

# EMERGENT LITERACY AND MATH (ELM) RESULTS: BANGLADESH

Save the Children is field testing early childhood development resources to better support the development of emergent literacy and math (ELM) skills in young children. The programming raises awareness of these skills and how they develop through play and joyful learning, trains early childhood care and development (ECCD) teachers on how best to support them and mobilizes communities to promote these skills at school and at home in order to ensure school readiness.

## SUMMARY

Save the Children (SC) has worked in early childhood in Bangladesh for almost 20 years in partnership with government and many local NGOs. Save the Children's flagship ECCD program, USAID-funded Promoting Talent Through Early Education (PROTEEVA) creates pre-primary opportunities for over 300,000 children. The 5 year program strives to ensure optimal school readiness and smooth transitions to primary school. It covers 21 districts in 6 regions of Bangladesh operating pre-primary classrooms both in community and school-based settings three hours a day, six days a week.

At least one trained adult engages children in structured and unstructured play, as well as early literacy and math activities using learning and teaching materials provided by the program. In addition to the foundational pre-service training ECD teachers receive at the beginning of the program cycle, during the course of the school year, all teachers receive additional follow up trainings on emergent literacy and math, classroom management and play-based learning. SC and its local partners also conduct regular parent education workshops to strengthen parental involvement in supporting child development and school readiness. PROTEEVA materials and messages have a strong focus on emergent literacy and math as well as joyful and active learning. Currently a total of 2,520 pre-primary classrooms are operational under PROTEEVA.

## METHODOLOGY

Five districts were selected for this external evaluation undertaken by McGill University. Four school-based and four community-based preprimary sites were selected from each study district (for a total of 40 sites) from among those within two hours' travel from the district center. Baseline data were gathered in March 2011 and after 8 months of implementation, endline data were gathered in November-December 2011. Sites were observed and rated using an adapted Early Childhood Environment Rating Scale (ECERS-R and ECERS-E), tools used globally to assess the quality of provision for children in center-based programs. Children's skills were measured a 30-item school readiness assessment including items like letters, shapes, numbers and writing one's name. Caregiver interviews provided measures of health, nutrition, and socioeconomic situation. At endline, all children and families were visited again, and 15 of the sites (3 per district) were revisited to re-assess program quality.

## LEARNERS

The learners in the sample include six randomly selected children from each of forty PROTEEVA schools and six children from neighboring villages where preschools are not available. The children are an average of 5.72 years of age, most are immunized and live in homes with safe water that their families own. Three in five have electricity in their home, two in five have a television, and 25% have mothers with no education.



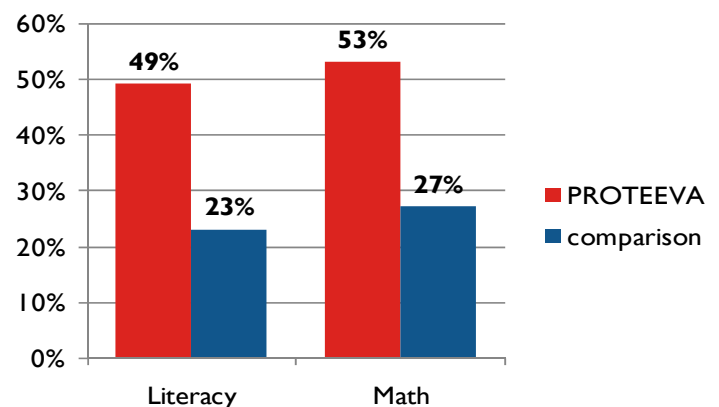
Kawser uses funnel to pour water during an exercise designed to promote numeracy. Photo by Jeff Holt.

## RESULTS: 8 MONTHS

### PROTEEVA Quickly Improves Skills, Quality, Health

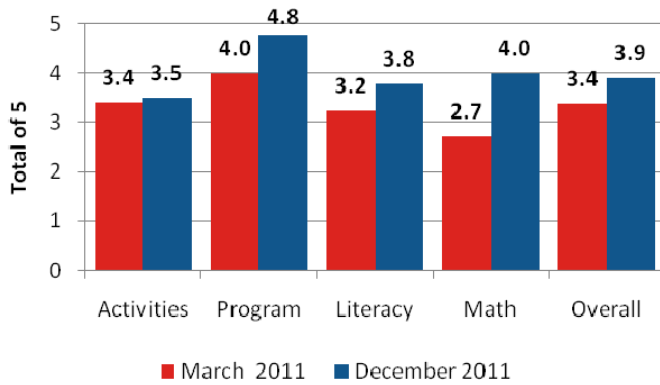
In just eight months, the PROTEEVA project demonstrated an impact on learning during the 2011 calendar year. Controlling for age, height for age, mothers education, family assets and baseline score, PROTEEVA children significantly outperformed comparison students on all tests and subtests, with very large effect sizes that range from 1.61 to 1.97.

**Figure 1:** Average endline school readiness scores by group controlling for age, height-for-age, mother's education, family assets and baseline score



In the context of effect sizes presented in a Lancet review of preschool programs globally (Engle et al, 2011), these effect sizes reflect impressive gains made by the program children.

**Figure 2: ECERS scores by subscale and time**



These increased skills relate to the increase in preschools quality from 3.4 to 3.9 on a scale of 0 to 5 as shown in Figure 2. Within the subscales, increased ratings for math, literacy and program contributed to this shift, while activities ratings remained stable. Improvement in reading/writing numbers, discussion of shapes, environmental print, story reading, writing letters and free play contributed most significantly to this higher score.



Any strengthens her math by counting leaves with her mother. Photo by Jeff Holt.

Finally, at endline, PROTEEVA children were less likely to be stunted, and had higher rates of use for: Vitamin A, latrines, deworming and iodized salt than comparison children. While at baseline they were significantly more likely to have been ill the week prior to the data collection, this was no longer the case at endline, reflecting improved health prevention and promotion practices such as hand washing.

## RECOMMENDATIONS FOR 2012

- Quality Variation:** While in just eight months PROTEEVA significantly improved overall quality in ECD sites, district analyses show great variation between sites. As each site represents a partnership with a different local NGO, programmatic attention is called for to ensure further and across the board progress in terms of quality. Program staff and partners should consider the causes of this variation with an eye towards sharing lessons and strengths across partners to strengthen all implementation.

- School Readiness:** Despite huge gains in math and literacy, children in PROTEEVA sites remain at roughly 50 percent correct responses on both emergent literacy and math sections of the school readiness assessment, on average. The program has further ground to cover to ensure that children attending PROTEEVA pre-primary schools are even better prepared for early primary grades.



Akash reads *Grandfather Goes to Market*, a narrative to promote reading and numeracy. Photo by Jeff Holt.

- Focus on emergent literacy and math:** The more focused training and resources on emergent literacy and math were welcomed by ECD teachers and program staff. Strengthening teacher knowledge of emergent literacy and math and providing simple classroom resources to help them foster language and literacy skills among children in meaningful and fun ways is a key strategy for ensuring better chances for reading and math achievement in primary grades. SC is in the process of reviewing and further enhancing these teacher resources by looking closely at the practices at the classroom level to support these important skills.



PROTEEVA students sort and count blocks. Photo by Jeff Holt.

## FOR MORE INFORMATION

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