EXTRA-SUPPORTS TO IMPROVE **LEARNING OUTCOMES AT SCALE**

Lessons from Haiti



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ABOUT US

The University of Notre Dame's ACE Haiti program promotes the flourishing of vulnerable children in Haiti through a transformative engagement with Catholic schools, families, churches, and communities.

We promote a holistic approach to child development and learning and are committed to finding scalable interventions capable of transforming life outcomes for children at risk. Our goal is to recognize, support, and strengthen institutional assets vital to children's healthy development, especially through school improvement, community engagement, and family supports.

We work throughout the country with various civil society partners, donors, and the Haitian government. We have a special relationship and long-term partnership with the national office for Catholic schools in Haiti, the Episcopal Commission for Catholic Education (CEEC), and Catholic Relief Services (CRS).

OUR WORK FOCUSES ON FOUR KEY AREAS:

- *Early childhood development:* promoting healthy development for children ages 0-5 by supporting parents and families and strengthening pre-school access and quality.
- *Early-grade reading:* improving students' reading outcomes as a foundation for academic and life success.
- Socio-emotional learning: fostering positive and nurturing relationships in and out of school so that children gain skills that promote academic success and healthy behaviors.
- L3 learning lab (Lakay, Legliz, Lekòl Home, Church, School): focusing on three central institutions in Haitian children's lives, the L3 lab uses a system strengthening and learning approach to find solutions that cultivate resilient children, households, and schools.

Using data to identify struggling learners and provide them with extra support is among the most promising strategies for improving academic outcomes cross-nationally. New methods using scripted curricula and teacher training to improve reading outcomes in low-income contexts are showing promise (Kim, et al., 2016; Snilstveit, 2016). However, in places like Haiti, where extreme poverty and other social conditions present barriers to learning, such scripted lessons may not be enough to reach all students. Extra supports for struggling students can contribute to improving outcomes for the most vulnerable and hard to reach (Cao et al., 2015).

Imagine a setting... in Haiti where classrooms are overcrowded and under-resourced, children are often under-fed, the school days are short, and teacher and student absenteeism is high. In sum, the barriers to learning are significant. Thus, even if instructional quality is optimal, it is likely that many Haitian students will be left behind. This brief will attempt to speak to the question: *How do we support all learners in mastering basic skills, especially those facing the most difficulties in low-income country contexts*?

Working in the Center Department of Haiti, the University of Notre Dame's ACE Haiti program and partners such as Catholic Relief Services (CRS), the Haitian Catholic school-system, Summits Education, and the Mirebalais EFACAP have experimented with various approaches to providing extra academic supports to ensure the success of all learners. In particular, project partners sought to carefully design and pilot summer camp and peer tutoring programs aimed at providing remedial support to struggling learners within a scripted literacy intervention. The program trained teachers to use a rapid literacy assessment to diagnose the lowest performing students in first and second grade classes. These students then participated in a three-week summer literacy camp and engaged in peer-to-peer after-school tutoring during the academic year. Finally, one network of schools, Summits Education, experimented with a multi-grade, pull-out remediation class throughout the academic year. This brief focuses on sharing the experiences, lessons, and results from these pilot programs.

THE POWER OF TARGETED, EXTRA SUPPORT

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and out-of-school learning opportunities are among the most consistent factors related to improved student learning outcomes across contexts (Cao et al., 2015; Levin and Lockheed, 2001; Murphy 2015; Song, Loewenstein, & Shi, 2018; CRS, 2016)

or interim assessments and the use of data to inform instruction is a hallmark of school improvement and school effectiveness (Murphy, 2015; Shereens, 2000)

> instruction targeted to students' ability levels has been found to be an effective means of improving learning in low- and middleincome countries (Banarji et al., 2015; Datar, 2010)

small-group instruction and student leadership opportunities (such as peer tutoring) have been linked to improved engagement and interest in school (CRS, 2016)

and parental engagement efforts have been found to be most effective at improving learning outcomes when they are directly tied to extra-learning opportunities for students and targeted instructional support, as with after school and summer programs (Cao et al., 2015)

BEST OF THE BEST

Integrating the most promising approaches to improving literacy outcomes in low-income country contexts

Since the mid-2000s, in response to a growing awareness of the learning crisis in low-income countries (Gove & Cvelich, 2011), two leading strategies have emerged for improving learning outcomes in reading and math in developing countries. One was developed by RTI International, an international non-governmental organization (NGO), and the other by PRATHAM, a large local NGO in India. Both groups initially focused on improving reading outcomes as a foundational skill for future learning. Both sought to teach children in their mother tongue with phonics-based instruction, in accordance with research affirming these practices.

RTI, working initially in Liberia, developed an approach using scripted teacher guides aligned with student curricular materials and focused on training and coaching teachers in the use of scripted literacy curricula. Their results in Liberia were very promising. Since then similar programs have been replicated in dozens of countries, and variations of the model have been adopted by other NGOs. This method remains among the most consistently effective for improving literacy instruction at scale in poor countries, especially benefiting emergent skills related to phonics and fluency (Kim et al., 2016; Snilstveit, 2016).

