



USAID
FROM THE AMERICAN PEOPLE

USAID Tusome Pamoja

Pre-primary Endline Assessment Report

September 2019

September 2019

This document was produced for review by the United States Agency for International Development (USAID). It was made possible by the support of the American people through USAID. It was prepared by RTI International for USAID/Tanzania Tusome Pamoja.

USAID Tusome Pamoja

Pre-primary Endline Assessment Report

Contract Period: January 12, 2016, through January 11, 2021

Contract Number: AID-621-C-16-00003

Prepared for

USAID/Tanzania

United States Agency for International Development

Office of Acquisition and Assistance

ATTN: Laura Kikuli, Contracting Officer's Representative

lkikuli@usaid.gov

Aaron Miles, Contracting Officer's Representative, alternate

E-mail: amiles@usaid.gov

686 Old Bagamoyo Road, Msasani

P.O. Box 9130

Dar es Salaam, Tanzania

Prepared by

RTI International

3040 E. Cornwallis Road

P.O. Box 12194

Research Triangle Park, NC 27709-2194

RTI International is one of the world's leading research institutes, dedicated to improving the human condition by turning knowledge into practice. Our staff of more than 5,000 provides research and technical services to governments and businesses in more than 75 countries in the areas of health and pharmaceuticals, education and training, surveys and statistics, advanced technology, international development, economic and social policy, energy and the environment, and laboratory testing and chemical analysis.

RTI International is a registered trademark and a trade name of Research Triangle Institute.

The authors' views expressed in this report do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

Table of Contents

List of Tables	iv
List of Figures	iv
1. Executive Summary	1
1.1 U.S. Agency for International Development’s USAID Tusome Pamoja Pre-primary Component	1
1.2 Evaluation Design and Methodology	1
1.3 Key Performance Indicators.....	2
1.3.1 School Readiness	2
1.3.2 Teaching and Learning Materials	3
1.3.3 Implementation.....	3
1.4 Key Findings and Recommendations	4
2. Background.....	6
2.1 USAID Tusome Pamoja Program	6
2.2 Pre-primary in Tanzania.....	7
2.3 USAID Tusome Pamoja Pre-primary Pilot Intervention	8
2.4 GOT Pre-primary Program.....	9
2.5 Evaluation Approach.....	9
2.6 Key Performance Indicators.....	10
3. Methodology: Sample Design and Instruments	12
3.1 Sample.....	12
3.1.1 Population and List Framework.....	12
3.1.2 Sample Description	12
3.1.3 Basic Demographics	13
3.2 Instruments	14
3.2.1 Overview of School Readiness Assessment.....	14
3.2.2 Overview of Classroom Instruments.....	17
3.2.3 Supplementary Interviews	17
3.3 Evaluation Limitations and Qualitative Follow-up Study	17
3.3.1 Subtask Limitations	17
3.3.2 Timing of Data Collection	17
3.3.3 Follow-up Qualitative Study.....	17
4. Key Performance Indicators	18
4.1 Teaching and Learning Materials and Implementation: KPIs P-011a Through P-011c.....	18
4.2 School Readiness: KPIs P-012a and P-012b	18
5. School Readiness Skills	19
5.1 Findings by Subtask.....	21
5.1.1 Expressive Vocabulary.....	21
5.1.2 Listening Comprehension.....	22
5.1.3 Letter Name Knowledge.....	22
5.1.4 Empathy	23
5.1.5 Number Identification	24
5.1.6 Producing a Set.....	24
5.1.7 Verbal Counting.....	24
5.1.8 Backward Digit Span	24
5.1.9 Forward Digit Span.....	25

6. Implementation of the USAID Tusome Pamoja Pre-primary Program.....	25
6.1 Teaching and Learning Materials.....	25
6.2 Instruction	26
6.3 Engagement of Parents and Caregivers.....	31
6.4 Support by School Leadership.....	32
6.5 Gender Equity and Equality	32
7. Key Findings and Recommendations	33
8. References	38

List of Tables

Table ES-1. USAID Tusome Pre-primary Baseline and Endline Assessment Values for Pupil-Level KPIs: P-012a and P-012b	3
Table ES-2. USAID Tusome Pre-Primary Baseline and Endline Assessment Values for School-Level KPIs: P-011a Through P-011c	3
Table 1. Sample Counts for Baseline and Endline Assessments.....	13
Table 2. Pupil Demographic Information by Group for Baseline and Endline Assessments	13
Table 3. Pre-primary Teacher Demographics by Group for the Endline Assessment.....	14
Table 4. Descriptions of School Readiness Measure Subasks in the Endline Assessment	16
Table 5. USAID Tusome Pamoja Pre-primary Baseline and Endline Assessment Values for School-Level KPIs	18
Table 6. USAID Tusome Pre-primary Baseline Assessment and Endline Assessment Values for Pupil KPIs Means, Control versus Intervention Schools.....	19
Table 7. Difference in difference Analysis Between Intervention and Control Groups	19
Table 8. Percentages of USAID Tusome Pamoja Teachers Implementing Components of Read Aloud Activities in Classrooms	27
Table 9. Learning Centers Observed in the Classrooms.....	29

List of Figures

Figure 1. Difference in difference Scores and Effect Sizes for Each Subtask (Note: ES = effect size)	21
Figure 2. Percentages of Intervention Classrooms Contained USAID Tusome Pamoja Teacher’s Guides and Supplies for Teaching and Learning Aids	26
Figure 3. Percentage Changes from the Baseline Assessment to the Endline Assessment in Intervention Classrooms	30
Figure 4. Percentage Changes in Control Classrooms from the Baseline Assessment to the Endline Assessment	30

Figure 5. Teachers Reporting of Parental and Caregiver Engagement in Classroom Feeding Programs and Making Teaching and Learning Aids	31
Figure 6. Methods of Teacher Reporting to Parents and Caregivers About Child Learning and Behavior.....	32
Figure 7. Teachers' Agreement with Statements About Boys' and Girls' Reading and Mathematics Ability	33

Acronyms

3Rs	reading, writing, and arithmetic
AAM	Assessor Accuracy Measure
B1	original baseline assessment
B2	revised baseline assessment sample
CI	confidence interval
DC	District Council
ECD	early childhood development
ES	effect size
GOT	Government of the United Republic of Tanzania
HT	Head Teacher
KPI	key performance indicator
MC	Municipal Council
MCDGC	Ministry of Community Development, Gender and Children
MELQO	Measuring Early Learning Quality and Outcomes
MKUKUTA	Second Growth and Poverty Reduction Program in Tanzania (<i>Mpango wa Pili wa Kukuza Uchumi na Kuondoa Umaskini Tanzania</i>)
MODEL	MELQO Child Development and Learning
MoEST	Ministry of Education, Science and Technology
NSGRP	National Strategy for Growth and Reduction of Poverty
PO-RALG	President's Office—Regional Administration and Local Government
PPS	probability proportional to size
SQA	School Quality Assurer
TC	Town Council
TIE	Tanzania Institute of Education
USAID	United States Agency for International Development
WEC	Ward Education Coordinator
WEO	Ward Education Officer

1. Executive Summary

1.1 U.S. Agency for International Development's USAID Tusome Pamoja Pre-primary Component

Providing early learners with the foundational skills needed for primary school entry allows for later success (Aboud & Hossain, 2011; Aboud, Hossain, & O'Gara, 2008; Berlinski, Galiani, & Gertler, 2009). The Government of the United Republic of Tanzania (GOT) has recently supported early learning by implementing a new policy that provides one compulsory and fee-free year of pre-primary education. In addition, the GOT has developed a new pre-primary curriculum designed to increase school readiness among pupils entering Standard 1 and has trained pre-primary teachers about using developmentally appropriate practices in their classrooms. The U.S. Agency for International Development (USAID) Tusome Pamoja Program (henceforth referred to as USAID Tusome Pamoja) has supported many agencies with effectively implementing the new curriculum at the pre-primary level. Some of these agencies include the Ministry of Education, Science and Technology (MoEST); the President's Office–Regional Administration and Local Government (PO-RALG); and the Tanzania Institute of Education (TIE). USAID Tusome Pamoja accomplished this task by providing teaching and learning materials and continuous professional development in two school districts in the Mtwara Region.

The USAID Tusome Pamoja pre-primary intervention was initially conceived as a pilot to demonstrate the importance of an approach that emphasized school readiness and developmentally appropriate teaching methodologies for pre-primary pupils. The expectation was that this intervention would serve as a model to be replicated throughout the Mtwara Region and in other regions. During the initial design of USAID Tusome Pamoja, TIE personnel completed the curriculum for primary schools. Shortly after the data collection effort was completed for the USAID Tusome Pamoja baseline assessment, TIE personnel rolled out its curriculum, teaching and learning materials, and training of pre-primary teachers throughout the Mtwara Region. The rollout of the actual curriculum, teaching and learning materials, and training affected the design, implementation, and results of the pre-primary pilot, which will all be discussed throughout this report.

1.2 Evaluation Design and Methodology

The USAID Tusome Pamoja team designed the impact evaluation to determine the change in school readiness among pupils entering Standard 1 after two years of implementing the USAID Tusome Pamoja pre-primary intervention, as well as to provide information about current teaching practices and learning environments in pre-primary classrooms in the pilot districts (i.e., Tandahimba, Mtwara District Council [DC], Nanyamba, and Newala DC) of the Mtwara Region.

The team designed the evaluation to answer the following research questions:

- Is the USAID Tusome Pamoja pre-primary program increasing school readiness among pupils entering Standard 1?
- Has the quality of teachers' implementation of the USAID Tusome Pamoja pre-primary program increased over time?
- Has the quality of learning environments in intervention schools improved because of the USAID Tusome Pamoja pre-primary program?

Specifically, the impact evaluation compares the outcomes of baseline and endline assessments of children between the groups to determine whether the program has

achieved the intended effects regarding school readiness. The USAID Tusome Pamoja team can also use the results from the impact evaluation to track changes in teaching and pupil performance over time, for comparisons of key performance indicators (KPIs) and to address research questions.

It should be noted that the scope of the impact evaluation decreased from the baseline assessment in January 2017 to the endline assessment in January 2019. For the baseline assessment, the sampling framework included a third group, pupils without pre-primary education. The expectation was to compare the gains of Standard 1 pupils in pre-primary education with those without pre-primary education. It is important to note that the GOT decided to make pre-primary participation universal in all government-supported schools; therefore, the team decided not to include the third group in the endline assessment. As a result, the USAID Tusome Pamoja team decreased the number of schools included in the endline assessment sample from 120 to 64. Intervention schools were in the Tandahimba and the Mtwara DC Districts. Control schools were in Nanyamba, the Newala Town Council (TC), the Newala DC, and the Mtwara Municipal Council (MC) Districts. The USAID Tusome Pamoja team randomly selected the final sample of 871 pupils from 32 intervention schools and 32 control schools. The overall pupil sample consisted of slightly fewer boys (413 [47.5%]) than girls (458 [52.6%]), and the average pupil was aged six years, seven months. The USAID Tusome Pamoja team collected data for the endline assessment at the beginning of the school year by using pupil assessments, teacher interviews, and classroom observations, which were all adapted, tested, and used for the baseline assessment, but were revised slightly for the endline assessment data collection.

This report also includes findings from a small qualitative follow-up study conducted in August 2019. The objective of the follow-up study was to assess whether pre-primary teachers were applying practices in 2019 that were not observed during the data collection effort of the endline assessment in January 2019 because the timing of gathering data coincided with the start of the school year and reception of new pupils.

1.3 Key Performance Indicators

The evaluation measured KPIs¹ regarding school readiness (literacy and numeracy), the availability of teaching and learning materials, and teacher practice in USAID Tusome Pamoja pre-primary classrooms. The KPI values for the baseline and endline assessments are summarized in this section of the report.

1.3.1 School Readiness

The USAID Tusome Pamoja team compared baseline and endline assessment scores of pupils in Standard 1 to determine the percentage point increases in letter recognition (KPI P-012a) and in listening comprehension (KPI P-012b) after teachers implemented the intervention for two years. **Table ES-1** shows a statistically significant increase in listening comprehension ability from the baseline assessment to the endline assessment. However, pupils' letter recognition scores decreased from the baseline assessment to the endline assessment.²

¹ For definitions of the KPIs used in the endline assessment, see **Section 4.1** of this report.

² As discussed later in this report, this finding is not surprising because the TIE curriculum excluded "letter names" from the curriculum and emphasized "letter sounds."

Table ES-1. USAID Tusome Pamoja Pre-primary Baseline and Endline Assessment Values for Pupil-Level KPIs: P-012a and P-012b

KPI	Subtask Score	Baseline Assessment		Endline Assessment	
		Mean Percentage	Margin of Error	Mean Percentage	Margin of Error
P-012a	Letter recognition score (percentage)	12.9%	±1.9	11.7%	±2.6
P-012b	Listening comprehension score (percentage) ^a	27.9%	±3.7	45.3%	±3.9

^a $p < 0.0$

1.3.2 Teaching and Learning Materials

The percentage of classrooms containing at least one big book title (KPI P-011a) was measured in two ways: (1) by the proportion of pre-primary classrooms containing big books, and (2) by the proportion of teachers implementing read aloud activities of big books. It is important to note that when the baseline assessment was being conducted in January 2017, the MoEST had not yet distributed big books. **Table ES-2** shows that almost all of the classrooms contained big books by the endline assessment. The proportion of pre-primary teachers implementing read aloud activities on the day of data collection increased from 0.0% at the baseline assessment to 50.0% at the endline assessment.

1.3.3 Implementation

The proportion of pre-primary teachers providing engaging learning environments for pupils (KPI P-011b) was measured by the proportion of pre-primary teachers conducting circle time. The number of pre-primary teachers encouraging productive pupil–teacher interactions (KPI P-011c) was measured by the proportion of pre-primary teachers extending pupil conversation by asking who, what, when, where, why, and how questions. **Table ES-2** shows increases in P-011a and P-011b, but a decrease in P-011c. From the time of baseline assessment to the endline assessment, almost all classrooms had big books, and 50% of the teachers were observed to be using the big books to conduct read aloud activities. The proportion of teachers conducting circle time increased from 47.0% to 91.0%. However, the proportion of teachers extending pupil conversation by asking who, what, when, where, why, and how questions—an integral factor in increasing oral language skills in young children—did not increase from baseline assessment to endline assessment.

Table ES-2. USAID Tusome Pamoja Pre-Primary Baseline and Endline Assessment Values for School-Level KPIs: P-011a Through P-011c

KPI	Baseline Assessment Percentage	Endline Assessment Percentage
P-011a: Percentage of classrooms containing at least 1 big book title.	0.0%	90.6%
Did the teacher conduct a Read Aloud using a big book?	0.0%	50.0%
P-011b: Proportion of pre-primary teachers providing engaging learning environments for pupils.	46.9%	90.6%
P-011c: Teacher extends pupil conversation by asking who, what, when, where, why, and how questions.	53.1%	43.8%

1.4 Key Findings and Recommendations

This endline assessment report provides the performance assessment of the USAID Tusome Pamoja pre-primary program's effectiveness in terms of pupil school readiness and teacher implementation. Altogether, the endline assessment shows that USAID Tusome Pamoja pre-primary program is successful in many ways, but there still are some areas for improvement. The team recommended and later implemented a qualitative study in August 2019 to further measure actual practices occurring eight months into the pre-primary school year. The remainder of this section of the report presents the main findings of the endline assessment from January 2019 and the subsequent data collection from the qualitative follow-up study in August 2019, as well as associated recommendations from the USAID Tusome Pamoja team.

The USAID Tusome Pamoja pre-primary intervention has shown to improve school readiness skills beyond that of what pupils currently receive in government-supported pre-primary schools. Results from a difference in difference analysis showed that pupils who attended USAID Tusome Pamoja pre-primary classrooms demonstrated significant gains in pre-literacy, pre-numeracy, and executive function skills when compared with pupils who attended pre-primary classes in other government-supported schools. Specifically, the pupils in intervention schools showed increases in listening comprehension, numeracy operations, and working memory. However, importantly, pupils who attended non-Tusome Pamoja (control) government-supported schools also showed increases in school readiness. Prior to data collection for the baseline assessment in January 2017, TIE personnel conducted training for pre-primary teachers about how to implement the new pre-primary curriculum. It is likely that the training and curriculum implemented by the government has yielded positive impacts on school readiness skills of children attending pre-primary in specific districts of the Mtwara Region.

The decrease in letter name knowledge is likely because of the increase in scope of teaching to include other domains and competencies. Both the intervention and the control groups of pupils showed decreases in letter name knowledge. The new pre-primary curriculum and accompanying syllabus and teacher's guide developed by TIE expanded the scope of pre-primary education. The curriculum, syllabus, and teacher's guide now address all learning domains by using a thematic-based approach and creating space for teachers to expand and improve their instruction to other competencies. The focus was shifted from letter name recognition in pre-primary classes to phonemic awareness or to knowledge of letter sounds. This change in focus would explain the lower letter name knowledge of pupils.

There has been an increase in teachers' use of important developmentally appropriate instructional strategies, such as summarizing the day, making connections, and reviewing learning, and teachers implementing the USAID Tusome Pamoja pre-primary program use these strategies more than teachers in control schools. The endline assessment showed an marked increase in the number of teachers using strategies that will enhance the learning experience for young children. For example, at baseline 34.4% of teachers in intervention schools were reviewing learning at the beginning and end of the day compared to 81.3% and 93.8% at endline, respectively. The percentage of teachers making connections to things the students learned before increased from 31.3% to 87.5%. In control schools, the percentage of teachers implementing these strategies were much less or even decreasing.

Teachers may need additional support regarding how to extend conversations with children because this is a key strategy in encouraging oral language development. It

is possible that teachers may find it unnatural to engage in more conversation with their pupils during class time. To understand better how and why this may be challenging for teachers, teachers should be interviewed their use of this strategy. When the quality of children's verbal interactions with adults and peers increase, children expand their receptive and expressive vocabulary and can learn how to make connections between concepts.

