



Early Childhood Education

The early years of a child's life set the stage for healthy development and positive long-term outcomes. Yet, an estimated 250 million children worldwide do not get a healthy start because of poor nutrition, lack of early stimulation, and risk factors associated with poverty. RTI partners with governments to increase investments in early childhood education and maximize opportunities for young children to achieve their developmental potential, with far-reaching positive implications for current and future generations.

Our expertise in the early-learning aspects of early childhood development (ECD) informs interventions that help children build a solid cognitive foundation to support success in early primary education.

- **Pre-primary and early primary education.** We work with ministries of education around the world to develop teaching and learning materials and to train teachers of young children. We promote developmentally appropriate practices while respecting local definitions of quality, and we build the capacity of policy makers and educators to effectively advocate for increased investment in pre-primary education.
- **Research.** We conduct rigorous, policy-relevant studies of early care and education programs as well as investigating cognitive abilities of young children—both inside and outside of formal education settings. Our research in executive function, language, and social-emotional learning helps advance the understanding of factors affecting learning. Through our research efforts

with children with disabilities and refugee children, we are committed to improving the lives of vulnerable populations.

- **Child development assessment.** We develop innovative assessment tools that tell us about children's development and early learning from birth through age eight, and beyond. Our instruments help education leaders and policy makers evaluate programs, acquire and employ data for decision making, and improve education for the youngest learners and most vulnerable populations.

Project and Research Highlights

CAMBODIA. All Children Reading-Cambodia Activity and All Children Learning Activity, U.S. Agency for International Development (USAID) (2017–2021 and 2018–2021). These two concurrent projects have the goal of improving early grade reading and learning skills of children from kindergarten to grade 3. This includes creating supplemental materials for kindergarten classrooms, such as storybooks, for use with children with and without disabilities.



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Why Invest in Early Childhood Education?

Recent estimates show that 39 percent of children in developing countries under the age of five are at risk of not reaching their developmental potential.* Investing in early childhood education can lead to significant social and economic gains. Unsurprisingly, interventions that lead to positive outcomes in the first 2,000 days of a child's life have very high returns on investment for society. According to Nobel laureate economist James Heckman (<https://heckmanequation.org/the-heckman-equation>), early interventions such as providing proper nutrition for infants to support brain development have a significantly higher return on investment than later interventions such as job training programs for adults.

Investment in early education is crucial to achieve the Sustainable Development Goals (SDGs). In 2015, for the first time, the SDGs made ECD a central theme. Millions of young children in developing countries are not meeting SDG targets related to ECD, including achieving developmental milestones and participating in organized learning before primary school. In addition to these education-related goals for ECD, nutrition, child survival, and child protection goals have also been established, illustrating the multisectoral nature of ECD.

* Lu, C., Black, M. M., & Richter, L. M. (2016). Risk of poor development in young children in low-income and middle-income countries: An estimation and analysis at the global, regional, and country level. *The Lancet Global Health*, 4(12), e916–e922.

JORDAN. USAID Early Grade Reading and Mathematics Initiative, USAID (2015–2019).

RTI is working with the Ministry of Education to support reading and math in kindergarten through grade 3. In addition, RTI is supporting Ministry efforts to expand access to high-quality kindergarten through two additional activities. An accelerated school-readiness program for children who have not had access to kindergarten educates both the children and their parents so that children transition successfully to school and parents engage in learning activities at home. RTI is also partnering with the Ministry of Education and the Ministry of Social Development to map the provision of kindergarten and analyze the gaps in coverage, especially among marginalized and refugee populations. This analysis has led to policy recommendations for achieving universal kindergarten enrollment, including options to leverage the private sector through public–private collaboration.

KENYA. The Tayari Early Childhood Development and Education Programme, Children's Investment Fund Foundation (2014–2019).

The goal of the Tayari program was to increase the school readiness of pre-primary children in Kenya, including sufficient cognitive, physical, social, and emotional well-being. As of 2019, Tayari had reached 145,000 children in 1,500 early childhood centers in selected counties in Kenya. Tayari's activities included developing learning materials for pupils and teachers, training teachers and giving them instructional support,



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and using technology for tracking child development outcomes. Additionally, Tayari aimed to reduce illness-related school absenteeism by promoting improved hygiene practices, water treatment, and health record-keeping in schools.

