?" Continue circling respondent's answers until he/she indicates that they have identified all of the messages they know. Try to match respondent's answer to one on the list below. If there is no answer choice that matches what the respondent is saying, circle "Other" below and fill in his/her response.*
    1. Did not learn anything from Getting Ready for School
    2. Children learn through play
    3. Children's early experiences can help their brains develop well
    4. What you say and do can help your child learn/Your child learns from you
    5. Children can learn a lot/You can help your child learn during everyday activities such as eating and going to the market
    6. When you take time to talk with your child and listen to him/her, this helps your child feel good about himself/herself and want to learn
    7. Children learn best when family members take an interest in their games and activities at home
    8. Older children can help younger children to learn/get ready for school
    9. Children feel good about themselves/proud when they learn new things
    10. Learning now can help improve a child's future
    11. Learning now can help a child succeed in school
    12. Other: _____
    88. Don't know
    99. No response

Appendix A-5: Young Facilitator Outcome Survey

Dear Students:

Thanks for participating in the programme to help young children get ready for school. You were asked to fill out a survey before the programme started. Now we would like to complete another survey that is very similar to the first one. At the end of this survey, there are a few open-ended questions that allow you to write your thoughts about things that happened during the programme. Please write as much as you would like. Your ideas will help us improve the programme in the future. There *are no right or wrong answers to any of the questions.* No one at your school or in your community will see your answers to any of the questions. Thank you for you ideas!

BACKGROUND INFORMATION

A. Today's Date: _____/_____/_____ Day/Month/Year

B. Your Name: _____

C. School Name: _____

D. What grade are you in? *(check one)*

☐ Grade 3   ☐ Grade 4   ☐ Grade 5   ☐ Grade 6   ☐ Other (please specify):_____

E. Are you a boy or a girl? *(check one)*

☐ Boy   ☐ Girl

F. Do you think you will continue your education next year? *(check one)*

☐ Yes   ☐ No

G. During the past year about how many days *in a month* did you miss school without permission from the school or from your family? *(check one)*

☐ 0 days   ☐1-5 days   ☐6-10 days   ☐11-15 days   ☐16 or more days

H. During the past year about how many days *in a month* did you have to miss school in order to work or to help out at home? *(check one)*

☐ 0 days   ☐1-5 days   ☐6-10 days   ☐11-15 days   ☐16 or more days

SECTION A

What kind of grades did you get in this semester in the following subjects? Please circle one number for each subject.

		Mostly Poor/Failing	Mostly Fair	Mostly good	Mostly Excellent
A1.	Language Arts (Reading)	1	2	3	4
A2.	Mathematics	1	2	3	4
A3.	Science	1	2	3	4
A4.	Social Studies	1	2	3	4

The following statements are about what you think and how you feel about learning. For each statement, please tell us if you agree or disagree with it. Circle one number for each statement.

		Disagree	Not Sure	Agree
B1.	I get high marks at school.	1	2	3
B2.	Learning is fun.	1	2	3
B3.	Learning only happens in the classroom.	1	2	3
B4.	I learn things from teachers.	1	2	3
B5.	I learn things from other students.	1	2	3
B6.	I only learn things from textbooks.	1	2	3
B7.	I learn things by playing with my friends.	1	2	3
B8.	I try to learn new things every day.	1	2	3
B9.	I enjoy solving problems in daily life.	1	2	3
B10.	Activities outside of school are a waste of my time.	1	2	3
B11.	I am trying my best at schoolwork.	1	2	3
B12.	Learning is all about taking notes and memorizing them.	1	2	3
B13.	I like expressing my opinions in class.	1	2	3
B14.	I don't learn anything from class discussion.	1	2	3
B15.	Teachers know everything and should tell students what to do all the time.	1	2	3
B16.	Learning only happens when you complete a task the right way.	1	2	3
B17.	I like teaching my friends or younger children to learn.	1	2	3
B18.	I like sharing my ideas with friends.	1	2	3
B19.	Homework should be given everyday to students like me.	1	2	3
B20.	I like leading class activities.	1	2	3
B21.	Helping other students or younger children learn helps me learn as well.	1	2	3
B22.	The subjects I am learning at school will be important for me later in my life.	1	2	3
B23.	I plan to attend secondary school someday.	1	2	3

The following statements are about what you think about young children. For each statement, please tell us if you agree or disagree with it. Circle one number for each statement.