Although the percentage of teachers conducting read-alouds were low at endline assessment, this is likely impacted by beginning of the school year activities. During data collection for the endline assessment in January 2019, the USAID Tusome Pamoja team observed that only 50.0% (16) of teachers conducted a read aloud activity during the day of data collection in USAID Tusome Pamoja–supported classrooms. Although the read aloud is one of the main components of the intervention, this level of occurrence was low. However, because the data collection coincided with the beginning of the school year and reception of new pupils, the occurrence of read aloud activities was measured again in August 2019. The findings from August 2019 indicated that most teachers conducted a read aloud activity four or five times per week and implemented most of the best practices associated with the activity.

Most USAID Tusome Pamoja pre-primary teachers have access to big books contained in the classroom. The data from the endline assessment indicate that 90.6% (35) of classrooms contained some number of big books contained in the classroom. The qualitative follow-up study in August 2019 investigated whether some big books were kept outside of the classroom for secure safeguarding. During interviews with teachers, some of them reported that big books are not generally stored in the classroom; instead, the books are brought into the classroom only for the day's lesson. Otherwise, the big books are securely stored in the Head Teacher's office or occasionally in the library, if one exists. Classes visited in August 2019 had varying numbers for titles both in the classroom and accessible in the Head Teacher's office. The following two recommendations can help ensure more books are provided in classrooms and are securely stored:

- Book distribution from the District Education Office, where complete sets of big books were received, should be more closely monitored in the future.
- Communities are encouraged to collaborate with schools to build locked cabinets in each classroom that can be used to store books.

Teachers are using the learning centers and most have the USAID Tusome Pamoja teachers' guides. Although not all intervention classrooms included learning centers, when they were present (14 [43.8%]) , all teachers were observed using them, including those classes conducted outdoors (mobile learning centers). Additionally, a large proportion (10 [71.4%]) of those teachers using them were actively facilitating learning. This finding show promise in this component of the USAID Tusome Pamoja pre-primary program, including training of teachers regarding the effective use of learning centers. Findings from the observation showed that most of the intervention classrooms (25 [78.1%]) had the USAID Tusome Pamoja pre-primary teacher's guide.

Although the learning centers had not yet been implemented before the January 2019 endline assessment occurred, findings from the follow-up study in August 2019 showed that all classroom learning centers were established and in use in the classrooms visited. The challenges that teachers experience when creating learning centers, specifically for classrooms without a physical space and during the rainy season, must be explored. Addressing these challenges will ensure successful

implementation of this promising activity and provide a place where this practice can occur in schools without a physical classroom for pre-primary pupils.

Parental and caregiver engagement in classroom feeding programs and development of teaching and learning materials had not begun in the beginning of the year. Based on the findings from the January 2019 endline assessment, few teachers reported that parents had begun supporting the pre-primary classroom with contributions of food and teaching and learning materials in the classroom. Based on the findings from teacher interviews, parents and caregivers were not yet mobilized in January 2019 when the endline assessment was conducted. In August 2019, all teachers reported receiving active support from parents and caregivers in their schools.

According to teachers, school and district leadership have provided support in helping them learn how to implement the USAID Tusome Pamoja pre-primary program. All teachers except for one reported that the Head Teacher, the Ward Education Officer (WEO), or the School Quality Assurer (SQA) provided support with implementing the program. The USAID Tusome Pamoja Program instituted training sessions for school leadership, which has promised to help with fidelity to the program and to buffer against the challenges of teacher transfer from control schools to intervention schools.

Teachers reported balanced gender beliefs about girls' and boys' learning. The endline assessment included questions to determine teachers' beliefs about ease in teaching boys and girls reading and writing and in boys' and girls' ability to perform mathematics. Most teachers showed balanced gender beliefs regarding reading and writing (81.3%) and mathematics (71.9%).

2. Background

2.1 USAID Tusome Pamoja Program

The U.S. Agency for International Development (USAID) Tusome Pamoja Program (henceforth referred to as USAID Tusome Pamoja) is a five-year (2016–2021) effort. The program is designed to provide technical assistance and resources to the Government of the United Republic of Tanzania (GOT) to strengthen the reading, writing, and arithmetic (3Rs) performance of Tanzanian pupils in Standards 1 through 4 and to pilot pre-primary interventions. The program is implemented in four regions in Mainland Tanzania (i.e., Iringa, Morogoro, Mtwara, and Ruvuma) and in Zanzibar. There are two primary objectives of USAID Tusome Pamoja. The first objective is to increase the percentage of pupils who, after two years of schooling, can read and comprehend grade-level text, encode simple sentences, and solve grade-level arithmetic problems (measured in all content areas). The second objective is to increase the percentage of pupils who, after four years of schooling, can read and comprehend grade-level text, respond to simple writing prompts, and solve grade-level arithmetic problems (measured in two content areas).

To achieve the objectives, USAID Tusome Pamoja aims to achieve the following three key results:

1. Quality of early grade basic skills instruction improved
2. Skills delivery and assessment systems strengthened
3. Effective engagement in education of caregivers and community.

In addition to the main work previously described, the USAID Tusome Pamoja team implemented a pilot activity over two years to demonstrate the importance of pre-

primary education for young pupils to improve their readiness to enter primary school. During program design, the Ministry of Education, Science and Technology (MoEST) and the Tanzania Institute of Education (TIE) implemented a new curriculum (described in Section 2.4) through the development of teaching and learning materials and continuous professional development mechanisms. USAID Tusome Pamoja implementation was adjusted to support this government initiative. The USAID Tusome Pamoja Program provided four training sessions to pre-primary teachers in two districts, 24 big book (storybook) titles to each classroom, and a teacher's guide to each USAID Tusome Pamoja teacher. This report discusses the impacts of the two-year pilot intervention conducted in the Mtwara Region.

2.2 Pre-primary in Tanzania

Early on in its independence, Tanzania recognized the importance of early learning, as reflected in several of its national policies. In the 1970s and 1980s, Tanzania made efforts to build the capacity of daycare center and nursery school attendants. In the early 1990s, the Ministry of Education and Culture started providing guidelines for the registrations of pre-primary schools, training of pre-primary teachers, inspections of facilities, and development of curricula.

In 1995, GOT formalized, systematized, and integrated in the formal school system a pre-primary education curriculum for pupils aged five to six years. The Education and Training Policy of 1995 emphasized “partnership in the provision of education and training” between government, communities, non-governmental organizations, and private enterprises, as well as targeting pupils aged five to six years only for pre-primary education efforts. The recently established Education and Training Policy of 2014 stipulates that basic education, including pre-primary education, is compulsory. As a follow-up to this provision, the newly elected Presidents of Mainland Tanzania and Zanzibar declared free basic education for pupils beginning with the 2015–2016 academic year. According to the Education and Training Policy of 1995, each primary school in both Mainland Tanzania and Zanzibar is expected to open a pre-primary classroom.

Since the formalization of pre-primary education, the GOT and other education stakeholders have heavily invested in promoting pre-primary education. For example, the GOT has included early childhood development (ECD) in the National Strategy for Growth and Reduction of Poverty (NSGRP). The NSGRP is better known as the Second Growth and Poverty Reduction Program in Tanzania (*Mpango wa Pili wa Kukuza Uchumi na Kuondoa Umaskini Tanzania* [MKUKUTA]). The GOT has also

- Committed itself to the development of an integrated ECD policy to address the needs of young pupils
- Included and budgeted for pre-primary education through capitation grants in the Primary Education Development Plan introduced in 2001
- Piloted the Joint Inter-sectoral ECD Service Delivery Initiative of 2007 to develop and implement low-cost models of integrated family- and community-based early childhood care and education.

The GOT is committed to better preparing pupils for primary school by improving access to and the quality of pre-primary education. A new governance structure is now in place to scale up ECD services. The Ministry of Community Development, Gender and Children (MCDGC) is the official coordinating ministry for ECD, but “focal points” in other relevant ministries and agencies have been established and are responsible for working with government counterparts and other stakeholders to advance ECD in Tanzania. Some of the established focal points include the MoEST, the Ministry of Health and Social Welfare, the Ministry of Finance, and the

President's Office—Regional Administration and Local Government (PO-RALG). Although the MCDGC is the ministry for coordinating ECD, it does not have a specific budget allocation or dedicated staff, which could complicate its ability to fulfill its mandate.

According to the Pre-primary Education and Curriculum Syllabus published by TIE in 2016, pre-primary education is now officially considered to be the first level of education in Tanzania. The curriculum, launched in 2017, is competency-based, inclusive, and intended to aid each child's development physically, cognitively, socially, and emotionally. During January 2017, teachers were trained on how to implement the curriculum in the classroom by using developmentally appropriate techniques.

This training significantly affected the outcomes of the pre-primary intervention, which was based on a comparison of intervention and control schools. As a result of the GOT initiative, control schools also received substantial support. The next section of this report outlines the differences between the government and USAID Tusome Pamoja support for pre-primary classrooms and teachers.

2.3 USAID Tusome Pamoja Pre-primary Pilot Intervention

Providing a rich environment to young children that is full of opportunities to learn holistically across learning domains is generally agreed to be the best approach to early education. Children participating in pre-primary programs that provide these opportunities, matched with healthy caregiving in their home environments, show better school and life outcomes than children who do not receive those experiences and opportunities.

Research focusing on early learning programming also shows that experiences with text and oral language greatly impact later reading skills, which is fundamental for learning other competencies. Emergent literacy activities (e.g., oral stories paired with a storybook with pictures, read aloud activities) can create the path to greater literacy outcomes. The effective use of read aloud activities can facilitate uptake of new vocabulary, encourage critical thinking skills, support listening comprehension, and strengthen cognitive abilities such as attention. Classrooms with robust numbers of other teaching and learning materials provide ample opportunities for learning. For instance, counters can be used for early numeracy and manipulatives to show concepts such as size, color, and use. In classrooms with large numbers of pupils, teachers can employ a variety of child-centered instructional strategies, such as use of learning centers and small group practice, to provide quality learning experiences for children, while offering classroom management advantages for teachers.

The USAID Tusome Pamoja pre-primary pilot in Tandahimba, the Mtwara DC, Nanyamba, and the Newala DC Districts was designed to increase children's preparedness for school and schools' preparedness for children. Teachers received four training sessions during which they learned how to conduct read aloud activities, how to facilitate learning centers, and how to use developmentally appropriate teaching strategies to engage children in quality learning interactions in the classroom. The read aloud activity includes the use of quality big books developed and provided by USAID Tusome Pamoja, as well as teacher strategies to engage pupils' cognitive skills while listening to and interacting with the narrative. The creation of learning centers in the classroom included the provision of supplies to make teaching and learning aids for use and teacher's guides to help teachers facilitate pupil participation and learning during learning center activities. Teachers learned how to encourage children to participate in activities and use their language and critical thinking skills through increased questioning and extending conversations with pupils. Additional components of the USAID Tusome Pamoja Program include engaging parents to contribute to classroom feeding programs and the development

of teaching and learning materials. Another component of the program involves the development and use of Communities of Practice, in which teachers can rely on each other for support, including sharing ideas to improve their practice and overcome challenges.

2.4 GOT Pre-primary Program

In parallel with the USAID Tusome Pamoja pre-primary program, the GOT rolled out its own pre-primary program nationally. All teachers in the country were provided with an initial three-day in-person training session in the City of Dodoma. This large-scale training assisted teachers with developing a thematic scheme of work and provided sample classroom routines. In addition, the training provided examples on how to improve the teaching and learning environment, with emphasis on learning centers and the use of “circle time.” The training also promoted the use of stories to introduce pre-literacy and pre-numeracy competencies.

The four main differences between the two programs that ran parallel in the Mtwara Region are presented in the remainder of this subsection of the report.

Depth of the training. The USAID Tusome Pamoja team used a cascade system of training delivery by first training six Master Trainers from Teacher Training Colleges in the Mtwara Region. The six Master Trainers in turn trained 20 District Trainers (District Education Officers and WEOs). These District Trainers then trained 200 teachers and volunteer teachers. Teachers received 12 days of training, which was delivered during four separate phases over the two-year pilot, to ensure gradual learning and better use of new strategies by the teachers. During each phase, the trainers modeled instructional strategies, and teachers were given the opportunity to practice them with each other. In contrast, the GOT training provided content to the teachers, but less of an opportunity for them for modeling and practice. It is important to note that the GOT training content was based on the USAID Tusome Pamoja pre-primary training content.

Training participants. USAID Tusome Pamoja included volunteer teachers and Head Teachers in the training, thereby ensuring broader understanding and support for teachers at the school level.

Materials. USAID Tusome Pamoja provided each classroom with a set of 24 big books, a starter kit for the development of teaching and learning aids, and a storage box for the teaching and learning materials. In contrast, the GOT did not provide books and starter kits to all classrooms, but it did provide teachers with a pre-primary teacher’s guide. In some control districts in the Mtwara Region, revenues from the cashew nut tax were used to purchase supplementary reading materials.

Teacher support. The USAID Tusome Pamoja team provided Ward Education Officers (WEOs) and School Quality Assurers (SQAs) with the same training as teachers and Head Teachers. With support from USAID Tusome Pamoja, the WEOs and SQAs were facilitated to provide monthly visits to the pre-primary classrooms during which they observed lessons and provided feedback to teachers. In contrast, the GOT did not provide teachers with additional visits beyond the routine oversight visits of SQAs.

2.5 Evaluation Approach

The overall evaluation approach of the USAID Tusome Pamoja pre-primary program is designed to answer the following set of core research questions:

1. Is there any measurable difference in the performance of USAID Tusome Pamoja pre-primary completers when compared to completers from other pre-primary programs?

2. Has the implementation of the USAID Tusome Pamoja pre-primary program positively impacted teachers' classroom practice? This question will be addressed more specifically through the following sub-questions:
 - a. Has teachers' use of pre-primary teaching and learning materials increased because of the USAID Tusome Pamoja pre-primary program?
 - b. Have pre-primary teachers' instructional strategies improved because of the USAID Tusome Pamoja pre-primary program?
3. Has the quality of pre-primary learning environments improved because of the USAID Tusome Pamoja pre-primary program? This question will be addressed more specifically through the following sub-question:
 - a. Has the proportion of observed classrooms with adequate numbers of key teaching and learning materials increased?

The evaluation approach allows for the comparison of baseline and endline assessment results in intervention and control schools by using a cross-sectional design to determine the impacts of the USAID Tusome Pamoja pre-primary program after two years of implementation.

2.6 Key Performance Indicators

A key purpose of the evaluation was to collect data regarding the KPIs that the USAID Tusome Pamoja Program tracks over time from the baseline assessment to the endline assessment. The Performance Monitoring and Evaluation Plan defines the five KPIs for the pre-primary intervention as follows:

- **P-011a:** Proportion (percentage) of pre-primary teachers effectively using teaching and learning materials
- **P-011b:** Proportion (percentage) of pre-primary teachers providing engaging learning environments for pupils
- **P-011c:** Proportion (percentage) of pre-primary teachers encouraging productive pupil–teacher interactions
- **P-012a:** Percentage point increase in letter recognition scores for pre-primary pupils
- **P-012b:** Percentage point increase in listening comprehension scores for pre-primary pupils.

The USAID Tusome Pamoja team used the following items from the classroom observation instruments to calculate the teacher materials, learning environments, and pupil–teacher interactions KPIs.

- **P-011a:** Classroom observation items regarding the presence of big books, and, if so, whether a read aloud was conducted
- **P-011b:** Classroom observation item regarding whether circle time was conducted
- **P-011c:** Classroom observation item regarding whether teachers extend conversation with pupils by using who, what, when, where, why, and how questions.

The pupil-level KPIs were calculated as follows:

- **P-012a** was calculated by using the letter name knowledge subtask from the

pupil assessment

- **P-012b** was calculated by using the listening comprehension subtask from the pupil assessment.

The KPIs at the baseline assessment and the endline assessment and the change over time are reported in Section 4 of this report.

3. Methodology: Sample Design and Instruments

3.1 Sample

3.1.1 Population and List Framework

The original evaluation design included three populations, with the additional population being pupils who did not attend any pre-primary program. During January 2017, the baseline assessment evaluated 2,310 pupils from 120 schools. Before the endline assessment, the USAID Tusome Pamoja team decided to decrease the scope of the research design by dropping the population of pupils who did not attend any pre-primary program. This decision was made because of two reasons. First, because sufficient international research exists that demonstrates the significant benefits of attending pre-primary school, the additional costs of increased sample size did not merit the likely benefit of confirming what is already widely known and had been accepted by the GOT. Second, the number of children who were not participating in pre-primary programs was radically reduced by GOT's decision to extend pre-primary education to all government schools. Because of this decision, the number of schools included in the sample decreased by 56 schools (from 120 to 64). A statistician on the USAID Tusome Pamoja team derived this number by calculating the sample size needed (schools and pupils) to achieve a small effect size of 0.2 standard deviations with 80% statistical power during the difference in difference analysis.

Hence, during the endline assessment, the USAID Tusome Pamoja team compared two distinct populations of interest: Population 1 and Population 2. Population 1 consists of pupils who attended USAID Tusome Pamoja-identified pre-primary schools. Population 2 consists of pupils who attended other (government) pre-primary schools. The comparison of these two populations allowed us to measure the impacts of pupil attendance in USAID Tusome Pamoja-supported classrooms and attendance at other pre-primary classrooms, both in government-supported schools.

The evaluation assessed school readiness among pupils just entering Standard 1 in primary schools. Each of the two populations of interest consisted of pupils who had attended a non-special needs pre-primary classroom attached to a government primary school during the previous year at one of the selected USAID Tusome Pamoja intervention districts or control districts within the Mtwara Region.

3.1.2 Sample Description

The original sample of schools selected were representative of the two selected intervention districts and the two selected control districts. The USAID Tusome Pamoja team sampled equal numbers of schools from each district: 60 schools from the control districts and 60 schools from the intervention districts. The team sampled the schools by using probability proportional to size (PPS) sampling within the control and intervention strata. However, once the sample was drawn, the team discovered that schools were missing from the original sample frame because of re-districting. The second list of additional schools lacked enrollment numbers (measure of size); therefore, the team sampled these schools by using a stratified random sample. The team then proportionally reduced the original PPS sample based on the number of new schools added to the frame. The USAID Tusome Pamoja team then balanced the sample for equivalence to ensure that the intervention and control schools were as comparable as possible.