LIBERIA. Read Liberia Activity, USAID (2017–2022). This five-year education project is helping to improve outcomes in public kindergartens in six targeted counties, as well as early grade reading skills for students in grades 1 and 2. The kindergarten pilot will reach 2,700 students from 60 schools, with the goal of improving oral vocabulary for emergent literacy. In addition to two trainings per year and ongoing coaching support, teachers receive daily structured lessons to aid in delivering instruction in language and emergent literacy. Additionally, students receive an activity book that aligns with the daily activities in the teachers' guide.

TANZANIA. Tusome Pamoja, USAID (2016–2021). The USAID Tusome Pamoja Program, or “Let’s Read Together,” provides sector support to the national pre-primary and primary education program through intensive, targeted assistance in Zanzibar and four mainland regions. Tusome Pamoja aims to improve emergent academic skills for roughly 1.4 million children through improved instructional practice, system strengthening, and community engagement. The pre-primary program, piloted in Mtwara region, emphasized the use of storybooks and dialogic reading strategies to support the development of foundational oral language and emergent

literacy skills of pre-primary students. Each teacher received 24 books for reading aloud and an accompanying teachers' guide. An impact evaluation showed that the intervention had a significant positive effect on children's emergent literacy and executive function skills.

TANZANIA. Early Learning Partnership System Research, World Bank (2017–2018). RTI performed a situational analysis of pre-primary education, with a goal of informing policy making in Tanzania and contributing to the global body of research on pre-primary education systems. The initial situational analysis concentrated on five elements of the subsector: teacher workforce, financing, the role of parents in early learning, nonstate provision of pre-primary education, and the political-economic context. Following the situational analysis, RTI collaborated with the Government of Tanzania to develop a systems research agenda.

TANZANIA. Measuring Early Learning Quality and Outcomes (MELQO), United Nations Children's Fund (2016–2017). RTI implemented MELQO, an assessment measuring school readiness and classroom quality, in mainland Tanzania and Zanzibar with a nationally representative sample to provide a snapshot of pre-primary learning outcomes and quality. This assessment enabled the government to better understand the quality of the pre-primary classroom and school environment, and children's school readiness skills at the start of grade 1. The government has used the findings



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to inform pre-primary sector planning, and as a baseline measure for future growth in early learning and quality of school environments.

UGANDA. Repetition/Early Years National Study, U.K. Department for International Development (DFID) (2017–2018). In 2016, RTI designed and self-funded a pilot study in two districts in Uganda to investigate whether access to pre-primary education affects enrollment and repetition. Parents and teachers were interviewed about children’s access to pre-primary education programs, pre-primary attendance, and grade 1 repetition. Results of this study suggested that children who attended pre-primary were less likely to repeat grade 1. Based on these results, Ugandan policy makers requested national-scale research to help them understand the causes of early primary repetition and its relationship to pre-primary education access. In response to this interest from policy makers, DFID funded a national study to examine the issue of repetition at a larger scale. Data were collected from teacher and parent interviews and student records in 10 subregions throughout Uganda. This national study confirmed the pilot findings that very high (unreported) repetition feeds overenrollment in grade 1, and that this high repetition rate stems partly from a lack of access to preprimary education.

Executive Function

Executive function (EF) refers to cognitive processes and abilities that are important for organizing information, planning, solving problems, sustaining attention, and orchestrating thought and action in support of goal-directed behavior. EF skills are central to a child’s ability to learn how to learn.

RTI has developed an innovative, tablet-administered tool to measure executive function in young children. EF Touch is made up of a battery of tasks that measure inhibitory control, working memory, and cognitive flexibility. It is unique in that its platform within RTI’s Tangerine® software enables easy-to-use and scalable assessment, even within low- and middle-income countries (LMICs).

EF Touch was originally piloted in Nairobi, Kenya, successfully demonstrating its feasibility to measure these skills in young children in an LMIC. It was incorporated into a longitudinal study within the Tayari Early Childhood Development and Education Programme in Kenya, to collect data from 1,300 children; and also was included in the baseline assessment for the impact evaluation of the USAID Read Liberia kindergarten activities.

More Information

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