		Disagree	Not Sure	Agree
C1.	It is important for young children to learn about their new school before they go to first grade.	1	2	3
C2.	It is a waste of time to teach young children before they go to first grade because they are too young to learn.	1	2	3
C3.	Young children will have better marks in first grade if they know most letters of the alphabet before they begin school.	1	2	3
C4.	Young children will have better marks in first grade if they have already learned a little bit of mathematics before they go to first grade.	1	2	3

SECTION II

Think about the Getting Ready for School programme that you participated in this year as a Young Facilitator. For each statement, tell us if you agree with it.

		Disagree	Not Sure	Agree
D1.	The activities we did were interesting to me.	1	2	3
D2.	I liked doing the activities with the younger children.	1	2	3
D3.	Younger children listened to me and asked me questions.	1	2	3
D4.	Teacher(s) gave me clear instruction how to work with the young children on the activities.	1	2	3
D5.	The materials I used to work with the young children were too hard for me to understand.	1	2	3
D6.	The children's materials given to were too difficult.	1	2	3
D7.	Participating in this programme took too much away from my studies.	1	2	3

Think about all the activities you have done with your young children in the Getting Ready for School programme and answer the following questions. Please write as much as you would like.

D8. How often did you work with your young children outside of school?
  Circle *one* of the options.

  A. Everyday
  B. 2-3 times a week
  C. A few times a month
  D. A few times a semester
  E. Never

D9. Think about the *home activities* that you have done with your young children. What were your *favourite home activities?*

D10. Think about all the activities you have done with the young children, *what activities did you like the most?*

D11. What have you learned from this program?

D12. Will you tell your friends to join the same programme if it is offered next year? *Why or Why Not?*

Thanks for your time and inputs!!

Appendix A-6: Teacher Outcome Survey

Dear Teachers:

Thanks for participating in the study. You were asked to fill out a survey a few months ago. Now we would like to complete another survey that is very similar to the first one.

There are no right or wrong answers to these questions. All the information is confidential. Your participation is voluntary and appreciated.

If you are a First Grade teacher, please remember to fill out the additional section on pages 5 and 6.

BACKGROUND INFORMATION

A. Today's Date: _____/_____/_____ Day/Month/Year

B. Your Name: _____

C. School Name: _____

D. Gender: *(check one):* □ Male   □ Female

E. What grade are you teaching: *(check all that apply)*

□ Grade 1   □ Grade 2   □ Grade 3   □ Grade 4   □ Grade 5   □ Grade 6

□ Grade 7   □ Grade 8   □ Grade 9   □ Other (please specify): _____

F. How many years have you taught: _____ Years

G. What is the highest level of education you have completed: *(check one)*

□ <<ISCED 1 >>

□ <<ISCED 2 >>

□ <<ISCED 3 >>

□ <<ISCED 4 >>

□ <<ISCED 5 >> or higher

Countries: Replace what is in << >> with the appropriate term for each ISCED level in your country. See the ISCED document provided.

H. Do you live in the same community as this school: *(check one)*

□ Yes   □ No

SECTION I: TEACHING AND LEARNING

Based on your experience, for each statement please say how much it is true for you. Circle one number for each statement.

		Not at All True	A Little Bit True	Mostly True	Very True
1.	Classroom learning is most effective when based primarily on lectures, with students responding when called on.	1	2	3	4
2.	Teachers should give feedback to students on assignments to help them improve their work.	1	2	3	4
3.	It is best when students work on assignments alone to show how much they know.	1	2	3	4
4.	All students should be helped to participate in class discussions.	1	2	3	4
5.	Teachers know more than students. They should just explain the facts to students.	1	2	3	4
6.	Teachers should give students problems with specific, correct answers and ideas.	1	2	3	4
7.	When students talk with each other during class time they disrupt the flow of class and the learning of other students.	1	2	3	4
8.	When students work on projects without the teacher being involved they usually learn "incorrect knowledge."	1	2	3	4
9.	Students also learn important information outside the classroom.	1	2	3	4
10.	The teacher's role is to help all students in their class be successful.	1	2	3	4
11.	Allowing students to talk about their ideas in class takes time away from learning.	1	2	3	4
12.	Teachers should not spend too much time helping students at the bottom of the class. It takes too much time away from the good students.	1	2	3	4
13.	Teachers should give more time to the best students in the class.	1	2	3	4
14.	Students have better academic achievement in classrooms where the teacher encourages students to participate.	1	2	3	4
15.	It is the teacher's responsibility to find a way to meet the learning needs of every student in the class.	1	2	3	4