Table 1 shows the numbers of schools, pupils sampled, and pre-primary classroom teachers observed and interviewed from each district by group at the original baseline assessment (B1), for the revised baseline assessment sample (B2), and at the endline assessment. At the time of the endline assessment, specific schools in

the control group had been redistricted to the Newala TC and Mtwara MC Districts. At each of the sampled schools, approximately 14 pupils were randomly selected from the Standard 1 classroom. If there were multiple Standard 1 classrooms, one of those classrooms was randomly chosen before pupil selection.

Table 1. Sample Counts for Baseline and Endline Assessments

Group	District	Number of Schools			Number of Teachers			Number of Pupils		
		B1	B2	Endline Assessment	B1	B2	Endline Assessment	B1	B2	Endline Assessment
Intervention	Tandahimba District	45	27	27	45	27	27	866	371	368
	Mtwara DC	15	5	5	15	5	5	292	64	69
	Total	60	32	32	60	32	32	1,158	435	437
Control	Nanyamba District	30	12	12	30	12	12	581	115	156
	Newala TC	—	2	2	—	2	2	—	29	28
	Mtwara MC	—	9	9	—	9	9	—	149	126
	Newala DC	30	9	9	30	9	9	571	135	124
	Total	60	32	32	60	32	32	1,152	428	434

3.1.3 Basic Demographics

The USAID Tusome Pamoja team collected basic demographic information about the sampled pupils from both the pre-primary and Primary 1 teacher together. The team asked the teachers to consult school records if this was necessary. Based on the findings, the overall pupil sample consisted of slightly fewer boys (47.5%) than girls (52.6%), and the average age of pupils was six years, seven months. The pre-primary teacher reported that all of the pupils had attended pre-primary at their current school. This finding ensured that the Primary 1 pupils from USAID Tusome Pamoja-supported schools received the USAID Tusome Pamoja pre-primary program and that the Primary 1 pupils from control schools received the GOT pre-primary program. **Table 2** lists the similarities in demographic information by group at each time point.

Table 2. Pupil Demographic Information by Group for Baseline and Endline Assessments

Demographic	Intervention		Control	
	Baseline Assessment	Endline Assessment	Baseline Assessment	Endline Assessment
Boys	46.5%	46.5%	45.7%	50.6%
Girls	53.5%	53.5%	54.3%	49.4%
Average age in years	6 years, 7 months	6 years, 6 months	6 years, 5 months	6 years, 6 months

Pre-primary Teacher Characteristics. Out of the 64 teachers sampled for the endline assessment, 36 (56.3%) were women. Regarding the highest level of education completed, 33 (51.6%) of teachers reported Form 4, and 15 (23.4%) of

teachers reported receiving a certificate. Only one teacher had a certificate in ECD. Most of the teachers interviewed (56 [87.5%]) had previously taught a grade other than pre-primary. **Table 3** lists these characteristics by group. The teachers differ considerably by highest level of education completed. It is important to note that in both groups, not all of the teachers interviewed and observed were the pre-primary teacher assigned to that class, meaning that the school may not have had a pre-primary teacher at the time of data collection; therefore, another teacher was substituted. Although this is indeed a limitation of the evaluation, it is important that the study reflects the real-world circumstance of schools. However, it is important to keep this knowledge in mind in later sections that discuss teacher implementation of the intervention.

Table 3. Pre-primary Teacher Demographics by Group for the Endline Assessment

Demographic	Intervention	Control
Women	50.0%	62.5%
Highest level of education completed	0.0%	50.0%
Less than Form 4	0.0%	21.9%
Form 4	71.9%	31.3%
Form 6	0.0%	3.1%
Certificate	21.9%	25.0%
Diploma	6.3%	18.8%
ECD certificate	0.0%	3.1%
Taught another grade	87.5%	87.5%
Pre-primary teacher	84.4%	68.8%

3.2 Instruments

3.2.1 Overview of School Readiness Assessment

Pupils entering Standard 1 for the first time vary in their skills for readiness for learning in the classroom or school setting, depending on such factors as nutrition, prior exposure to school, and parental or caregiver engagement. As previously mentioned in Section 2.1 of this report, pupils demonstrating greater school readiness are more likely to succeed in primary school. Pre-primary education aims to prepare pupils for primary education physically, cognitively, socially, and emotionally. Pre-primary education also strives to familiarize pupils with foundational reading, writing, and mathematics knowledge and skills, including letter and number recognition.

The school readiness assessment used in the endline assessment was a shortened version of the assessment used in the baseline data collection, which was adapted from the Measuring Early Learning Quality and Outcomes (MELQO) Child Development and Learning (MODEL) instrument. To decrease the amount of time for the assessment in which the young pupils were participating, five subtasks from the baseline assessment were dropped for the endline assessment. When deciding which subtasks to drop from the assessment, the USAID Tusome Pamoja team used the findings from a psychometric analysis of the baseline instrument. The team removed an additional subtask after data collection training revealed that reliability was difficult to achieve among assessors. **Table 4** lists the learning domains, subgroups, subtask names, and descriptions of the remaining 11 subtasks included in the school readiness instrument used for the endline assessment. These subtasks measure emerging skills that have been shown to be important for early learning

across cultures, including pre-numeracy, pre-literacy, socio-emotional, and executive function. Within the pre-numeracy set, subtasks are included that measure number concepts and operations. Within the pre-literacy set, subtasks are included that measure oral language and alphabet knowledge. Empathy knowledge is measured for the socio-emotional domain. Within the executive function set, subtasks are included that measure working memory, inhibitory control, and short-term memory.

Table 4. Descriptions of School Readiness Measure Subasks in the Endline Assessment

Emerging Learning Domain	Subgroup	Subtask	Description	Scoring
Pre-numeracy	Number concepts	Verbal counting	Pupil's knowledge of counting words in order	Highest out of 30 in correct order
		Number identification	Pupil's ability to name numerals (number symbols)	Number correct out of 5 items
	Operations	Producing a set	Counting word order, 1-to-1 correspondence, and cardinal value	Number correct out of 4 items
Pre-literacy	Oral language	Expressive vocabulary	Verbal naming by category (e.g., animals, foods)	Highest number counted with a maximum of 20 items
		Listening comprehension	Listening to story and showing understanding	Number correct out of 5 comprehension questions
	Alphabet knowledge	Letter name knowledge	Letter name identification/knowledge	Number correct out of 20 items
		Pre-writing: Name writing	Letter writing	Leveled scoring of correct letter writing
Socio-emotional	Relating to others	Perspective taking/empathy	Understanding others' feelings and emotions; pro-social skills	Correct identification of empathetic action out of 3 items
Executive function	Working memory and inhibitory control	Backward digit span	Reciting digit sequence backward; requires working memory	Number correct out of 7 sets
	Short-term memory	Forward digit span	Reciting digit sequence; requires memory	Number correct out of 5 sets

3.2.2 Overview of Classroom Instruments

The classroom observation instrument for the USAID Tusome Pamoja pre-primary evaluation measures the number of pupils and teachers present, the competencies observed, teacher and student interactions, instructional strategies, inclusive teaching, and teaching and learning materials found in the classroom. The team used the classroom observation instrument to measure components of the USAID Tusome Pamoja pre-primary intervention. The team also used the instrument to understand various instructional practices and the availability and use of teaching and learning materials after two years of program implementation.

3.2.3 Supplementary Interviews

The USAID Tusome Pamoja team interviewed pre-primary teachers at each school to collect information about their educational and professional backgrounds, motivation and attitudes about teaching and support, engagement with parents and caregivers, and support provided by Head Teachers and Districts. The team revised the interview questions used in the endline assessment to account for activities implemented by the USAID Tusome Pamoja Program.

3.3 Evaluation Limitations and Qualitative Follow-up Study

3.3.1 Subtask Limitations

The new TIE pre-primary curriculum reflects MoEST's transition from whole-language to phonics-based instruction pedagogy. Although the national curriculum includes the teaching of letter names and letter sounds, GOT teachers prioritized the instruction of letter names with minimal attention to sounds. In contrast, in intervention schools, the teachers instead prioritize letter sounds. The letter name knowledge subtask in the baseline assessment was therefore not relevant during the endline assessment. However, the subtask was retained because it is included as a KPI from the Performance Monitoring and Evaluation Plan.

3.3.2 Timing of Data Collection

Data collection occurred early in the school year (in late January³) in order to measure the school readiness of incoming Standard 1 pupils who had previously attended pre-primary school. The rationale for this decision was to limit the interference of the Standard 1 curriculum on pupils' academic performance. However, during this time, the USAID Tusome Pamoja team also collected data during observations of pre-primary classrooms. During the pre-primary school year, January and February are considered to be "reception" months, during which classroom activities are limited to socialization of the young children. As a result, the incidence of application of expected teaching methodologies (use of big books; circle time; etc) was reduced.

3.3.3 Follow-up Qualitative Study

As previously mentioned, the teacher practice findings from the data collection effort of the endline assessment were lower than expected for some activities. The team planned a small follow-up qualitative study, which conducted in August 2019 in four control schools and eight intervention schools. The objectives of the study were to better understand whether teachers were conducting read aloud and circle time activities during classes and to determine whether they had access to big books. Another objective of the study was to determine whether teachers included learning centers in their classrooms at a time in the school year that was not focused on

³ The school year in Tanzania runs from January to December.

receiving pupils. A USAID Tusome Pamoja pre-primary staff member visited schools, interviewed teachers, and conducted a classroom observation. The findings from this study are interspersed throughout this report to provide additional perspective where relevant.

4. Key Performance Indicators

4.1 Teaching and Learning Materials and Implementation: KPIs P-011a Through P-011c

A goal of the endline assessment was to determine the values of the KPIs after two years of program implementation. **Table 5** shows the values from the baseline and endline assessments for KPIs P-011a through P-011c. The baseline assessment value for pre-primary teachers effectively using teaching and learning materials (KPI P-011a), including story read aloud activities, was zero (0.0%) classrooms because MoEST had not yet distributed the big books; therefore, storybooks were not available in any of the classrooms. The findings from the endline assessment showed that 90.6% of USAID Tusome Pamoja pre-primary classrooms had big books, with 50.0% of teachers observed using the big books while conducting read aloud activities.

The team measured the proportion of pre-primary teachers providing engaging learning environments for pupils (KPI P-011b) by the proportion of pre-primary teachers. The team measured the proportion of pre-primary teachers encouraging productive pupil–teacher interactions (KPI P-011c) by the proportion of pre-primary teachers extending conversation with pupils by using questions. **Table 5** shows increases in most KPIs, including an increase in the percentage of classrooms containing big books, the percentage of classrooms with teachers using the big books to conduct a read aloud activities, and the percentage of classrooms in which teachers were observed to conduct circle time activities. For both big books and circle time activities, the percentage of classrooms reached almost 100%. However, there was no improvement in the proportion of teachers extending pupil conversations—an integral factor in increasing oral language skills in young children.

Table 5. USAID Tusome Pamoja Pre-primary Baseline and Endline Assessment Values for School-Level KPIs

KPI	Baseline Assessment Percentage	Endline Assessment Percentage
P-011a: Percentage of classrooms containing at least 1 big book title.	0.0%	90.6%
Did the teacher conduct a Read Aloud using a big book?	0.0%	50.0%
P-011b: Proportion of pre-primary teachers providing engaging learning environments for pupils by conducting circle time.	46.9%	90.6%
P-011c: Teacher extends pupil conversation by asking who, what, when, where, why, and how questions.	53.1%	43.8%

4.2 School Readiness: KPIs P-012a and P-012b

The team determined the percentage point increases in letter recognition (KPI P-012a) and in listening comprehension (KPI P-012b) for pre-primary pupils. Letter identification and listening comprehension are both pre-literacy skills that align with the pre-primary curriculum and the USAID Tusome Pamoja pre-primary program. **Table 6** shows mean percentage scores for the school readiness KPIs that were calculated from the data from the baseline and endline assessments. These values

show that after two years of program implementation, pupils' mean performance regarding letter identification decreased by 1.2 percentage points. However, the mean percentage score regarding listening comprehension increased from 27.9% to 45.3%, a statistically significant increase.

Table 6. USAID Tusome Pre-primary Baseline Assessment and Endline Assessment Values for Pupil KPIs Means, Control versus Intervention Schools

Subtask Score	Baseline Assessment		Endline Assessment	
	Mean Percentage	Margin of Error	Mean Percentage	Margin of Error
Letter score (percentage correct)	12.9%	±1.9	11.7%	±2.6
Listening comprehension score (percentage correct) ^a	27.9%	±3.7	45.3%	±3.9

^a $p < 0.0$

5. School Readiness Skills

As mentioned in Section 2 of this report, the first research question of the evaluation of the USAID Tusome Pamoja pre-primary program is the following: Is there any measurable difference in the performance of USAID Tusome Pamoja pre-primary completers (Population 1) when compared to completers from other pre-primary programs (Population 2)?

To answer this question, the USAID Tusome Pamoja team calculated the difference in difference scores to compare intervention and control group gains regarding pupil's performance between baseline and endline assessments. A difference in difference score is how much the intervention group has or has not improved over the control group. **Table 7** shows the statistical description and differences between groups. **Figure 1** presents the difference in difference scores and the effect sizes. Discussions of performance on each subtask are presented Sections 5.1 of this report.

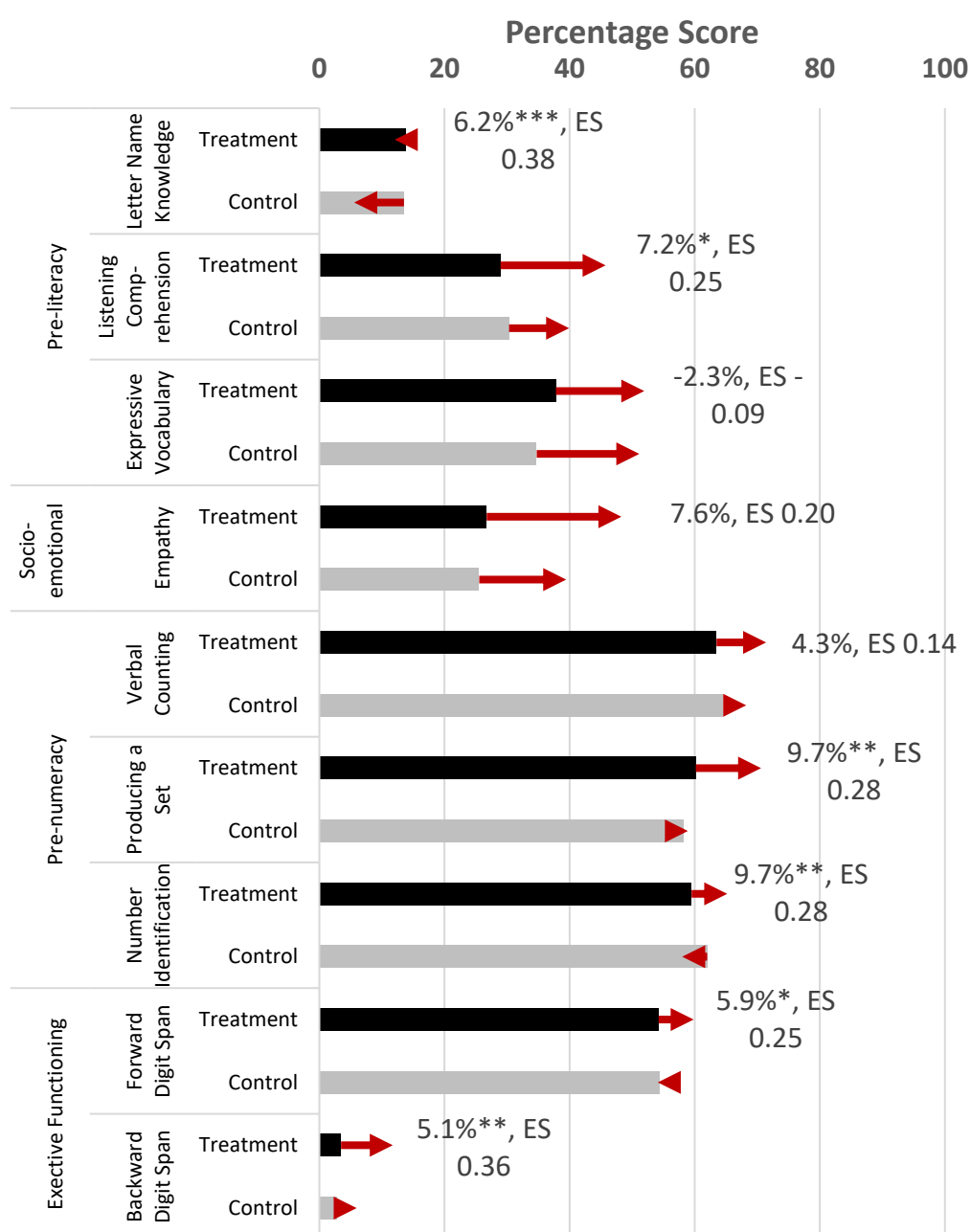
Table 7. Difference in Difference Analysis Between Intervention and Control Groups

Learning Domain	Subtask	Group	Baseline Assessment Mean (%)	Endline Assessment Mean (%)	Difference in Difference	p-Value	Effect Size
Pre-literacy	Expressive vocabulary	Control	34.7	51.1	-2.3	0.41	-0.09
		Intervention	37.8	51.9			
	Listening comprehension ^a	Control	30.3	39.9	7.2	0.03	0.25
		Intervention	29.0	45.8			
	Letter name knowledge ^b	Control	13.5	5.6	6.2	0.00	0.38
		Intervention	13.8	12.1			
Social-emotional	Empathy	Control	25.6	39.5	7.6	0.06	0.20
		Intervention	26.8	48.3			
Pre-numeracy	Number identification ^b	Control	62.0	58.0	9.7	0.00	0.28
		Intervention	59.5	65.2			
	Producing a set ^b	Control	58.2	58.9	9.7	0.00	0.28
		Intervention	60.2	70.6			
	Verbal counting	Control	64.6	68.2	4.3	0.24	0.14
		Intervention	63.5	71.4			

Learning Domain	Subtask	Group	Baseline Assessment Mean (%)	Endline Assessment Mean (%)	Difference in Difference	p-Value	Effect Size
Executive function	Backward digit span ^b	Control	2.8	6.0	5.1	0.00	0.36
		Intervention	3.5	11.7			
	Forward digit span ^a	Control	54.4	54.1	5.9	0.02	0.25
		Intervention	54.2	59.8			

^a $p < 0.05$; ^b $p < 0.01$

Figure 1. Difference in difference Scores and Effect Sizes for Each Subtask
(Note: ES = effect size)



5.1 Findings by Subtask

5.1.1 Expressive Vocabulary

Expressive vocabulary ability is shown through children’s breadth of spoken words and is related to many academic outcomes. During this subtask, an assessor asked each pupil to name as many foods and animals as he or she knows, with a maximum of 10 each for a total of 20 items. Pupil performance of this subtask showed that across both groups, pupils on average responded with 10 names of foods and animals.

