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Lessons from LAC Reads: *Espacios para Crecer* in Nicaragua

This brief is one in a series of briefs uncovering lessons learned from four evaluations of promising reading interventions funded by USAID as part of the Latin America and the Caribbean Reads (LAC Reads) project. The evaluations were conducted by Mathematica.

Background

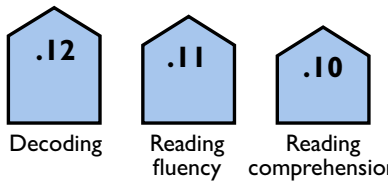
Espacios para Crecer (EpC) is an intensive after-school program designed to support disadvantaged, primary school-age children by providing additional learning time to children who are at risk of poor performance, are having difficulties at school, have dropped out of school before completing grade 3, or have never attended school. DevTech Systems Inc. and its partners adapted and implemented the EpC intervention in Nicaragua's Southern Caribbean Atlantic Autonomous Region (RACCS) as a part of the USAID/Nicaragua-funded Community Action for Reading and Security (CARS) project.

The evaluation focused on the impact of the main EpC program activities:

- Offering EpC in communities and encouraging children's attendance.
- Training and coaching facilitators on methods, techniques, and activities to facilitate accelerated learning, including providing differentiated responses to meet children's individual needs and make learning fun.
- Observing facilitators and providing feedback/mentoring.
- Adapting reading materials to the local context.
- Distributing books, musical instruments, and sports equipment.

Results

After about 1.5 years, the evaluators identified that the experimental design worked well in small communities, but not as well in the larger ones, due to lower take-up of and compliance with the program. Based on survey results and qualitative findings from a randomized controlled trial, evaluators found that in these communities:



Impacts on reading skills
(Standard deviations)

EpC had positive impacts on children's reading outcomes, but not on school attachment or social-emotional outcomes.

- There were positive impacts of 0.12 standard deviations on decoding and 0.11 standard deviations on reading fluency. These impacts represent about a 10 percent difference from the control group's mean for these outcomes and may reflect early impacts of EpC.
- Reading comprehension improved, with children in EpC scoring 4 to 5 percentage points better than control group children. This difference reflects an effect size of 0.1 standard deviations.

Impacts were statistically significant for girls and for children who were out of school at intake, but not for boys and children who were already enrolled in school.

- Girls and children who were not enrolled in school at intake in the treatment group had higher decoding, oral reading fluency, and reading comprehension scores than those in the control group.
- There were no significant impacts for children who were enrolled in school at intake, except for an impact on reading comprehension that was only significant at the 10 percent level.
- Endline impacts on literacy skills were not significant or were significant only at the 10 percent level for reading comprehension after adjusting for base-year differences, which could reflect early impacts of EpC.

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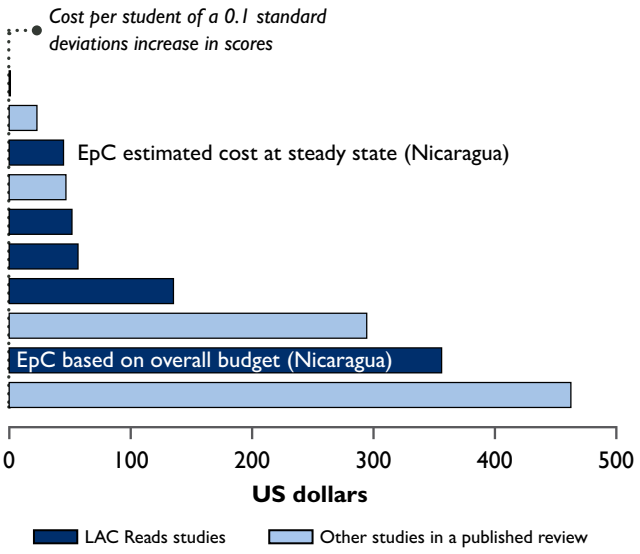
Cost-effectiveness of LAC Reads Interventions compared to similar interventions in the region



Cost-effectiveness estimates for the EpC intervention ranged from $45, at steady state, to $358, including startup costs, per 0.1 standard deviations in literacy score improvement.

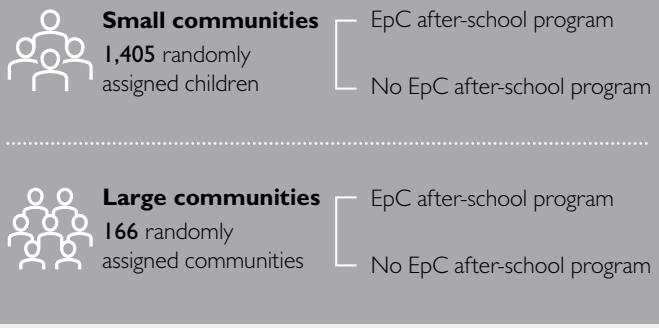
Cost-effectiveness estimates based on impacts in small communities show that EpC in the RACCS at steady state was in the middle of the range of cost-effectiveness when compared to other education interventions to improve student performance that have been rigorously evaluated in LAC. When including design and startup costs (including capacity building to local NGOs to provide EpC), cost-effectiveness was in the high end of the range.

Lessons learned and recommendations

After-school programs that focus on hard-to-reach children can improve early grade reading outcomes, but achieving meaningful impacts may require a heavy investment. Children living in harder to reach areas (such as remote rural areas) often have lower educational outcomes and more room for improvement than children living in more accessible areas, and their families and communities are more likely to take up the intervention if there are few or no similar services available.

Policymakers should consider offering after-school programs to those most likely to benefit in their specific context. The EpC intervention was able to serve a wide range of children successfully but it did have challenges reaching one of the targeted populations: older children who were not enrolled in school because they had dropped out or had never enrolled, many of whom face barriers to schooling. Had the intervention focused only on those who were most likely to benefit from it—younger primary school-age children—it might have been even more successful or more cost-effective.

Hybrid randomization can be useful when implementation conditions are heterogeneous. Individual randomization can often provide greater statistical power with a smaller sample size than group-level randomization; yet, if the risks of low take-up and contamination are high, group randomization may be preferable. The experiment in this evaluation was more successful in small communities than in large communities, where take-up and compliance with the research group were low. Evaluators and donors investing in rigorous evaluations should consider hybrid design as a strategy to balance these risks; however, close collaboration with implementers and local authorities is needed to understand program implementation and the local context to better interpret evaluation findings.



Evaluation Design

A two-arm randomized controlled trial was implemented to assess the impact of the EpC intervention on children's reading skills. In the treatment group, children were exposed to the EpC intervention, and in the control group, children were not exposed to EpC after-school activities. In this design, we randomly assigned different units—children or communities—to the treatment or control group depending on the size of the community. In larger communities (with more eligible children), we randomly assigned children. In communities with fewer children, it was not possible to form two separate groups, so the communities were the unit of random assignment, with all children in the community assigned together to the treatment or control group.

The evaluation followed two cohorts of students for approximately 1.5 years of exposure to the EpC program. We collected base-year data to measure children's literacy skills, but we could do so in only one of the cohorts and, in some cases, after exposure to the intervention had begun. We collected follow-up data for each cohort (in 2016 for Cohort 1 and in 2017 for Cohort 2).