SECTION II: SCHOOL READINESS SKILLS

Based on your experience, please indicate how important you think it is for a child to have each of the following skills __before__ he or she begins first grade. Circle one number for each statement.

		Not at All Important	Not Important	Somewhat Important	Very Important
Language and Books					
l1.	know some letters	1	2	3	4
l2.	read some words	1	2	3	4
l3.	write own name	1	2	3	4
l4.	sing songs and rhymes	1	2	3	4
l5.	listen to and talk about stories	1	2	3	4
l6.	express ideas through drawings	1	2	3	4
Mathematics					
m1.	count from 1 to 10	1	2	3	4
m2.	recognise and name shapes	1	2	3	4
m3.	sort objects by size and shape	1	2	3	4
m4.	make simple patterns	1	2	3	4
m5.	use objects to solve simple addition and subtraction problems	1	2	3	4
Fine and Gross Motor Skills					
f1.	use crayons	1	2	3	4
f2.	move body to different patterns and rhythms	1	2	3	4
f3.	perform simple routines independently (e.g., brushing teeth, getting dressed, etc.)	1	2	3	4
Behavioural Skills					
b1.	participate in games with others	1	2	3	4
b2.	listen to and follow instructions	1	2	3	4
b3.	play well with other children	1	2	3	4
b4.	take turns and share materials	1	2	3	4

	Not at All Important	Not Important	Important	Very Important
Social Emotional Skills				
s1. is confident	1	2	3	4
s2. is curious and likes to learn about new things	1	2	3	4
s3. try different ways to solve a problem	1	2	3	4
s4. understand others' feelings	1	2	3	4

SECTION III*: Parent Involvement*

Based on your experience, how important it is for parents to be involved in the following ways? Circle one number for each.

	Not at All Important	Not Important	Important	Very Important
Parental Involvement				
p1. Parents should read story books with their children regularly before they begin first grade.	1	2	3	4
p2. Parents should play counting games with their children regularly before they begin first grade.	1	2	3	4
p3. Parents should play with their children (for example: singing songs, free play, etc.) regularly.	1	2	3	4
p4. Parents should teach their children how to read before they begin first grade.	1	2	3	4
p5. Parents should encourage their children to play with peers before they begin first grade.	1	2	3	4
p6. Parents should help their children feel comfortable about going to school before they begin first grade.	1	2	3	4

If you are a <u>FIRST GRADE</u> teacher, please <u>CONTINUE</u> to the next page.

If you are <u>NOT</u> a First Grade teacher, please STOP here and turn in the survey. Thank you for helping us.

SECTION IV: EXPECTATIONS ABOUT INCOMING FIRST GRADE STUDENTS

How prepared do you think your incoming first grade students will be in terms of the following skills? Circle one number for each skill. The four-point scale is a continuous scale where 1 indicates that the students will not have the skill at all and 4 indicates that the students will be well prepared in that skill.

		Don't Have the Skill ← - - - → Well Prepared			
		1	2	3	4
Language and Books					
l1.	know some letters (note for China: need to adapt this item)	1	2	3	4
l2.	read some words	1	2	3	4
l3.	write own name	1	2	3	4
l4.	sing songs and rhymes	1	2	3	4
l5.	listen to and talk about stories	1	2	3	4
l6.	express ideas through drawings	1	2	3	4
Mathematics					
m1.	count from 1 to 10	1	2	3	4
m2.	recognise and name shapes	1	2	3	4
m3.	sort objects by size and shape	1	2	3	4
m4.	make simple patterns	1	2	3	4
m5.	use objects to solve simple addition and subtraction problems	1	2	3	4
Fine and Gross Motor Skills					
f1.	use crayons	1	2	3	4
f2.	move body to different patterns and rhythms	1	2	3	4
f3.	perform simple routines independently (e.g., brushing teeth, getting dressed, etc.)	1	2	3	4
Behavioural Skills					
b1.	participate in games with others	1	2	3	4
b2.	listen to and follow instructions	1	2	3	4
b3.	play well with other children	1	2	3	4
b4.	take turns and share materials	1	2	3	4