Pupil performance gains were not significantly different between groups on this subtask. Both groups showed gains at approximately the same level. The new curriculum focuses on strengthening children’s oral language abilities; therefore, this finding aligns with the goal because it indicates that pupils are developing their vocabulary at the same rate because of similar school and home influences, as one would expect over time.

5.1.2 Listening Comprehension

Comprehension of an oral narrative is a complex skill related to later reading success. Pupils must use attention skills to maintain and shift their focus on the story, as well as receptive vocabulary knowledge to make sense of a story. Pupils must also use their executive function ability to make causal connections between events in a story, as well as expressive vocabulary and other oral language skills to answer questions to determine their comprehension. During the listening comprehension subtask, assessors read a story to each pupil individually, and then asked five comprehension questions (factual and causal).

Findings from the baseline assessment showed that pupils’ performance scores regarding listening comprehension were comparable between groups, with pupils in both groups achieving an average of approximately 30.0%. Findings from the endline assessment showed that pupils from the USAID Tusome Pamoja classrooms demonstrated significant gains above that of pupils in control schools, with a difference in difference score of 7.2. Pupils from the USAID Tusome Pamoja pre-primary classrooms achieved a mean of 29.0% on the baseline assessment and 45.8% on the endline assessment.

The significant gains in listening comprehension skills may be attributed to the effects of the read aloud activity implemented through USAID Tusome Pamoja. As previously mentioned in Section 2.3 of this report, the read aloud activity allows for pupils to practice and strengthen their comprehension skills by listening to the teacher read a story, remembering information in the story, and then reproducing that knowledge by answering questions about that story. Pupils from non-USAID Tusome Pamoja (control) pre-primary classrooms likely do not have this specific opportunity because no teachers conducted read aloud activities during the observation day in control schools when compared with 50% of teachers in USAID Tusome Pamoja schools. However, teachers in control schools received training through the GOT that focused on how to use storytelling as a strategy for teaching pre-literacy.

5.1.3 Letter Name Knowledge

Identification of letter names is a fundamental component of early literacy, and exposure to letters is an important activity in the pre-primary classroom experience. For this subtask, assessors presented letters to each pupil and asked him or her to name each letter.

Findings from the baseline assessment showed that pupil performance on the letter name knowledge subtask was comparable. Out of 20 letters, both groups correctly identified an average of almost 3 letters. Findings from the endline assessment showed that pupils in both groups demonstrated decreased skills, with pupils in the control group showing the largest drop, with an average of only one letter correct. Pupils who attended USAID Tusome Pamoja pre-primary classrooms correctly identified an average of two letters. Although the skills of both groups decreased, pupils in the non-USAID Tusome Pamoja (control) pre-primary classrooms decreased significantly more. Regardless of group, knowledge of letters is low among pupils.

Findings from teacher interviews via the qualitative study showed that the teachers in USAID Tusome Pamoja pre-primary classrooms focused their instruction on letter

sounds before letter names. Teachers provided the following reasoning for this practice:

- Learning letter sounds in pre-primary creates a smooth transition for pupils and helps children learn to read in Standard 1 because reading is given more weight in the GOT curriculum.
- The USAID Tusome Pamoja Program had trained teachers to focus their teaching on phonemic awareness rather than phonics. However, the situation was different in the four control schools visited: these teachers prioritized the letter recognition over letter sounds during their instruction. Their justifications were as follows:
 - One teacher emphasized letter names, because he had been trained in letter name knowledge and believed that children would learn sounds the following year in Standard 1.
 - In the three other control schools, teachers did not follow the syllabus and they did not teach letter sounds or letter names during classes; instead, they taught only syllables, in order to impress parents. The teachers said that they had limited knowledge about how to teach letter names or letter sounds.

In the Tanzanian curriculum, letter names and letter sounds are introduced during pre-primary classes; however, they are not taught equally in schools. As previously mentioned, teachers in intervention schools tend to stress letter sounds, whereas their counterparts in control schools focus on letter names. Taken together, the decrease from the baseline assessment to the endline assessment in letter names reflect the misunderstanding of the curriculum, which balances letter names with letter sounds, and the USAID Tusome Pamoja pre-primary program regarding mastery of letter sounds rather than letter name. However, it is concerning that some teachers in control schools said they were not knowledgeable about the curriculum or how to teach letter sounds.

5.1.4 Empathy

Empathy is a social-emotional construct that shows a child's ability to understand the feelings of others. Children who have strong social-emotional skills are shown to have better behavior and academic outcomes later (Gutman & Schoon, 2016). During the subtask to assess empathy, assessors asked each pupil to identify an emotion that a character in a story experienced and to determine ways to help that character. Overall, scores on the empathy subtask were low. Regarding empathy skills, no significant difference in difference score between groups was found, although both groups made gains from the baseline assessment to the endline assessment.

The qualitative study found that most teachers (i.e., seven from intervention schools and two from control schools) reported that they taught different socio-emotional skills at the beginning of the school year to help children better cope with the school environment and their classmates. When asked to mention which socio-emotional skills they taught in their classrooms, seven teachers (i.e., six teachers from the intervention schools and one from the control schools) specifically mentioned "empathy" as one of the skills they taught to help children be friendly to one another.

Other factors guided which socio-emotional skill was taught on a particular day. For instance, teachers in the intervention schools said they include the message or topic of the selected story of the day, use the teacher's guide, discuss specific incidents that occurred in the class or school, and/or follow the competency scheduled in the

class timetable (syllabus). Although teachers from the control schools also taught empathy, their method of selection and planning varied from their counterparts at intervention schools. The teachers from the control schools said that they used the competencies found in the class timetable (syllabus) and the events that had occurred in the class or school to determine which socio-emotional skill to teach.

From the previously mentioned findings, it is clear that socio-emotional skills are taught in both GOT and USAID Tusome Pamoja–supported schools throughout the school year, beginning in January, which explains the lack of a significant difference in difference score between the two populations of pupils.

5.1.5 Number Identification

The ability to identify numbers is a fundamental skill that serves as a foundation for other mathematical skills. During this subtask, assessors showed each pupil individually a number and asked the child to identify it. Although the initial subtask included five numbers between 1 and 20, only the performance on numbers between 1 and 10 were analyzed because the pre-primary curriculum focuses on numbers 1 through 10.

Findings showed that the pupils who received the USAID Tusome Pamoja pre-primary intervention showed significant improvement in number identification skills when compared to their peers in control schools. Based on teachers' responses during interviews conducted during the qualitative study, the teachers said that they only teach identification of numbers 1 through 9 or 1 through 10, as prescribed by the pre-primary curriculum.

5.1.6 Producing a Set

This subtask asks children to count out a specific number by using a set of counters or items, such as bottlecaps. Pre-numeracy skills related to operations are important foundational abilities needed for more complex mathematical tasks. Pupils showed intermediate skill levels in their performance this task.

Pupils from USAID Tusome Pamoja pre-primary classrooms show significant gains when compared with their peers in other pre-primary classrooms. Pupils in the intervention group gained, on average, 10 percentage points from the baseline assessment to the endline assessment, whereas pupils in the comparison group showed no gain. These results indicate that the USAID Tusome Pamoja pre-primary intervention increases pupils' skills in this area, likely from the use of manipulatives and other teaching and learning materials provided in the starter kit and designed to support teachers and children with numeracy in the classroom.

5.1.7 Verbal Counting

The ability to count is a vital pre-numeracy skill that supports all other mathematical knowledge. Assessors asked each pupil to count as high as they could, with a maximum score of 30 correct in a row. The verbal counting score across the intervention and control groups was promising, with pupils in both groups correctly counting to approximately 21, based on findings from the endline assessment.

No significant difference in difference score regarding verbal counting ability was identified between groups; both groups showed increased skills from the baseline assessment to the endline assessment. The lack of a difference in gains between groups points to similar experiences in counting instruction or exposure to this topic in their classrooms.

5.1.8 Backward Digit Span

This subtask measures working memory, which is a component of executive function. Working memory undergoes significant development in children of pre-primary age,

and it is essential for the ability to learn. Backward digit span focuses on the ability to hold and manipulate information in the mind and use it to make a decision later. Assessors orally presented a set of numbers to each pupil and asked him or her to repeat them, but in backward order. The sets increased in difficulty by increasing the count of numbers in each set.

Pupils from USAID Tusome Pamoja pre-primary classrooms showed significantly higher gains than pupils from control schools, although both groups increased their skills. The results indicate that the USAID Tusome Pamoja Program provides opportunities that strengthen children's working memory skills beyond that of a regular pre-primary classroom can provide.

5.1.9 Forward Digit Span

This subtask measures short-term memory, which is a cognitive ability that is central to most learning in school. As children mature, their cognitive skills, such as memory, naturally increase in capacity because their brains are developing. For this subtask, an assessor recited sets of numbers, increasing in difficulty, and then asked the pupil to repeat the sets back to the assessor.

Pupils from USAID Tusome Pamoja pre-primary classrooms showed significantly higher gains than pupils from other pre-primary programs. However, the gains were not substantive, with pupils showing an increase of only 5.6 percentage points from the baseline assessment to the endline assessment.

6. Implementation of the USAID Tusome Pamoja Pre-primary Program

The second research question answered through the evaluation involves teacher implementation of the program: Has the quality of teachers' implementation of the USAID Tusome Pamoja pre-primary program increased over time? To answer this question, observations were focused on whether teachers' use of pre-primary teaching and learning materials provided by the program have been implemented and whether teachers' instructional strategies improved.

6.1 Teaching and Learning Materials

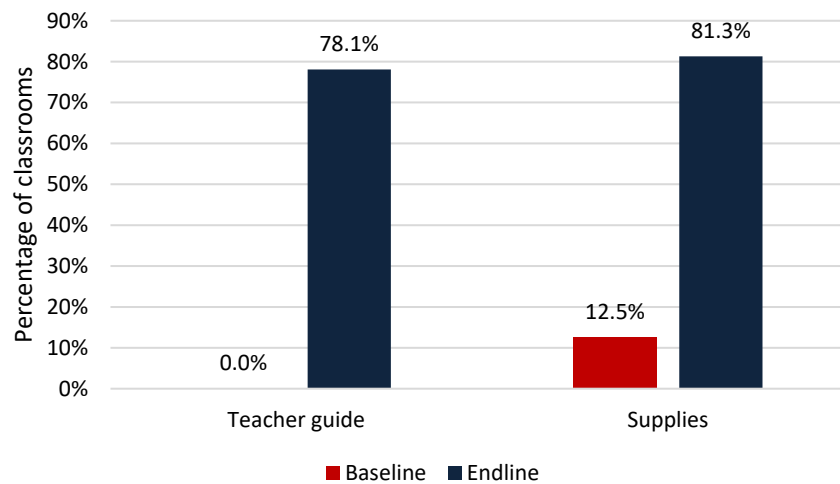
The USAID Tusome Pamoja pre-primary program provided teachers with 24 big books, supplies so they can make teaching and learning aids, and a USAID Tusome Pamoja pre-primary teacher's guide.

Before USAID Tusome Pamoja implementation, none of the classrooms contained big books, and very few contained any type of storybooks. As part of the USAID Tusome Pamoja pre-primary program, every classroom was to receive 24 titles of big books for use when conducting read aloud activities. Based on findings from the endline assessment, most of the classrooms (90.6%) contained some number of big books. Although only four schools (12.5%) contained all 24 titles actually in the classroom, teachers tended to store them somewhere secure, such as the Head Teacher's office, rather than storing them in the classroom at all times. Generally, based on an informal observation, teachers brought the books to the classroom when they needed them for their lessons. This finding was confirmed during interviews with teachers during the qualitative study. The USAID Tusome Pamoja pre-primary program also developed and provided teacher's guides to support the implementation of the intervention in classrooms. As expected, no classrooms contained the USAID Tusome Pamoja teacher's guides during the baseline assessment. It was expected that all classrooms would have teacher's guides before

data collection began for the endline assessment; the assessors observed that 78.1% of the teachers had them (*Figure 2*).

Figure 2 also shows the percentages of classrooms that were observed at the baseline assessment and the endline assessment as having supplies for teaching and learning aids. USAID Tusome Pamoja provided supplies for teachers and for parents and caregivers to create materials for use to support classroom teaching and learning. Findings showed that 12.5% of classrooms already had supplies during the baseline assessment compared with 81.3% of classrooms during the endline assessment.

Figure 2. Percentages of Intervention Classrooms Contained USAID Tusome Pamoja Teacher’s Guides and Supplies for Teaching and Learning Aids



These findings might have been affected by the timing of the data collection for the endline assessment, which was previously mentioned as a limitation of the evaluation. When practice school visits occurred for data collection for the endline assessment, many classrooms were not fully set up with teaching and learning materials at that time, and some teaching and learning materials were still in storage. In addition, during practice school visits for data collection, some teachers had just transferred into a USAID Tusome Pamoja pre-primary classroom and were not yet aware of the materials to which they had access. These circumstances may also have persisted through during data collection, which could be why a few classrooms did not contain the appropriate USAID Tusome Pamoja teaching and learning materials.

In contrast, control schools had few storybooks or teaching and learning supplies. Only 15.6% of control classrooms had supplies for making teaching and learning aids, and 28.1% had supplementary literacy materials for pupils. Pre-primary classrooms participating in the USAID Tusome Pamoja pre-primary contained far more teaching and learning materials to enrich pupils’ time in the classroom. Additionally, only 50.0% of teachers in control schools had a copy of the pre-primary teacher’s guide for the GOT curriculum compared with 84.4% of their counterparts in USAID Tusome Pamoja pre-primary classrooms.

6.2 Instruction

As part of the USAID Tusome Pamoja pre-primary program, teachers learned how to use big books to conduct read aloud activities, how to use learning centers to facilitate activities, and how to use more developmentally appropriate strategies for instruction (e.g., read aloud activities). Teachers received four in-person training

sessions on how to implement the USAID Tusome Pamoja Program in the classroom.

Exposure to printed teaching and learning materials, such as storybooks, is an integral component of a quality pre-primary program. When young children are guided through the use of a storybook, they are exposed to an array of emergent literacy skills. Pupils learn that letters represent sounds, those letters are combined to form words, and the words are combined to form sentences. In addition, pupils learn that when those sentences are combined, they tell a story, which has a beginning, middle, and an end. Children are also exposed to new words and learn that context and pictures can help them understand what those words mean. Pupils develop their comprehension skills as they listen and attend to the narrative and as they connect the events of the story.

Table 8 shows the percentages of classrooms with USAID Tusome Pamoja teachers implementing a read aloud activity. **Table 8** includes a breakdown of teachers implementing the specific components of the read aloud activity. The assessors observed that teachers in 50.0% of the classrooms conducted read aloud activities with their pupils. Out of those teachers who conducted read aloud activities, little variation occurred with reference to the specific read aloud components. The assessors observed that 34.4% of teachers discussed vocabulary words with pupils during the activity, which was the component least observed. The implementation of the read aloud activities in 50.0% of the classrooms is likely because of the expectations of teachers early in the school year, when they are still building a rapport with children and familiarizing them with the classroom environment, appropriate behaviors, and routines. The findings from the qualitative follow-up study showed that all eight intervention teachers who were visited had conducted read aloud activities. The findings also showed that most of the read aloud strategies, such as discussing the cover illustration, performing a picture walk with pupils, and encouraging them to make predictions about what will happen in the story, were also conducted. These findings support the theory that at the beginning of the school year, teachers had not yet begun to engage during their typical classroom activities. In contrast with teachers in the intervention schools, teachers in control classrooms did not conduct any read aloud activities.

Table 8. Percentages of USAID Tusome Pamoja Teachers Implementing Components of Read Aloud Activities in Classrooms

Read Aloud Activities	Percentages of Classrooms		
	Baseline Assessment	Endline Assessment	August 2019 Qualitative Follow-up Survey
Teacher read a storybook aloud to children.	—	50.0%	100.0%
Teacher showed and discussed the cover of the book.	—	43.8%	100.0%
Teacher performs a picture walk.	—	43.8%	100.0%
Teacher connects the story or lesson content to children's lives.	—	37.5%	100.0%
Teacher asks children to make connections to things they have learned before.	—	37.5%	100.0%
Teacher discusses vocabulary words.	—	34.4%	63.0%

Read Aloud Activities	Percentages of Classrooms		
	Baseline Assessment	Endline Assessment	August 2019 Qualitative Follow-up Survey
Teacher encourages children to make a prediction about what is going to happen in the book.	—	37.5%	75.0%
Teacher holds the book so children can see the pictures.	—	46.9%	100.0%
Teacher asks children comprehension questions about the book or story that was read to them.	—	46.8%	100.0%

Learning centers describe the physical areas in the classroom that are devoted to specific learning domains, such as literacy, numeracy, arts, and science. The learning centers each contain teaching and learning materials for activities in those domains. A teacher divides the class of pupils into small groups and assign each group to a learning center. A teacher then actively facilitates learning during this time by visiting each group at each center, offering individualized support, providing alternative or extension activities (if needed) to some groups, answering pupils' questions and extending conversations, and ensuring that pupils are actively participating in the learning center activity. As shown in **Table 9**, before implementing the USAID Tusome Pamoja pre-primary intervention, none of the classrooms contained learning centers. Findings from the endline assessment showed that 14 (43.8%) of USAID Tusome Pamoja classrooms included learning centers. In addition, assessors observed that teachers in all 14 of the classrooms, which contained learning centers, used them during data collection. Out of the classrooms that were using learning centers, teachers were actively facilitating learning while pupils were participating in learning center activities in 10 of the classrooms (71.4%).

It is important to note that many intervention schools did not have a permanent classroom assigned for pre-primary classes and that some sampled pre-primary classes took place under trees. Teachers used ingenuity and created “moveable learning centers.” However, the data collection effort was at the height of the rainy season, which prevented teachers from setting up these moveable learning centers. As a result, assessors were unable to observe the classes.

Observations during the qualitative follow-up study showed that learning centers were found in all eight intervention schools (100.0%). Additionally, the assessors observed that 75.0% (6) of those learning centers were used by teachers during instruction, and in 87.5% (7) of those used, teachers were actively facilitating learning during that time.

Table 9. Learning Centers Observed in the Classrooms

Learning Centers	Baseline Assessment Percentage	Endline Assessment Percentage	August 2019 Qualitative Follow-up Survey Percentage
Learning centers present	0.0%	43.8%	100.0%
Learning centers used (out of those present)	—	100.0%	75.0%
Learning centers actively facilitated (out of those used)	—	71.4%	88.0%

In addition to conducting read aloud activities and using the learning centers, teachers were also trained on how to use of developmentally appropriate teaching methods. Some examples of the methods include reviewing the information learned during the previous school day, summarizing the day, making connections between the information that the children previously learned and what they are currently learning, and extending conversations with pupils. Through these methods, pupils are given the opportunities to reflect on the information they have learned, which helps to create connections from one school day to the next. Extending conversations with children provides additional opportunities for critical thinking and for oral language exploration. Teachers who use all of these methods with their pupils help to create a more robust and cohesive learning environment. **Figure 3** shows the changes in the percentages of intervention classrooms from the baseline assessment to the endline assessment that were observed as using these instructional strategies. Teachers made great strides in increasing their use of these strategies after two years of USAID Tusome Pamoja pre-primary program implementation, with more teachers observed as beginning the day by reviewing the information learned during the previous school day, summarizing the end of the day with the pupils, and asking children to make connections to information they previously learned. However, extending conversations with children by asking questions is still a challenge for many teachers.

When compared with teachers implementing the GOT pre-primary program (**Figure 4**), teachers implementing the USAID Tusome Pamoja Program showed much higher implementation of the developmentally appropriate strategies in the classroom. This finding shows that USAID Tusome Pamoja has been more successful at preparing teachers for implementing important instructional methods in the classroom than the GOT pre-primary program.

Figure 3. Percentage Changes from the Baseline Assessment to the Endline Assessment in Intervention Classrooms

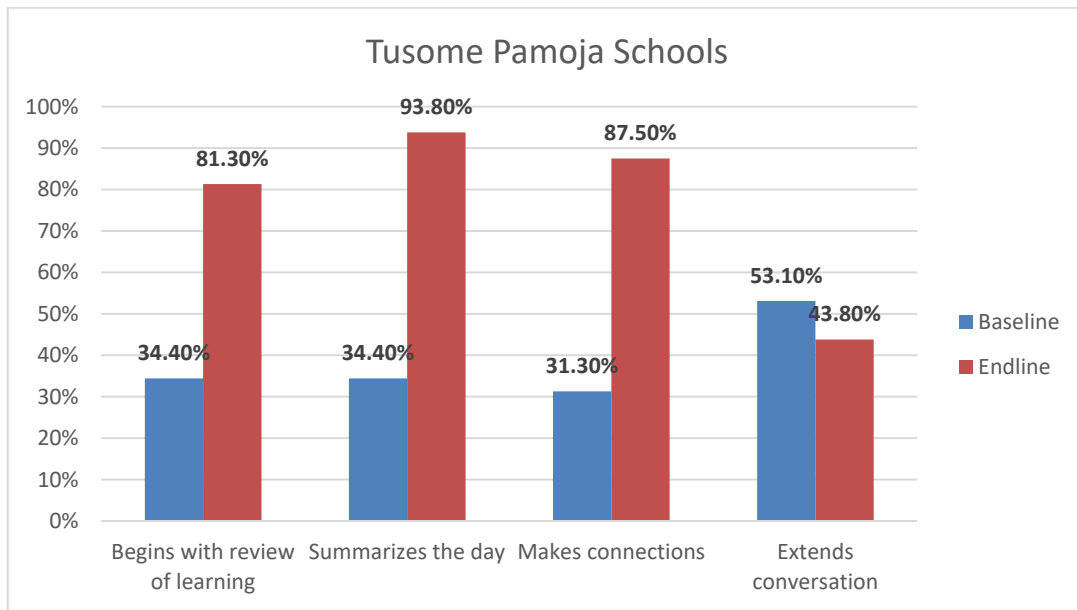
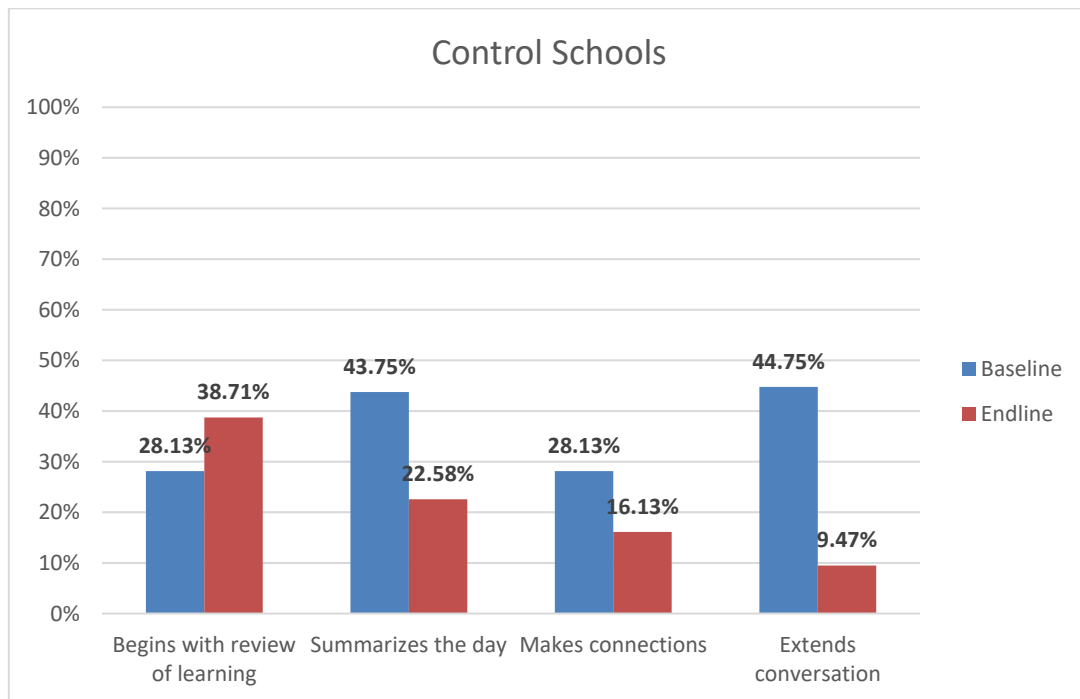


Figure 4. Percentage Changes in Control Classrooms from the Baseline Assessment to the Endline Assessment



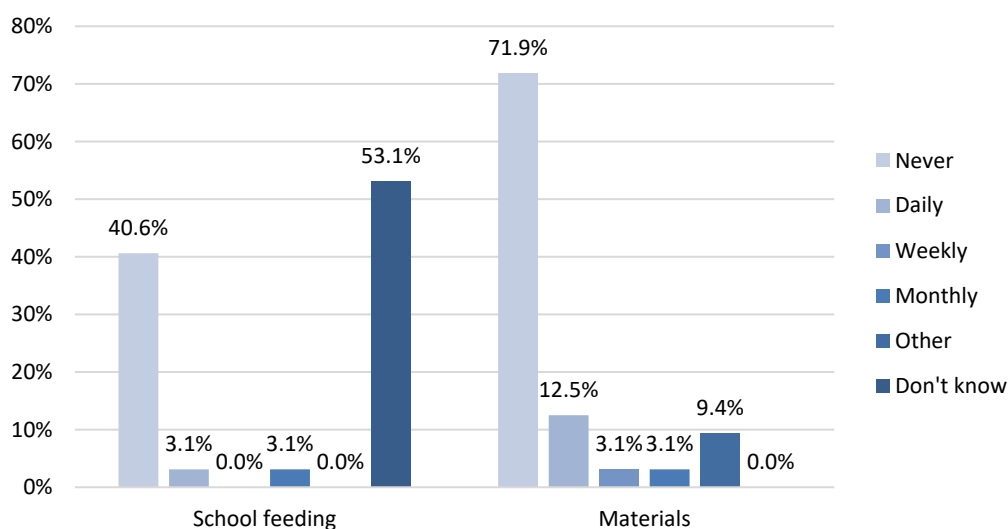
6.3 Engagement of Parents and Caregivers

A goal of the USAID Tusome Pamoja pre-primary program is to involve parents and caregivers of pre-primary pupils in classroom feeding programs and in the provision of teaching and learning aids for use in the classrooms. Parental and caregiver involvement was accomplished in several ways, including by establishing community education mobilizers, parent–teacher partnerships, school feeding committees, and reading weeks.

The assessors collected information about parental and caregiver engagement as phrased in this way only at the endline assessment time point. **Figure 5** shows that few teachers reported that parents and caregivers contributed to the classroom feeding program, whether that included money, food substances, or time on behalf of parents or caregivers. The assessors observed similar findings regarding parental and caregiver engagement in making teaching and learning aids for the classroom.

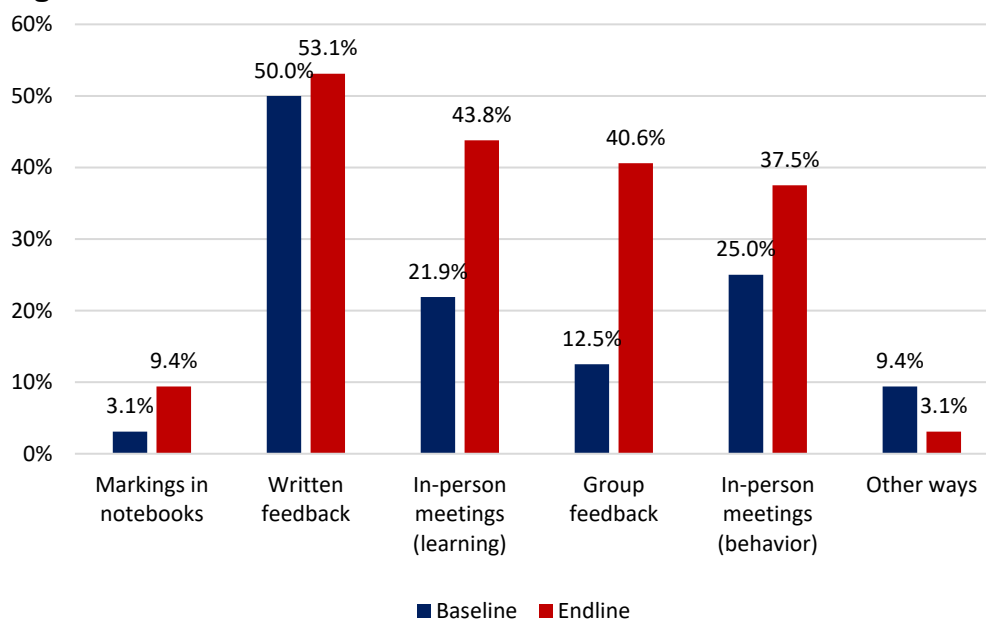
It should be noted that the question asked about parental and caregiver engagement was just directed at the current school year. Data were collected at the beginning of the school year, and it usually takes two or three months to engage and organize parents and caregivers who are new to the school to participate. This question could have provided more valid data by asking parents and caregivers about their participation during the previous school year.

Figure 5. Teachers Reporting of Parental and Caregiver Engagement in Classroom Feeding Programs and Making Teaching and Learning Aids



The assessors collected other measures of parental and caregiver engagement by teachers, including the provision of information to parents and caregivers about their child’s learning. During the baseline assessment in January 2017, 59.4% of teachers reported that they reach out to parents and caregivers to provide information about how their child is doing in school. In contrast, during the endline assessment, 93.8% of teachers said that they engaged with parents and caregivers for that same purpose. Teachers reported using a variety of methods for engaging parents and caregivers at both time points, but assessors observed a marked increase in the use of in-person meetings and group feedback about child learning from the baseline assessment to the endline assessment (see **Figure 6**).

Figure 6. Methods of Teacher Reporting to Parents and Caregivers About Child Learning and Behavior



6.4 Support by School Leadership

Support by school leadership is important for successful implementation of any program in a school. As part of the USAID Tusome Pamoja pre-primary program, school leaders participated in training sessions so they could provide support to teachers in the pre-primary classroom and fill a gap when teachers transfer from non-USAID Tusome Pamoja (control) classrooms into one that implements the pre-primary program. Engaging leadership in this way helps to ensure that a lack of implementation does not occur in real-world scenarios and supports cohesion and fidelity of the program within USAID Tusome Pamoja schools. Although these data were not collected during the baseline assessment because the USAID Tusome Pamoja pre-primary program was not yet implemented, 96.9% of teachers reported that either the Head Teacher, WEO, or the SQA helped them implement the USAID Tusome Pamoja pre-primary program.

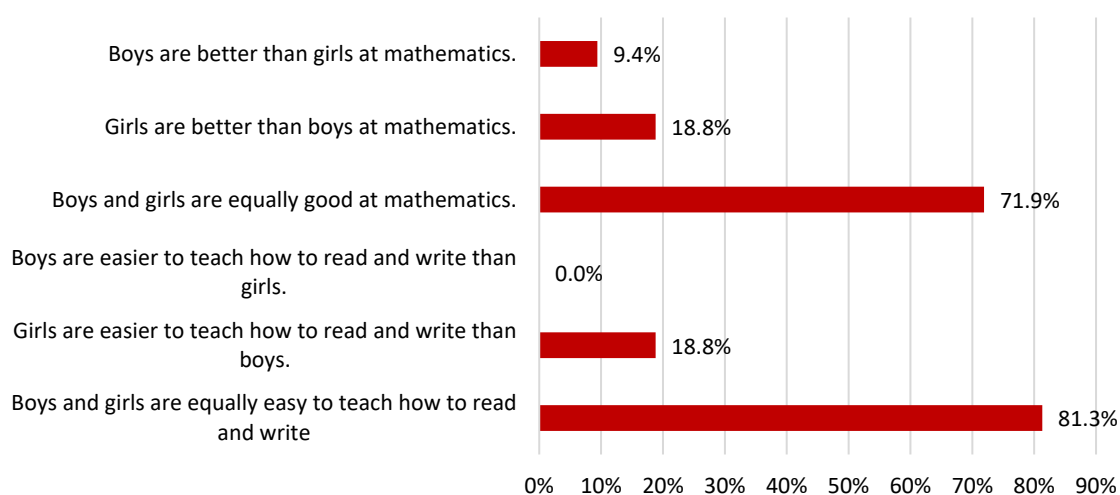
6.5 Gender Equity and Equality

The treatment of boys and girls within education systems in low- and middle-income countries has been shown to favor boys because findings of more boys than girls completing school and entering secondary and tertiary levels of education are common. Families often report encouraging boys to stay in school and keeping girls at home to assist with household tasks, such as providing care to siblings. Limited education for girls impacts their life trajectory in negative ways. To better understand the current state of treatment of boys and girls in the classroom, the endline assessment also measured teachers' behaviors toward boys and girls in the classroom and beliefs about the differences between boys' and girls' learning abilities.

First, findings from the classroom observation showed that in 100.0% of intervention classrooms, when compared with 90.6% of control school classrooms, the teachers involved both boys and girls during the teaching and learning process. Next, assessors read different statements about boys and girls to the teachers and asked them to choose the statement with which they agreed. **Figure 7** shows that most

teachers agreed with statements that supported equal ability in and teaching capability toward boys and girls. In fact, more teachers agreed with the statements that supported the reading and mathematics abilities and capabilities of girls over boys. Teacher support of equality between gender is likely due to the influence of the increased messaging and programming regarding girls' education both locally and globally.

Figure 7. Teachers' Agreement with Statements About Boys' and Girls' Reading and Mathematics Ability



7. Key Findings and Recommendations

This endline assessment report discusses the findings of the performance assessment of the USAID Tusome Pamoja pre-primary program's effectiveness in terms of pupil school readiness and teacher implementation. Altogether, the findings from the endline assessment show that the USAID Tusome Pamoja pre-primary program is successful in many ways, but there are still some areas for improvement. For instance, it might be worthwhile to conduct the classroom observation section of the assessment during the middle of the school year because teachers are more likely to be using many of the teaching strategies that were part of the intervention training sessions. The main findings of the endline assessment conducted in January 2019 are discussed in the remainder of this section. Note: These findings have been updated with the data collected in August 2019 and include associated recommendations.

The USAID Tusome Pamoja Program has shown to improve school readiness skills beyond that of what pupils currently receive in government-supported pre-primary schools. The findings from the difference in difference analysis showed that pupils who attended USAID Tusome Pamoja pre-primary classrooms experienced significant gains in skills regarding pre-literacy, pre-numeracy, and executive function as compared with pupils who attended pre-primary classrooms in other government-supported schools. Specifically, pupils in the USAID Tusome Pamoja intervention schools showed increases in listening comprehension, numeracy operations, and working memory. However, importantly, pupils who attended non-USAID Tusome Pamoja (control) government-supported schools also showed increases in school readiness. As previously mentioned in this report, before data collection began for the baseline assessment in January 2017, TIE personnel conducted training for pre-primary teachers on how to implement the new pre-

primary curriculum. It is likely that the training and curriculum employed by the government has had a positive impact on school readiness skills of children attending pre-primary school in specific districts in the Mtwara Region.