	Don't Have the Skill ← - - - - → Well Prepared			
	1	2	3	4
Social Emotional Skills				
s1. is confident	1	2	3	4
s2. is curious and likes to learn about new things	1	2	3	4
s3. try different ways to solve a problem	1	2	3	4
s4. understand others' feelings	1	2	3	4

Appendix A-7: School Head Interview

Instructions for Data Collectors: This questionnaire is designed to be read aloud to the school director. Please read the greeting, instructions, questions, and response options aloud. For the open-ended questions in the last section, please record the school director's answers in <u>as much detail as possible</u>. Use the provided prompts for each open-ended question to obtain in-depth information.

Greeting to School Director: Thank you for taking the time to meet with me. As the Getting Ready for School (GRS) programme has approached the end of the first year of implementation, we would like to gather some valuable information from you to help us better understand how the programme has worked in your school. I will ask some questions about 1) the resources of early childhood education in the community, and 2) your view of the GRS programme. There are no right or wrong answers to these questions. All the information is confidential. Your participation is voluntary and much appreciated.

BACKGROUND INFORMATION
A. Today's Date: _____/_____/_____ Day/Month/Year
B. School Director Name: _____
C. School Name: _____
D. School Director Gender: *(check one):*   □ Male   □ Female
E. How many years have you been in this school? _____ Years
F. How many years have you been in this school *as a school director*? _____ Years
G. What is the highest level of education you have completed: *(check one)*
□ << ISCED 1 >>   □ << ISCED 2 >>   □ << ISCED 3 >>   **Countries: Replace what is in << >> with the appropriate term for each ISCED level in your country. See the ISCED document provided.**   □ << ISCED 4 >>   □ << ISCED 5 >> or higher
H. Do you live in the same community as this school: *(check one)*   □ Yes   □ No

SECTION 1: SURVEY QUESTIONS

Based on your observation or experience, for each statement please answer "Yes" or "No".

Note for Data Collector: Please circle School Director's answer for each statement.

Item		Yes	No
1.	Besides this GRS program, there are other opportunities for pre-primary aged children to receive educational programs in this community.	1	0
2.	The community provides a sufficient number of programs that support families with young children.	1	0
3.	When your school staff first learned about the Getting Ready for School program, the idea was well communicated to you.	1	0
4.	The idea and philosophy of the Getting Ready for School programme was well communicated to the parents.	1	0
5.	The Getting Ready for School programme strategy to pair older children (Young Facilitators) with younger children worked well in our school.	1	0
6.	The older children (Young Facilitators) in the school were enthusiastic about the programme during the implementation period.	1	0
7.	The teachers who participated in the programme were enthusiastic about the programme during the implementation period.	1	0
8.	The teachers who did not participate in the programme were interested in knowing more about the programme.	1	0
9.	Implementing this programme took too much time away from teachers' routine teaching responsibilities.	1	0
10.	This programme should be implemented in more schools.	1	0
11.	This community has official policies on early childhood education that benefit the community.	1	0
12.	There are suitable places in this community to hold educational activities for pre-primary children.	1	0
13.	Most parents in this community are comfortable with letting their pre-primary aged children participate in educational activities.	1	0
14.	Our education system here communicates its achievements and goals with the community on a regular basis.	1	0

SECTION 2: OPEN-ENDED QUESTIONS

Now I am going to ask you some questions that would need you to elaborate your answers in more depth. Please take the time to tell me all of your thoughts about the topic you are asked about.

Note for Data Collector: Please write down the school director's answers in <u>as much as details as possible</u>. You may jot down some notes during the interview and add the details after the interview is completed. During the interview, if the school director provides very brief answers to the questions, please use the prompts associated with each question to elicit rich information.