Sets of big book titles in classrooms were found to be incomplete in some classrooms. The data from the endline assessment indicate that 90.6% (35) of classrooms contained some number of big books contained in the classroom, and 71.9% (23) of intervention classrooms had more than 10 big book titles contained in the classrooms. Although few classrooms contained all 24 in the classroom, the August 2019 qualitative study found that teachers store books in various places until the day of use for safe-keeping. Most teachers (5 [62.5%]) reported that the books were stored in the Head Teacher's office; others said the books are kept in individual classrooms (2 [25.0%]) and in the library (1 [12.5%]).

During the August 2019 classroom observation, more big books were available in classrooms than had been observed in January 2019. The findings from the classroom observation in August regarding the number of books found are presented as follows:

- 12 books (in three classrooms)
- 24 books (in one classroom)
- 23 books (in one classroom)
- 22 books (in one classroom)
- 16 books (in one classroom)
- 14 books (in one classroom).

Teacher interviews conducted during the qualitative follow-up study in August 2019 revealed that only two out of eight classes received a complete set of 24 books, even though complete sets for each classroom were delivered to the District Education Office in the two target districts, Tandahimba and the Mtwara DC. It is recommended to supplement the other classes with additional books, if possible.

There is another reason why the complete sets of books were not found in some of the classrooms during the observation in January 2019. Specifically, when choosing which books to use during classes, teachers follow the class time table (syllabus), choose the book to align with the competency being taught on that particular day, and follow the USAID Tusome Pamoja teacher's guide. Therefore, it would be understandable that the teachers would only have the selected books in the classroom on any given day.

Regarding the future development and distribution of supplementary books, it is recommended that the GOT monitor the delivery of books by District Education Offices to classrooms. Classrooms should be periodically visited to also monitor the storage and inventory of big books. In addition, Head Teachers and communities should be encouraged to support systems for the safe storage of books (e.g., constructing locked cabinets in each classroom).

Although the percentage of teachers conducting read-alouds were low at endline assessment, this is likely impacted by beginning of the school year activities. During data collection for the endline assessment, the assessors observed that 50.0% (16) of teachers conducted read aloud activities during the day of data collection in USAID Tusome Pamoja-supported classrooms. Given that the read aloud activity is one of the main components of the intervention, this level of occurrence was low. The findings also indicated that not all teachers who conducted read aloud activities are implementing all of the best practices associated with the

activity. However, as previously mentioned, during the first month of the school year when data were collected for the endline assessment, teachers focused on school adjustment and socio-emotional skills, such as empathy, to help children work together as a group.

Data collected during August 2019 during classroom observations and teacher interviews, however, showed different results. The assessors observed that all eight intervention school teachers (100.0%) conducted read aloud activities to their pupils. During the interviews, seven teachers (87.5%) reported reading aloud everyday to their pupils. One teacher (12.5%) reported reading to the pupils only once per week. Additionally, the specific instructional strategies that the team expected to see during read aloud activities were observed in all classes at intervention schools during the subsequent data collection. This finding is expected because, as previously mentioned, the routine of read aloud instruction had not yet begun in January 2019 but it was a routine practice in August 2019 when additional data were collected (see **Table 9**).

Big books were not made available to the control school classrooms, read aloud activities were not conducted in the GOT classrooms, and the teachers interviewed were unable to identify the components of reading instruction.

The previously mentioned findings explain why, overall, implementation of the read aloud components were low in January 2019. Understanding the barriers facing some teachers who are not conducting the read aloud activity, as well as understanding the challenges teachers are facing in conducting the activity as trained would uncover lessons that could be helpful in either revising the activity or supporting teachers in overcoming challenges in the classroom to conduct the activity.

There has been an increase in teachers' use of important developmentally appropriate instructional strategies, such as summarizing the day, making connections, and reviewing learning, and teachers implementing the USAID Tusome Pamoja pre-primary program use these strategies more than teachers in control schools. The endline assessment showed an marked increase in the number of teachers using strategies that will enhance the learning experience for young children. For example, at baseline 34.4% of teachers in intervention schools were reviewing learning at the beginning and end of the day compared to 81.3% and 93.8% at endline, respectively. The percentage of teachers making connections to things the students learned before increased from 31.3% to 87.5%. In control schools, the percentage of teachers implementing these strategies were much less or even decreasing.

In the followup study conducted in August 2019, all 12 teachers (intervention and control) used a variety of teaching and learning strategies. During classroom observations at the intervention schools, seven teachers (87.5%) used five or six different teaching strategies during a lesson. In contrast, during the observations at the control schools, only one teacher (25.0%) used more than three strategies during the lesson. The results also show that most teachers (7 [87.5%]) in the intervention schools, but only one (25.0%) teacher at a control school, organize pupils to work in small groups, usually based on children's gender, ability, and age.

These results show that, overall, the teachers in the USAID Tusome Pamoja schools consistently used a variety of teaching and learning strategies, including read aloud lessons, whereas teachers in the government-supported schools did not.

Pre-primary teachers may need additional support with extending conversations with children because this is a key strategy in encouraging oral language development. It is possible that teachers may find it unnatural or difficult

to engage in more conversation with children during classes. However, employing this strategy in the classroom can help children expand their receptive and expressive vocabulary, and they can learn how to make connections between concepts when the quality of their verbal interactions with adults and peers increase. Because extending conversations may be a particularly challenging strategy for teachers to implement, teachers who engage in the strategy should be interviewed often and lessons should be shared with them so that learning can be spread to other teachers who may benefit. Assisting teachers with increasing their quality of verbal interactions with their pupils is a vital step that should be prioritized by the program.

Teachers are using the learning centers and most have teacher’s guides.

Although not all intervention classrooms had learning centers in place, when they were present 14 [43.8%], all of those teachers were observed using them. Additionally, a large proportion (10 [71.4%]) of those teachers using the learning centers were actively facilitating learning with their pupils. This finding shows promise in this component of the USAID Tusome Pamoja pre-primary program, including training teachers on how to effectively use the learning centers. The findings also showed that most intervention classrooms (25 [78.1%]) had copies of the USAID Tusome Pamoja pre-primary teacher’s guide.

The findings from the data collected in August 2019 showed that most teachers in intervention schools (7 [87.5%]) used the learning centers daily. The four control classes (100.0%) did not have learning centers at all.

When the team asked the teachers how they set up their learning centers during rainy seasons, three teachers, whose classes are conducted outside because of a lack of physical classroom space, reported during the interviews that they did not use learning centers during rainy seasons. Instead, the teachers said they had to stop teaching and learning activities completely, or they sometimes asked the children to stay at home until they were sure it was safe to come to school. The remaining five intervention classes had classrooms where learning centers were set up permanently and could be used, even during rainy seasons.

However, when the team asked the teachers during the follow-up study in January 2019 whether their pupils used the learning centers, all eight teachers (100.0%) in the intervention schools reported that they did not. All of the teachers reported the same reason for not using the learning centers: class time during the first month of school is spent establishing a rapport with children, helping them work together as a group, familiarizing them with the school environment, preparing teaching and learning materials, and enrolling new children.

Parental and caregiver engagement in classroom feeding programs and development of teaching and learning materials have not been achieved. Few teachers reported that parents and caregivers are involved in contributing food to (6.2%) and developing teaching and learning materials (28.1%) in the classroom. Anecdotal evidence has shown that since pre-primary and basic education has become fee-free, parents and caregivers are reluctant to support school activities through financial and/or teaching and learning materials contributions. Another challenge regarding parental and caregiver involvement could be a lack of time during the planting and harvesting seasons. Given the multi-prong approach to parental and caregiver engagement, USAID Tusome Pamoja should explore why these methods are not working for parents and caregivers of pre-primary pupils.

As was found to be the case with the other KPIs, parental and caregiver engagement was present to a higher degree during the August 2019 data collection effort for the follow-up study than during the January 2019 endline assessment. Some teachers in both groups (7 [75%]) reported during the interviews that parents and caregivers helped prepare porridge and develop teaching and learning materials. When asked

specifically whether parents provided support in January 2019, all teachers except one (11 [91.7%]) responded that parents and caregivers had not yet been organized during the first month of the school year, so they did not receive parental or caregiver support inside or outside of the classrooms. Two teachers reported that parents and caregivers began supporting their classes in February 2019, five teachers reported that this occurred in March 2019, and a teacher from one intervention school did not receive parental or caregiver support until April 2019.

Therefore, it is understandable that parental and caregiver involvement in classroom school feeding programs and the development of teaching and learning materials would not have occurred in January and February 2019, which is consistent with the other findings.

It is important to identify the methods that teachers, parent–teacher partnerships, and community mobilizers have successfully used to engage parents and caregivers early in the school year. These methods could then be used to help other schools that are struggling with parental and caregiver involvement during the first months of the school year.

According to teachers, school and district leadership have provided support in helping them learn how to implement the USAID Tusome Pamoja pre-primary program. All teachers except for one reported that either the Head Teacher, WEO, or the SQA helped them implement the program. The USAID Tusome Pamoja Program instituted training sessions for school leadership, which has promised to help with fidelity to the program and to buffer against the challenges of teacher transfer from control schools to intervention schools.

Teachers reported balanced gender beliefs about girls' and boys' learning. The endline assessment included questions to determine teachers' beliefs about ease in teaching boys and girls reading and writing and in boys' and girls' ability to perform mathematics. Most teachers showed balanced gender beliefs regarding reading and writing (81.3%) and mathematics (71.9%).

8. References

About, F. E., & Hossain, K. (2011). The impact of preprimary school on primary school achievement in Bangladesh. *Early Childhood Research Quarterly*, 26(2), 237–246

About, F. E., Hossain, K., & O’Gara, C. (2008) The Succeed Project: challenging early school failure in Bangladesh. *Research in Comparative and International Education*, 3(3), 295–307

Berlinski, S., Galiani, S., & Gertler, P. (2009). The effect of pre-primary education on primary school performance. *Journal of Public Economics*, 93(1), 219–234.

Gutman, L. M., & Schoon, I. (2016) A synthesis of causal evidence linking non-cognitive skills to later outcomes for children and adolescents. In M. S. Khine & S. Areepattamannil (Eds.), *Non-cognitive skills and factors in educational attainment* (pp.171–198). Rotterdam, The Netherlands: Sense Publishers.

Annex A: Development of Tools for Data Collection During Baseline and Endline Assessments

For the baseline assessment, the Tusome Pamoja team implemented an adaptation and piloting process during a three-day workshop in November 2016 to ensure that the data were reliable and valid for the constructs and measures of interest. The assessors collected the pilot data from 245 pupils, 197 parents and caregivers of the sampled pupils, and 15 teachers across 15 schools in the Masasi District of the Mtwara Region. The Tusome Pamoja team analyzed the data to inform any necessary modifications to the instruments, and then used the finalized tools to collect data during the baseline assessment.

For the endline assessment, the team revised the data collection tools to decrease the amount of assessment time required for the young pupils to measure components that were not measured during the baseline assessment, but were integral to the program, and to improve the reliability of the data collected. The Tusome Pamoja team made changes regarding three areas (i.e., child assessment, classroom observation, and pre-primary teacher interviews), which are each discussed as follows.

Child assessment. Because of low accuracy scores on the Assessor Accuracy Measure (AAM), one subtask titled shape copying, which is a measure of fine motor skills, was dropped for full data collection. Another subtask titled confidence and curiosity that involving the socio-emotional domain included 17 items, which were tested and piloted by assessors. After this effort, the monitoring and evaluation team analyzed the results and subsequently decided to remove nine of the items, leaving eight items in this subtask in the final version of the child assessment.

Classroom observation. Because of low reliability and after a discussion regarding how to operationally define the term “equally,” a decision was made to change the question “Does the teacher call on boys and girls equally?” to “Does the teacher involve both boys and girls in the teaching and learning process?” In addition, the team deemed that some questions in the assessment were unnecessary, including the number of slates, pencils, and exercise books included in a classroom; therefore, they deleted these questions from the assessment. The team added the question “Does the teacher have a teacher’s guide for Tusome Pamoja pre-primary program implementation?” because it was important to have that data. The team added another question “Do the children work together in large groups?” to account for large classroom sizes and how the teachers were trained to manage the sizes.

Pre-primary teacher interviews. The team added the following two questions because these were needed to measure parental involvement in the classroom:

- “How often do parents of children in your pre-primary class participate in the porridge preparation process (e.g., cooking, fetching water, providing flour)?”
- “How often do parents and caregivers come to the pre-primary classroom to help prepare teaching and learning aids?”

The team added two more pertinent questions to the assessment to determine whether the teachers attended the training sessions. These questions are as follows:

- “Did you participate in the Tusome Pamoja pre-primary program for teachers?”
- “Which Tusome Pamoja pre-primary training sessions did you attend in person?”

Additionally, to determine whether the Community of Learning was used for teachers who did not attend any training sessions, the team added the following question: “Did the Head Teacher, the Ward Education Coordinator (WEC), or the Quality Assurance Officer provide support to you to help you learn how to implement the Tusome Pamoja pre-primary program?”

The team revised or added two more questions about the Community of Learning. These questions are as follows:

- “In the past 12 months, how often have you engaged with other pre-primary teachers from schools nearby to discuss teaching and learning?”
- “In the past 12 months, how often have you engaged with Standard 1 teachers at your school to discuss teaching and learning?”

The team also added the question “Did you teach pre-primary class at this school last year?” to learn whether this teacher was new to the school and whether this teacher taught the Standard 1 pupils who were being assessed.

Annex B: Data Collection Methodology Used for the Endline Assessment

In total, 27 staff from the Tusome Pamoja Program and three officials from the President's Office—Regional Administration and Local Government (PO-RALG) completed six days of training in Mtwara, Tanzania, from January 13–19, 2019. The participants were trained on how to properly use the tablets to collect data. The participants also attended separate training sessions about the assessments, depending on whether they were a pupil assessor or classroom-level observer during the data collection period.

All assessors and observers participated in two Assessor Accuracy Measure (AAM) tests that examined the participants' ability to accurately and correctly score and record data. The AAMs allowed for specialized support to be given regarding the topic areas in which assessors seemed to be struggling. According to the results, classroom observers achieved 97.7% accuracy on the first AAM. Regarding the second AAM, although the video chosen increased the difficulty of the AAM, the classroom observers achieved 90.1% accuracy and 93.5% inter-rater reliability. During the first AAM, the pupil assessors achieved an average of 93.7% accuracy, which increased to overall 96.6% accuracy on the second AAM. Immediately after the training, workshop facilitators conducted a pilot effort for the participants to ensure that all protocols were working well and that all of the final revisions to the instruments were clear and fully integrated.

The assessors collected data for the baseline assessment in four districts in the Mtwara Region from January 21 through 31, 2017. Each data collection team consisted of three members: two pupil assessors and one classroom observer. To ensure high-quality data, the following quality assurance processes were implemented throughout each phase of the baseline assessment:

- During training, AAM was used to ensure that the assessor, observers, and supervisors were ready for field work.
- Tangerine™ software had programmed range checks and automatic skip patterns, as well as drop-down menus with school names and codes to minimize errors from assessors.
- Each team uploaded data daily. The home office statisticians team conducted quality control checks of these data and flagged any problems in data collection so they could be corrected.
- Tusome Pamoja staff served as Field Monitors. Each Field Monitor oversaw a small number of teams to ensure the smooth performance of field work.

Annex C: School Readiness—Tusome Pamoja Only

As mentioned in Section 3.2.1 of the Pre-Primary Endline Assessment Report for the Tusome Pamoja Program, the school readiness assessment measures pupils' pre-numeracy, pre-literacy, social-emotional, and executive function. Pupils' performance on these measures indicates the level of skills and knowledge that they have as they enter primary school. **Tables C-1** through **Table C-4** show the school readiness scores of children who attended Tusome Pamoja pre-primary classrooms. **Table C-1** presents pupils' mean scores from the baseline and endline assessments. **Table C-2** presents the mean percentage scores for both time points. **Table C-3** presents the percentages of zero scores on each subtask at each time point. In **Table C-4**, the performance on school readiness subtasks is disaggregated by gender.

Table C-1. Pupils' Mean Scores from the Baseline and Endline Assessments (Tusome Pamoja Schools Only)

Subtask	Number of Items in Subtask	Baseline Assessment	Endline Assessment
		Mean Score (Confidence Interval [CI])	Mean Score (CI)
Pre-numeracy			
Verbal counting	Count to 30	19.0 (±1.0)	21.4 (±1.1)
Number identification	5	2.3 (±0.2)	2.5 (±0.2)
Producing a set	4	2.4 (±0.2)	2.8 (±0.2)
Pre-literacy			
Expressive vocabulary	20	7.4 (±0.5)	10.3 (±0.7)
Listening comprehension	5	1.4 (±0.2)	2.3 (±0.2)
Letter name knowledge	20	2.2 (±0.3)	2.0 (±0.4)
Pre-writing: Name writing	1	0.2 (±0.0)	0.2 (±0.1)
Social-emotional			
Perspective taking/empathy	3	0.7 (±0.1)	1.4 (±0.2)
Executive Function			
Backward digit span	7	0.2 (±0.1)	0.8 (±0.2)
Forward digit span	5	2.7 (±0.1)	3.0 (±0.1)

Table C-2. Pupils' Mean Percentage Scores from Baseline and Endline Assessments (Tusome Pamoja Schools Only)

Subtask	Mean Percentage Scores (Confidence Interval)	
	Baseline Assessment	Endline Assessment
Pre-numeracy		
Verbal counting	63.2% (±3.4)	71.4% (±3.8)
Number identification	45.5% (±3.6)	49.6% (±4.9)
Producing a set	59.4% (±3.9)	70.6% (±4.2)
Pre-literacy		
Expressive vocabulary	37.1% (±2.3)	51.6% (±3.5)
Listening comprehension	27.9% (±3.7)	45.3% (±3.9)
Letter name knowledge	12.9% (±1.9)	11.7% (±2.6)
Pre-writing: Name writing	16.4% (±3.3)	18.0% (±5.0)
Social-emotional		
Perspective taking/empathy	24.7% (±3.7)	47.4% (±4.9)
Executive Function		
Backward digit span	3.1% (±1.4)	11.6% (±2.5)
Forward digit span	53.2% (±2.7)	59.5% (±2.7)

Table C-3. Percentages of Zero Scores on Each Subtask from the Baseline and Endline Assessments (Tusome Pamoja Schools Only)

Subtask	Percentages of Zero Scores	
	Baseline Assessment	Endline Assessment
Pre-numeracy		
Verbal counting	0.0%	0.0%
Number identification	16.0%	11.6%
Producing a set	10.8%	10.4%
Pre-literacy		
Expressive vocabulary	6.0%	4.9%
Listening comprehension	31.4%	16.5%
Letter name knowledge	43.8%	43.5%
Pre-writing: Name writing	70.4%	43.5%
Socio-emotional		

Subtask	Percentages of Zero Scores	
	Baseline Assessment	Endline Assessment
Perspective taking/empathy	56.0%	34.4%
Executive Function		
Backward digit span	90.6%	66.9%
Forward digit span	3.9%	1.3%

Table C-4. Performance on the School Readiness Subtasks, Disaggregated by Gender

Subtask	Total Number of Items	Mean Score (Confidence Interval)	
		Boys	Girls
Pre-numeracy			
Verbal counting	Count to 30	22.1 [±1.5]	20.7 [±1.4]
Number identification	5	2.5 [±0.3]	2.4 [±0.3]
Producing a set	4	2.9 [±0.2]	2.7 [±0.2]
Pre-literacy			
Expressive vocabulary	20	10.6 [±1.0]	10.1 [±0.7]
Listening comprehension	5	2.4 [±0.2]	2.1 [±0.3]
Letter name knowledge	20	1.9 [±0.5]	2.1 [±0.5]
Pre-writing: Name writing	1	0.2 [±0.1]	0.2 [±0.1]
Socio-emotional			
Perspective taking/empathy	3	1.5 [±0.2]	1.4 [±0.2]
Executive Function			
Backward digit span	7	1.0 [±0.2]	0.6 [±0.2]
Forward digit span	5	3.0 [±0.2]	2.9 [±0.2]

Annex D: Descriptive Analysis of Classroom Observation Data

Table D-1 through **Table D-8** and **Figures D-1** and **D-2** present the analysis from the classroom observation instrument in both intervention and control schools at baseline and endline assessment time points.

Table D-1. Total Number of Pupils in Pre-primary Classrooms

Time Points	Intervention		Control	
	Girls	Boys	Girls	Boys
Baseline assessment	20.1 (±8.9)	21.0 (±10.9)	24.7 (±12.4)	23.1 (±11.1)
Endline assessment	23.1 (±9.6)	23.9 (±9.6)	25.7 (±12.3)	24.7 (±12.0)

Figure D-1. Mean Number of Boys and Girls in the Classrooms from the Baseline and Endline Assessments

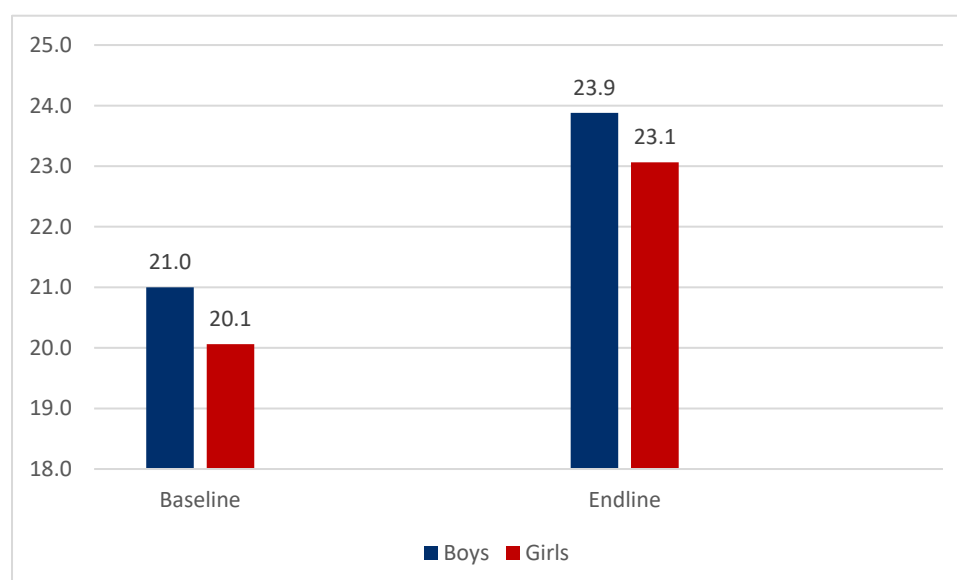


Table D-2. How Many Adults Were Present Today in the Classroom and Working with the Children?

Role	Intervention				Control			
	Baseline Assessment		Endline Assessment		Baseline Assessment		Endline Assessment	
	Mean Men	Mean Women	Mean Men	Mean Women	Mean Men	Mean Women	Mean Men	Mean Women
Teachers	0.0	1.0	0.5	0.5	0.0	1.0	0.2	0.5
Parents, Caregivers, and Teaching Assistants	0.0	0.1	0.1	0.2	0.0	0.0	0.0	0.0
Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Figure D-2. Percentage of Tusome Pamoja Classrooms Observed Implementing the Curriculum Competencies

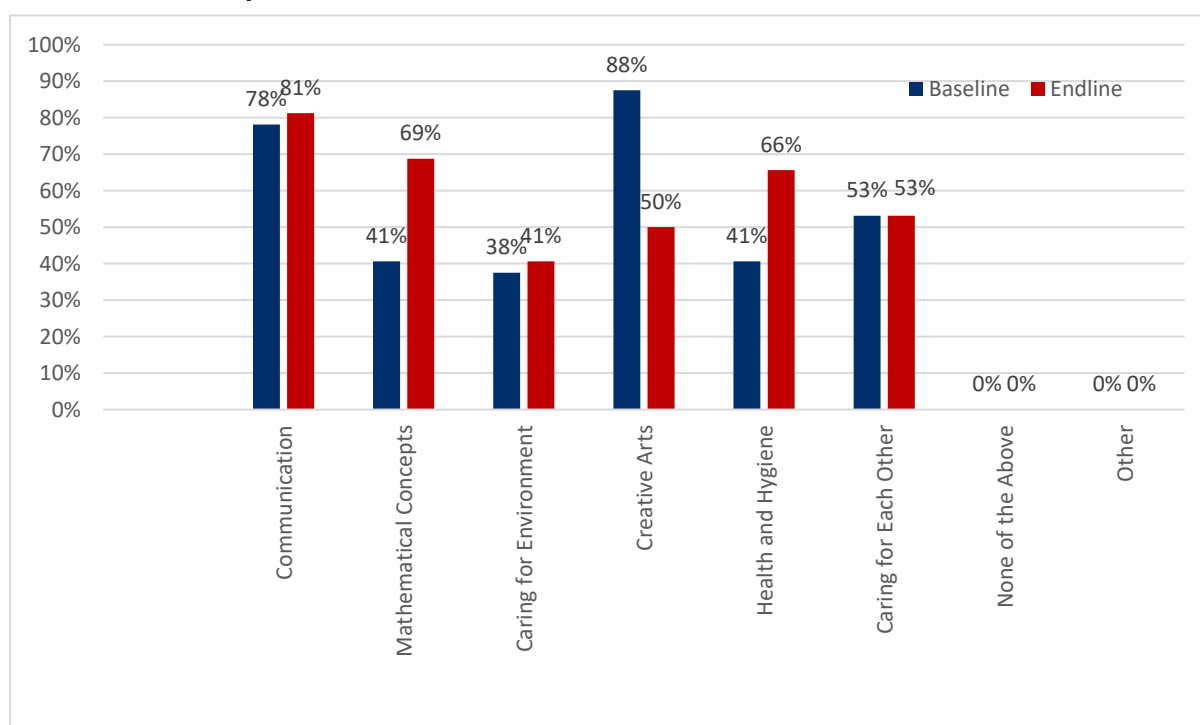


Table D-3. During the Day, How Often Did You Observe the Following Instructional Strategies (Intervention Group)?

Percentage of Classrooms (Number of Classrooms)							
Not at All		Some of the Time		Often		Almost All of the Time	
Assessments							
Baseline	Endline	Baseline	Endline	Baseline	Endline	Baseline	Endline
Item: Teacher asks questions that involve choral responses.							
9.38% (3)	0.00% (0)	9.38% (3)	6.25% (2)	50.00% (16)	28.03% (9)	31.25% (10)	65.63% (21)
Item: Teacher responds to children's questions with sentences of explanation.							
0.00% (0)	0.00% (0)	0.00% (0)	0.00% (0)	0.00% (0)	0.00% (0)	0.00% (0)	0.00% (0)
Item: Children initiate questions.							
100.00% (32)	96.88% (31)	0.00% (0)	3.13% (1)	0.00% (0)	0.00% (0)	0.00% (0)	0.00% (0)
Item: Children express their ideas when they are asked.							
6.25% (2)	0.00% (0)	31.25% (10)	12.50% (4)	6.25% (2)	0.00% (0)	0.00% (0)	0.00% (0)
Item: Teacher extends pupil conversation by asking who, what, when, where, why, and how questions.							
46.88% (15)	56.25% (18)	37.5% (12)	21.88% (7)	15.63% (5)	21.88% (7)	0.00% (0)	0.00% (0)
Item: Teacher uses objects and/or pictures to teach new words.							
3.13% (1)	21.88% (7)	6.25% (2)	15.63% (5)	0.00% (0)	18.75% (6)	0.00% (0)	25.00% (8)

Table D-3. During the Day, How Often Did You Observe the Following Instructional Strategies (Intervention Group)? (Continued)

Percentage of Classrooms (Number of Classrooms)							
Not at All		Some of the Time		Often		Almost All of the Time	
Assessments							
Baseline	Endline	Baseline	Endline	Baseline	Endline	Baseline	Endline
Item: Teacher uses written numbers and an associated set of real or drawn objects to teach number concepts.							
15.63% (5)	6.25% (2)	3.13% (1)	21.88% (7)	3.13% (1)	18.75% (6)	0.00% (0)	28.13% (9)
Item: Children work independently.							
40.63% (13)	18.75% (6)	28.13% (9)	37.5% (12)	31.25% (10)	18.75% (6)	0.00% (0)	25.00% (8)
Item: Children work in pairs.							
90.63% (29)	84.38% (27)	3.13% (1)	12.50% (4)	3.13% (1)	0.00% (0)	3.13% (1)	3.13% (1)
Item: Children work together in small groups (3 to 6 children per group).							
96.88% (31)	75.00% (24)	3.13% (1)	15.63% (5)	0.00% (0)	3.13% (1)	0.00% (0)	6.25% (2)

Table D-4. During the Day, How Often Did You Observe the Following Instructional Strategies (Control Group)?

Percentage of Classrooms (Number of Classrooms)							
Not at All		Some of the Time		Often		Almost All of the Time	
Assessments							
Baseline	Endline	Baseline	Endline	Baseline	Endline	Baseline	Endline
Item: Teacher asks questions that involve choral responses.							
0.00% (0)	9.38% (3)	6.25% (2)	15.63% (5)	62.50% (20)	6.25% (2)	31.25% (10)	68.75% (22)
Item: Teacher responds to children's questions with sentences of explanation.							
12.50% (4)	6.25% (2)	0.00% (0)	0.00% (0)	0.00% (0)	0.00% (0)	0.00% (0)	0.00% (0)
Item: Children initiate questions.							
100.00% (32)	96.88% (31)	0.00% (0)	0.00% (0)	0.00% (0)	0.00% (0)	0.00% (0)	3.13% (1)
Item: Children express their ideas when they are asked.							
18.75% (6)	6.25% (2)	18.75% (6)	3.13% (1)	3.13% (1)	0.00% (0)	0.00% (0)	0.00% (0)
Item: Teacher extends pupil conversation by asking who, what, when, where, why, and how questions.							
56.25% (18)	90.63% (29)	28.13% (9)	6.25% (2)	12.50% (4)	3.13% (1)	3.13% (1)	0.00% (0)
Item: Teacher uses objects and pictures to teach new words.							
25.00% (8)	31.25% (10)	15.63% (5)	18.75% (6)	6.25% (2)	3.13% (1)	0.00% (0)	6.25% (2)

Table D-4. During the Day, How Often Did You Observe the Following Instructional Strategies (Control Group)? (Continued)

Percentage of Classrooms (Number of Classrooms)							
Not at All		Some of the Time		Often		Almost All of the Time	
Assessments							
Baseline	Endline	Baseline	Endline	Baseline	Endline	Baseline	Endline
Item: Teacher uses written numbers and an associated set of real or drawn objects to teach number concepts.							
28.13% (9)	37.50% (12)	9.38% (3)	9.38% (3)	6.25% (2)	15.63% (5)	6.25% (2)	3.13% (1)
Item: Children work independently.							
50.00% (16)	43.75% (14)	34.38% (11)	43.75% (14)	15.63% (5)	9.38% (3)	0.00% (0)	3.13% (1)
Item: Children work in pairs.							
93.75% (30)	96.88% (31)	6.25% (2)	3.13% (1)	0.00% (0)	0.00% (0)	0.00% (0)	0.00% (0)
Item: Children work together in small groups (3 to 6 children per group).							
96.88% (31)	96.88% (31)	0.00% (0)	0.00% (0)	3.13% (1)	0.00% (0)	0.00% (0)	3.13% (1)

Table D-5. Instructional Methods Used by Teachers in the Intervention Group

Percentage of Classrooms (Number of Classrooms)			
Yes		No	
Baseline Assessment	Endline Assessment	Baseline Assessment	Endline Assessment
Item: Does the teacher use appropriate techniques to address mixed abilities (e.g., peer teaching, individual coaching, grouping children and giving different levels of support, resources to be used or tasks to complete)?			
56.25% (18)	75.00% (24)	43.75% (14)	25.00% (8)
Item: Does the teacher involve both boys and girls in the teaching and learning process?			
—	100.00% (32)	—	0.00% (0)
Item: Does the teacher begin with a short review of previous learning (e.g., asks questions about what children have learned yesterday, what they remember, what they liked)?			
34.38% (11)	81.25% (26)	65.63% (21)	18.75% (6)
Item: Does the teacher summarize the day with the children (i.e., repeat the main idea or new skills at the end of the day)?			
34.38% (11)	93.75% (30)	65.63% (21)	6.25% (2)
Item: Does the teacher ask children to make connections to things that they have learned before?			
31.25% (10)	87.50% (28)	68.75% (22)	12.50% (4)
Item: Did the teacher conduct a circle time?			
46.88% (15)	90.63% (29)	53.13% (17)	9.38% (3)
Item: Are there learning centers in the classroom?			
0.00% (0)	43.75% (14)	100.00% (32)	56.25% (18)

Table D-5. Instructional Methods Used by Teachers in the Intervention Group (Continued)

Percentage of Classrooms (Number of Classrooms)			
Yes		No	
Baseline Assessment	Endline Assessment	Baseline Assessment	Endline Assessment
Item: Are the learning centers used during the observation?			
0.00% (0)	100.00% (14)	0.00% (0)	0.00% (0)
Item: Is the teacher actively facilitating learning during this time (i.e., providing individualized support to pupils, providing alternative or extension activities for specific groups, answering questions and extending conversations)?			
0.00% (0)	71.43% (10)	0.00% (0)	28.57% (4)
Item: Is children's work displayed on the walls?			
3.13% (1)	9.38% (3)	96.88% (31)	90.63% (29)
Item: Are there instructional posters or visuals on the walls?			
6.25% (2)	78.13% (25)	93.75% (30)	21.88% (7)
Item: Did the teacher encourage hand washing at any time?			
9.38% (3)	28.13% (9)	90.63% (29)	71.88% (23)
Item: Are there supplementary readers (i.e., any reading materials other than the big books or textbooks)?			
12.5% (4)	81.25% (26)	87.50% (28)	18.75% (6)
Item: Does the teacher have a teacher's guide for the new curriculum?			
71.88% (23)	84.38% (27)	28.13% (9)	15.63% (5)
Item: Does the teacher have a teacher's guide for Tusome Pamoja pre-primary program implementation?			
0.00% (0)	78.13% (25)	0.00% (0)	21.88% (7)
Item: Are there supplies for the teacher to make teaching and learning aids?			
12.50% (4)	81.25% (26)	87.5% (28)	18.75% (6)

Table D-6. Instructional Methods Used by Teachers in the Control Group

Percentage of Classrooms (Number of Classrooms)			
Yes		No	
Baseline Assessment	Endline Assessment	Baseline Assessment	Endline Assessment
Item: Does the teacher use appropriate techniques to address mixed abilities (e.g., peer teaching, individual coaching, grouping children and giving different levels of support, resources to be used or tasks to complete)?			
40.63% (13)	15.63% (5)	59.38% (19)	84.38% (27)
Item: Does the teacher involve both boys and girls in the teaching and learning process?			
a	90.63%(29)	a	9.38% (3)
Item: Does the teacher begin with a short review of previous learning (e.g., asks questions about what children have learned yesterday, what they remember, what they liked)?			
28.13% (9)	38.71% (12)	71.88% (23)	61.29% (19)
Item: Does the teacher summarize the day with the children (i.e., repeat the main idea or new skills at the end of the day)?			
43.75% (14)	22.58% (7)	56.25% (18)	77.42% (24)

Table D-6. Instructional Methods Used by Teachers in the Control Group (Continued)

Percentage of Classrooms (Number of Classrooms)			
Yes		No	
Baseline Assessment	Endline Assessment	Baseline Assessment	Endline Assessment
Item: Does the teacher ask children to make connections to things that they have learned before?			
28.13% (9)	16.13% (5)	71.88% (23)	83.87% (26)
Item: Did the teacher conduct a circle time?			
34.38% (11)	32.26% (10)	65.63% (21)	67.74% (21)
Item: Are there learning centers in the classroom?			
0.00% (0)	0.00% (0)	100.00% (32)	100.00% (31)
Item: Are the learning centers used during the observation?			
0.00% (0)	0.00% (0)	0.00% (0)	0.00% (0)
Item: Is the teacher actively facilitating learning during this time (i.e., providing individualized support to pupils, providing alternative or extension activities for specific groups, answering questions and extending conversations)?			
0.00% (0)	0.00% (0)	0.00% (0)	0.00% (0)
Item: Is children's work displayed on the walls?			
6.25% (2)	0.0% (0)	93.75% (30)	100% (32)
Item: Are there instructional posters or visuals on the walls?			
15.63% (5)	28.13% (9)	84.38% (27)	71.88% (23)
Item: Did the teacher encourage hand washing at any time?			
0.0% (0)	3.23% (1)	100.00% (32)	96.77% (30)
Item: Are there supplementary readers (i.e., any reading materials other than the big books or textbooks)?			
25.00% (8)	28.13% (9)	75.00% (24)	71.88% (23)
Item: Does the teacher have a teacher's guide for the new curriculum?			
75.00% (24)	50.00% (16)	25.00% (8)	50.00% (16)
Item: Does the teacher have a teacher's guide for Tusome Pamoja pre-primary program implementation?			
0.00% (0)	0.00% (0)	0.00% (0)	100.00% (32)
Item: Are there supplies for the teacher to make teaching and learning aids?			
28.13% (9)	15.63% (5)	71.88% (23)	84.38% (27)

^a Item was not asked during the baseline assessment time point.