Question 1: What are the *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 GRS program? 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 program? Did the community members increase their awareness of early childhood education?

Response:

Question 2: What have been the *barriers* to implementing the GRS 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.

Response:

Question 3: Has the implementation of the Getting Ready for School programme changed the way your school reaches out to parents and community members? *If the answer is yes, ask about what were the differences and ask for concrete examples.*

Response:

Question 4: Has technical support you've received from UNICEF or its partners in the area of Getting Ready for School been well designed to suit the needs of your school and the community? Please give some examples.

Possible prompts: In the future, what additional support would you like to receive from UNICEF or its partners to make the programme successful?

Response:

Question 5: Is your school planning to involve more young children in the Year 2 programme implementation? *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.*

Response:

Question 6: Would you recommend this programme to the Ministry of Education so that the programme can be implemented nationwide? *If the answer is "Yes", ask why. If the answer is "No", ask why not.*

Response:

Question 7: Do you think that the GRS programme is sustainable in this community?

Possible Prompts: If <u>yes</u>, what aspects of the GRS programme make it sustainable in this community? If <u>no</u>, what aspects of the GRS 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 GRS programme to make it more sustainable?

Response:

Thanks for your time and all the inputs!!

Appendix A-8: Community Leader Interview

Instructions for Data Collectors: This questionnaire is designed to be read aloud to the community leader. Please read the greeting, instructions, questions, and response options aloud. For the open-ended questions in the last section, please record the community leader's answers in <u>as much detailed as possible</u>. Use the provided prompts for each open-ended question to obtain in-depth information.

Greeting to School Director: Thanks for taking the time to meet with me. We are working on a study to learn more about how to help young children get ready for school. This study is being conducted in six countries in different regions of the world. It is important to get information from community leaders like you. You will help us understand what we can do for young children in communities like yours to help them to be prepared for school. In the following 30-45 minutes, I will ask some questions about 1) your community in general, and 2) resources and policy of early childhood education in the community. There are no right or wrong answers to these questions. All the information is confidential. Your participation is voluntary and much appreciated.

BACKGROUND INFORMATION
A. Today's Date: _____/_____/_____ Day/Month/Year
B. School Name: _____
C. Community Leader Name: _____
D. Community Leader Gender: *(check one):*   □ Male   □ Female
E. How many years have you lived in community? _____ Years
F. What is the community leader's role in the community?   _____   *Note for data collector: Describe the community leader's role and fill in Question F. The community leader could be a chair of PTA, a village elder, a district education officer, a local NGO, etc.*

SECTION I: SURVEY QUESTIONS

Based on your observation or experience, for each statement please answer "Yes" or "No".

Note for the Data Collector: Please circle School Director's answer for each statement. If the interviewee's answer is "Don't Know" for a statement, circle the "NA" option.

Item		YES	No	Don't Know or Not Applicable
1.	There are sufficient opportunities for pre-primary aged children to receive educational programs in this community.	1	0	NA
2.	The community is able to provide a sufficient number of programs to support families with young children.	1	0	NA
3.	There are a sufficient number of teachers with the proper training in pre-primary education in this community.	1	0	NA
4.	This community has official policies on early childhood education that benefit the community.	1	0	NA
5.	There are suitable places in this community to hold educational activities for pre-primary children.	1	0	NA
6.	Most people in this community believe that structured early childhood education is not necessary.	1	0	NA
7.	Most parents in this community are comfortable with letting their pre-primary aged children participate in educational activities.	1	0	NA
8.	Most people in this community think that you can only trust qualified teachers to educate young children.	1	0	NA
9.	Our education system here communicates its achievements and goals with the community on a regular basis.	1	0	NA

SECTION II: OPEN-ENDED QUESTIONS

Now I am going to ask you some questions that would need you to elaborate your answers in more depth. Please take the time to tell me all of your thoughts about the topic you are asked about.

Note for the Data Collector: Please write down the interviewee's answers in as much as details as possible. You may write down some notes during the interview and add the details after the interview is completed. During the interview, please use the prompts associated with each question to elicit rich information from the interviewee.