Table D-7. How Many Titles of Big Books Are There?

Number of Titles of Big Books	Intervention		Control	
	Baseline Assessment	Endline Assessment	Baseline Assessment	Endline Assessment
None	100.00% (32)	9.38% (3)	93.75% (30)	96.88% (31)
1 to 5	0.00% (0)	6.25% (2)	0.00% (0)	3.13% (1)
6 to 10	0.00% (0)	12.50% (4)	0.00% (0)	0.00% (0)
11 to 15	0.00% (0)	43.75% (14)	3.13% (1)	0.00% (0)
16 to 23	0.00% (0)	15.63% (5)	3.13% (1)	0.00% (0)
24 or more	0.00% (0)	12.50% (4)	0.00% (0)	0.00% (0)

Table D-8. Read Aloud Implementation by Teachers (Intervention Schools Only)

Story Book Items	Yes	
	Baseline Assessment	Endline Assessment
Is a story book available?	0.00%	65.60%
Did the teacher read a story book aloud to children?	—	43.8%
Does the teacher show and discuss the cover of the book?	—	43.8%
Does the teacher do a picture walk?	—	37.5%
Does the teacher connect the story or lesson content to children's lives?	—	37.5%
Does the teacher ask children to make connections to items that they have learned before?	—	34.4%
Does the teacher discuss vocabulary words?	—	37.5%
Does the teacher encourage children to predict what is going to happen in the book?	—	46.9%
Does the teacher hold the book so children can see the pictures?	—	46.8%
Does the teacher ask children comprehension questions about the book or story that was read to them?	—	43.8%

Annex E: Pre-primary Teacher Interview (Tusome Pamoja Schools Only)

Tables E-1 through Table E-33 present the findings from the analysis of data from the pre-primary teacher interviews for intervention schools only.

Table E-1. Status of Pre-primary Teacher

Status	Baseline Assessment	Endline Assessment
Current pre-primary teacher	84.4%	84.4%
Not the current pre-primary teacher	15.6%	15.6%
Same pre-primary teacher as last year	—	96.7%
Different pre-primary teacher than last year	—	3.1%
Women	53.1%	50.0%
Men	46.9%	50.0%

Table E-2. How Many Years Have You Been a Teacher?

Years	Baseline Assessment	Endline Assessment
Any grade		
Mean years	6.9	8.8
Minimum, maximum	0, 30	2, 32
Pre-primary level		
Mean years	0.8	2.5
Minimum, maximum	0, 3	0, 5

Table E-3. Number of Years as a Teacher

Percentage of Teachers (Number)		
Number of Years	Baseline Assessment	Endline Assessment
Less than 1 year	3.13% (1)	0.00% (0)
1 year	0.00% (0)	0.00% (0)
2 to 5 years	65.63% (21)	51.61% (16)
6 to 10 years	12.50% (4)	16.13% (5)
11 to 15 years	9.38% (3)	22.58% (7)
16 to 20 years	0.00% (0)	3.23% (1)
More than 20 years	9.38% (3)	6.45% (2)

Table E-4. Number of Years Teaching Pre-primary Class

Percentage of Teachers (Number of Teachers)		
Number of Years	Baseline Assessment	Endline Assessment
Less than 1 year	34.38% (11)	3.33% (1)
1 year	56.25% (18)	6.67% (2)
2 to 5 years	9.38% (3)	90.00% (27)
6 to 10 years	0.00% (0)	0.00% (0)
11 to 15 years	0.00% (0)	0.00% (0)
16 to 20 years	0.00% (0)	0.00% (0)
More than 20 years	0.00% (0)	0.00% (0)

Table E-5. Highest Educational Level Completed

Educational Level	Baseline Assessment	Endline Assessment
Less than Form 4	—	—
Form 4	34.4%	71.9%
Form 6 completion	—	—
Certificate	62.5%	21.9%
Diploma	3.1%	6.3%
Bachelor's degree	—	—
Postgraduate diploma	—	—
Master's degree	—	—
Doctorate	—	—
No answer	—	—

Table E-6. Certification in Early Childhood Development

Early Childhood Development Certification	Baseline Assessment	Endline Assessment
No	76.2%	88.9%
Normal certificate	40.0%	0.0%
Grade A certificate	0.0%	0.0%
Diploma	0.0%	0.0%
Other	60.0%	0.0%

Table E-7. Have You Taught a Grade Other Than Pre-primary Classes?

Other Grades	Baseline Assessment	Endline Assessment
Taught a grade other than pre-primary	96.90%	87.50%
Did not teach a grade other than pre-primary	3.10%	12.50%

Table E-8. Why Did You Become a Pre-primary Teacher?

Reason	Baseline Assessment	Endline Assessment
Earn money	0.0%	0.0%
Help children	40.6%	6.3%
I like teaching young children	59.4%	68.8%
No other jobs available	3.1%	9.4%
Teaching young children because it is simple and everybody can teach	6.3%	0.0%
Learn skills	15.6%	21.9%
I was a teacher at another level; I was re-assigned to the pre-primary level	59.4%	37.5%
Other (specify)	15.6%	3.1%
No answer	0.0%	0.0%

Table E-9. Pre-primary Teachers' Beliefs About Their Current Position

Baseline Assessment					Endline Assessment				
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Statement: I receive adequate support from my Head Teacher.									
0.0%	15.6%	9.4%	40.6%	34.4%	3.1%	0.0%	0.0%	28.1%	65.6%
Statement: I am overwhelmed with the amount of work I have.									
3.1%	9.4%	3.1%	28.1%	56.3%	6.3%	9.4%	0.0%	25.0%	59.4%
Statement: I have adequate support and resources from the school in carrying out my teaching duties.									
21.9%	56.3%	0.0%	21.9%	0.0%	15.6%	6.3%	12.5%	46.9%	18.8%
Statement: I feel that the role of pre-primary teacher is valued.									
21.9%	9.4%	3.1%	28.1%	37.5%	9.4%	0.0%	6.3%	28.1%	56.3%
Statement: I feel that I have the training I need to be an effective pre-primary teacher.									
9.4%	6.3%	3.1%	43.8%	37.5%	9.4%	0.0%	0.0%	34.4%	56.3%

Table E-10. Do You Provide Information to Parents or Caregivers About How Their Child Is Doing in the Pre-primary Class?

Information Provided	Baseline Assessment	Endline Assessment
No	34.4%	6.3%
Yes	59.4%	93.8%
Do not know	6.3%	0.0%

Table E-11. If "Yes," Then to How Many of the Parents and Caregivers Do You Provide Information?

Information Provided to How Many Parents and Caregivers	Baseline Assessment	Endline Assessment
Less than half	5.3%	3.3%
Approximately half	26.3%	36.7%
Most	52.6%	26.7%

Information Provided to How Many Parents and Caregivers	Baseline Assessment	Endline Assessment
All	15.8%	33.3%
Do not know	0.0%	0.0%

Table E-12. What Is the Composition of Parents or Caregivers to Whom You Provide Information?

Composition of Parents and Caregivers	Baseline Assessment	Endline Assessment
Mothers	—	60.0%
Fathers	—	40.0%
Grandparents	—	0.0%
Others	—	0.0%
Do not know	—	0.0%

Table E-13. How Do You Provide Information to Parents and Caregivers?

Ways In Which Information Is Provided	Baseline Assessment	Endline Assessment
I include markings in the notebook, workbook, and/or diary for them to review at home.	3.1%	9.4%
I provide written feedback about the child's learning and/or development.	50.0%	53.1%
I hold in-person meetings or conversations with parents or caregivers about their child's learning and/or development.	21.9%	43.8%
I provide group feedback about their child's learning and/or development in parent and caregiver meetings and in school committee meetings.	12.5%	40.6%
I hold in-person conversations with school committee members or with parents and caregivers about their child's behavior.	25.0%	37.5%
I provide other ways.	9.4%	3.1%
I do not know.	0.0%	0.0%

Table E-14. How Frequently Do You Have Individual Meetings with Parents and Caregivers in a Typical Year?

Frequencies of Individual Meetings	Baseline Assessment	Endline Assessment
Never	37.5%	0.0%
Weekly	3.1%	10.0%
Monthly	21.9%	23.3%
Every 3 months	21.9%	26.7%
Every 6 months	9.4%	20.0%
Once per year	3.1%	20.0%
Do not know	3.1%	0.0%
Other	0.0%	0.0%

Table E-15. How Often Do Parents and Caregivers of Children in Your Pre-primary Class Participate in the Porridge Preparation Process (e.g., Cooking, Fetching Water, Providing Flour)?

Participation in the Porridge Preparation Process	Baseline Assessment	Endline Assessment
Never	—	40.6%
Daily	—	3.1%
Weekly	—	0.0%
Monthly	—	3.1%
Other	—	0.0%
Do not know	—	53.1%

Table E-16. How Often Do Parents and Caregivers Come to the Pre-primary Classroom to Help Prepare Teaching and Learning Aids?

Frequencies of Visits	Baseline Assessment	Endline Assessment
Never	—	71.9%
Daily	—	12.5%
Weekly	—	3.1%
Monthly	—	3.1%
Other	—	9.4%
Do not know	—	0.0%

Table E-17. Did You Receive the Pre-primary Curriculum Training and Orientation by the Tanzania Institute of Education?

Attendance of the Pre-primary Curriculum Training and Orientation?	Baseline Assessment	Endline Assessment
Yes	15.6%	34.4%
No	84.4%	65.6%

Table E-18. Did You Participate in the Tusome Pamoja Pre-primary Program for Teachers?

Participation in the Tusome Pamoja Pre-primary Program	Baseline Assessment	Endline Assessment
Yes	—	90.63%
No	—	9.38%

Table E-19. Did You Attend a Tusome Pamoja Pre-primary Training for Teachers in Person?

Attendance at in-Person Training	Baseline Assessment	Endline Assessment
Yes	—	87.5%
No	—	9.4%
Do not know	—	3.1%

Table E-20. Did the Ward Education Officer, Head Teacher, or the Quality Assurance Officer Provide Support to You to Help You Learn How to Implement the Tusome Pamoja Pre-primary Program?

Provision of Support	Baseline Assessment	Endline Assessment
Yes	—	96.9%
No	—	0.0%
Do not know	—	3.1%

Table E-21. During the Past School Year, Did Anyone Enter Your Classroom to Observe Your Teaching?

Conduct of Classroom Observation	Baseline Assessment	Endline Assessment
Yes	81.3%	15.6%
No	12.5%	84.4%
Do not know	6.3%	0.0%

Table E-22. Observation and/or Feedback Provided by the Ward Education Officer

Observation and/or Types of Feedback	Baseline Assessment	Endline Assessment
The Ward Education Officer (WEO) observed by teaching.	9.4%	65.6%
The WEO gave me feedback about classroom management.	6.3%	34.4%
The WEO gave me feedback about record keeping.	3.1%	15.6%
The WEO gave me feedback about teaching and learning.	3.1%	56.3%
The WEO gave me feedback about learner assessment.	0.0%	6.3%
The WEO gave me feedback about something else.	0.0%	6.3%
The WEO observed my teaching, but did not give me feedback.	3.1%	3.1%

Table E-23. Usefulness of the Ward Education Officer's Feedback

Feedback Options	Baseline Assessment	Endline Assessment
The Ward Education Officer's (WEO's) feedback was not useful.	0.0%	0.0%
The WEO's feedback was somewhat useful.	50.0%	20.0%
The WEO's feedback was quite useful.	0.0%	15.0%
The WEO's feedback was very useful.	50.0%	65.0%

Table E-24. Observation and/or Feedback Provided by the Head Teacher

Observation and/or Types of Feedback	Baseline Assessment	Endline Assessment
The Head Teacher (HT) observed my teaching.	12.5%	71.9%
The HT gave me feedback about classroom management.	6.3%	34.4%
The HT gave me feedback about record keeping.	3.1%	12.5%
The HT gave me feedback about teaching and learning.	12.5%	46.9%
The HT gave me feedback about learner assessment.	0.0%	0.0%
The HT gave me feedback about something else.	0.0%	12.5%
The HT observed my teaching, but did not give me feedback.	0.0%	9.4%

Table E-25. Usefulness of the Head Teacher's Feedback

Feedback Options	Baseline Assessment	Endline Assessment
The Head Teacher's (HT's) feedback was not useful.	0.0%	5.0%
The HT's feedback was somewhat useful.	0.0%	5.0%
The HT's feedback was quite useful.	25.0%	25.0%
The HT's feedback was very useful.	75.0%	65.0%

Table E-26. During the Past 12 Months, How Often Have You Engaged with Other Pre-primary Teachers from Schools Nearby to Discuss Teaching and Learning?

Frequencies of Engaging with Other Pre-primary Teachers	Baseline Assessment	Endline Assessment
Never	59.4%	25.0%
Weekly	6.3%	15.6%
Monthly	9.4%	31.3%
Every 3 months	15.6%	15.6%
Every 6 months	3.1%	12.5%
Once per year	3.1%	0.0%
Do not know	3.1%	0.0%

Table E-27. Were These Meetings with Other Pre-primary Teachers from Schools to Discuss Teaching and Learning Useful to You?

Meetings Useful to Teachers	Baseline Assessment	Endline Assessment
Yes	100.0%	100.0%
No	0.0%	0.0%
Do not know	0.0%	0.0%

Table E-28. During the Past 12 Months, How Often Have You Engaged with Standard I Teachers at Your School to Discuss Teaching and Learning?

Frequency of Engaging with Standard 1 Teachers at Your School	Baseline Assessment	Endline Assessment
Never	—	6.3%
Weekly	—	6.3%
Monthly	—	9.4%
Every 3 months	—	18.8%
Every 6 months	—	34.4%
Once per year	—	25.0%

Table E-29. Were These Meetings with Standard I Teachers at Your School to Discuss Teaching and Learning Useful to You?

Meetings Useful to Teachers	Baseline Assessment	Endline Assessment
Yes	—	100.0%
No	—	0.0%
Do not know	—	0.0%

Table E-30. During the Past 12 Months, How Often Has the Head Teacher or Assistant Head Teacher Met With You to Provide Teaching and Learning Support?

Frequencies of Meetings with the Head Teacher or Assistant Head Teacher	Baseline Assessment	Endline Assessment
Never	50.0%	6.3%
Weekly	9.4%	3.1%
Monthly	3.1%	9.4%
Every 3 months	3.1%	21.9%
Every 6 months	18.8%	28.1%
Once per year	15.6%	28.1%
Do not know	0.0%	3.1%

Table E-31. Were These Meetings with the Head Teacher or the Assistant Head Teacher to Provide Teaching and Learning Support Useful to You?

Meetings Useful to Teachers	Baseline Assessment	Endline Assessment
Yes	100.0%	100.0%
No	0.0%	0.0%
Do not know	0.0%	0.0%

Table E-32. Do You Put Children into Small Groups to Teach Them?

Grouping Pupils	Baseline Assessment	Endline Assessment
Yes, I group them by age.	25.0%	12.5%
Yes, I group them by ability.	65.6%	81.3%
Yes, I group them by another category.	59.4%	59.4%
I do not know how I group them.	0.0%	3.1%
No, I do not group them.	6.3%	3.1%

Table E-33. Teachers' Beliefs About Best Practices in Early Learning

Teachers' Knowledge of Early Learning Best Practices	Percentage of Teachers Who Agree with the Statement	
	Baseline Assessment	Endline Assessment
Children in pre-primary classes can learn through play.	100.0%	100.0%
Children in pre-primary classes cannot learn through play.	0.0%	0.0%
Children in pre-primary classes should be taught by using the same teaching strategies as are used with children in primary classes.	50.0%	31.3%
Children in pre-primary classes should be taught by using different teaching strategies than are used with children in primary classes.	43.8%	68.8%
Children in pre-primary classes learn best through an approach that separates learning subjects or competencies.	62.5%	34.4%
Children in pre-primary classes learn best through an approach that combines learning across subjects or competencies.	37.5%	65.6%
Parents and caregivers can support their children's learning even though they cannot read themselves.	31.3%	87.5%
Parents and caregivers can support their children's learning only if they know how to read themselves.	68.8%	12.5%
Boys and girls are equally easy to teach how to read and write.	^a	81.3%
Girls are easier to teach how to read and write than boys	^a	18.8%
Boys are easier to teach how to read and write than girls.	^a	0.0%
Boys and girls are equally good at mathematics.	^a	71.9%
Girls are better than boys at mathematics.	^a	18.8%
Boys are better than girls at mathematics.	^a	9.4%

^a Item was not asked during the baseline assessment time point.