Question 1: In your community, what types of educational opportunities exist for pre-primary aged children? *If there are NO such educational opportunities in the community, ask what would need to change to have early childhood educational programs (probe for attitudes, funding, infrastructure issues, etc.). Ask whether there were any programs in the past and (if so) what happened to them – why they went away.*

Response:

Question 2: In your community, have you observed any *attitude or behaviour* changes in community members towards the value of early childhood education because of the GRS program?

Possible prompts: How much did the community members know about the GRS program? Did the GRS programme increase community members' awareness of early childhood education? Please give some examples.

Response:

Question 3: Are there any **formal (written)** policies on early childhood education in your community? *If yes, ask what the policy is, and whether the community is able to follow/implement the policy. If able to implement, ask what impact this policy has on what happens in the community. If <u>not</u>, ask why the community is not able to implement the policy (or does not wish to do so).*

Response:

Question 4: Are there any **informal policies (i.e., practices/arrangements)** on early childhood education in your community? By "informal," we mean generally accepted rules/practices/arrangements or ways of doing things in the community that have not been written down or made official. For example, a group of parents voluntarily teach pre-primary aged children how to read on weekends. *If yes, ask what the policy is, where it came from, and what impact this informal policy has on what happens in the community.*

Response:

Question 5: If there are formal or informal policies (practices/arrangements) on early childhood education in the community, do you think they benefit **all** types of children and families? *If the answer is "Yes", ask for some example. If the answer is "No", ask why not.*

Response:

Question 6: Do you think that this community needs any new policies regarding early childhood education? If yes, what would you recommend, and why?

Response:

Question 7: Do you think that the GRS programme is sustainable in this community?

Possible Prompts: If <u>yes</u>, what aspects of the GRS programme make it sustainable in this community? If <u>no</u>, what aspects of the GRS 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 GRS programme to make it more sustainable?

Response:

Thanks for your time and all the inputs!

Appendix B: Description of Scales

Table B-1 Importance of School Readiness items

Literacy

It is important that the child knows some letters.

It is important that the child can read some words.

It is important that the child can write their own name.

It is important that the child can sing songs and make rhymes.

It is important that the child can express ideas through drawings.

Mathematics

It is important that the child can count from 1 to 10.

It is important that the child can recognise and name shapes.

It is important that the child can sort objects by size and shape.

It is important that the child can make simple patterns.

It is important that the child can use objects to solve simple addition and subtraction problems.

Motor Skills

It is important that the child is able to use crayons.

It is important that the child knows how to move their body to different patterns and rhythms.

It is important that the child can perform simple routines independently (e.g., getting dressed)

Behaviour

It is important that the child can participate in games with others.

It is important that the child can listen to and follow instructions.

It is important that the child plays well with other children.

It is important that the child can take turns and share materials.

Behaviour

It is important that the child is confident.

It is important that the child is curious and likes to learn about new things.

It is important that the child can try different ways to solve a problem.

It is important that the child understands others' feelings.

Table B-2 Grade One Teacher Expectations for School Readiness items

Literacy

I expect that the children will know some letters.

I expect that the children will be able to read some words.

I expect that the children will be able to write their own names.

I expect that the children will be able to sing songs and make rhymes.

I expect that the children will be able to express ideas through drawings.

Mathematics

I expect that the children will be able to count from 1 to 10.

I expect that the children will be able to recognise and name shapes.

I expect that the children will be able to sort objects by size and shape.

I expect that the children will be able to make simple patterns.

I expect that the children will be able to use objects to solve simple addition and subtraction problems.

Motor Skills

I expect that the children will be able to use crayons.

I expect that the children will know how to move their bodies to different patterns and rhythms.

I expect that the children will know how to perform simple routines independently (e.g., getting dressed)

Behaviour

I expect that the children will know how to participate in games with others.

I expect that the children will know how to listen to and follow instructions.

I expect that the children will know how to play well with other children.

I expect that the children will know how to take turns and share materials.

Social and Emotional learning

I expect that the children will be confident.

I expect that the children will be curious and like to learn about new things.

I expect that the children will be able to try different ways to solve a problem.

I expect that the children will be able to understands others' feelings.