PRATHAM developed a different approach, called "Teaching at the Right Level" (TaRL), which was initially deployed as an after-school or summer-school supplemental intervention for struggling learners, often delivered by volunteers or paraprofessionals. Subsequently it was integrated into classroom instruction and delivered by teachers. TaRL involves grouping children according to ability level (regardless of grade level) and providing targeted instruction for students related to skills relevant for their proximate level of reading development using simple, high-yield, and engaging instructional techniques and smaller group instruction. TaRL has been implemented in a number of national contexts and the results have shown consistent promise (https://www.teachingattherightlevel.org/evidence/).

While these two methods have been regarded as leading alternatives, scholars and staff from the University of Notre Dame's ACE Haiti initiative and Catholic Relief Services (CRS) suggested that these methods need not be viewed as mutually exclusive, but instead could be combined for optimal results. Drawing on theory and practice for remedial instruction in the U.S., including Response to Intervention (RTI), and emerging evidence of the promise of summer school and after school and peer tutoring programs (Cao et al., 2015), these partners sought to experiment with elements of "TaRL" within a broader scripted literacy intervention already being implemented at scale in Haiti.

The scripted literacy curriculum in Haiti was initially developed by RTI International and implemented most successfully in a project led by Notre Dame, CRS, and the Haitian Catholic Church. This project worked with first- and second-grade students and teachers in 50 Catholic schools between 2012 and 2014. The results showed large improvements in students' literacy skills. For example, 49 percent of Haitiain children nationally cannot read a single word by the end of the second grade, but in schools participating in the program, 90 percent of children were reading by the end of second grade. While this is considerable improvement, a substantive portion of students that failed to make adequate progress, after the intervention.

Therefore, as part of a second phase of implementation of this literacy program in 90 schools in Haiti's central plateau, the partners sought to design and pilot approaches to providing struggling learners with extra support (Cao et al., 2015). Four primary activities were developed and implemented in two subsets of schools: 1) interim, diagnostic assessments to monitor students' learning progress, 2) remedial summer literacy camps using methods similar to TaRL, 3) after-school remedial support for struggling learners, including teacher-led instruction and peer-tutoring, and 4) in-school, remedial, multi-grade, pull-out classes using a combination of scripted programs and targeted, small-group instruction. The design, preliminary results, and lessons from each experience are presented in the following pages.

PROMISING STRATEGIES FOR **REMEDIATION AND SUPPORT**

1) IN-CLASS BENCHMARKING ASSESSMENTS AND PROGRESS MONITORING

The foundation for this work has been the use of an in-class, teacher-delivered reading assessment conducted multiple times throughout the year to monitor students' progress. The primary assessment tool used for this purpose has been ALiK (which stands for Ayiti Li Kreyol – Haiti Reads in Creole), a simple assessment instrument based upon a modified and translated version of ASER, the rapid assessment developed by PRATHAM in India. Three versions of the tool are included in classroom library kits that are provided to each participating classroom. Teachers are trained and encouraged to assess students' literacy in the fall, winter, and spring. Other benchmark assessments were also developed by the local partners to supplement the ALiK data as additional formative assessments.

The ALiK data and other supplemental assessments served as the foundation for each of the support programs described below. Teachers were trained to administer ALiK and were supported in organizing and interpreting this data to inform their teaching strategies and to prioritize struggling learners as in need of extra support. This in-class progress monitoring tended to increase the awareness of teachers, school leaders, and regional pedagogical coaches of the relative progress or learning gaps of students in participating schools. Awareness of these needs and the availability of this data began to shift the culture within the schools and among local partners toward a mastery orientation. In these schools, extra support and the success of all learners began to become the expectation and the norm, catalyzing what one local partner described as "a movement" for reading mastery for all.

2) SUMMER LITERACY CAMPS

The first major support mechanism piloted in the summer of 2018 was a set of summer camps in 16 of the 90 schools. The bottom 25 percent of learners in the first and second grades based upon ALiK scores were recruited to participate in three-week camps. Schools were grouped in pairs, with one school serving as the site of the camp to allow for economies of scale. A regional pedagogical coach was assigned to monitor and support each camp.

Camp activities:

- Morning meetings to facilitate a safe camp environment and for students to build a sense of self and emotional stability strategies for students to express themselves
- Oral comprehension activities, with a focus on interactive read alouds to expose students to and engage them in meaningful talk about text and new vocabulary
- Using classroom libraries for independent reading and peer-tutoring activities
- Games to foster literacy skills using self-made materials focused on phonics and decoding with activities such as phoneme segmentation and blending
- Cultural activities, including art, drumming, and reading competition
- A hard-boiled egg each morning provided by a local NGO
- A hot meal each afternoon provided by the project and local cooks

Stakeholders were deeply committed to and appreciative of the camps, such that demand to scale up the program led to a doubling of the schools participating in the second year. The camps are fun and engaging, including singing, dancing, and opportunities for sports and recreation. They also include high quality, engaging, small-group (roughly 1:10 adult to student ratios) learning opportunities for students in need of extra help. Teachers and volunteers provide quality learning experiences and activities for children that were appreciated by parents and children alike.

In Summer 2019, the number of schools participating in camps doubled to 32, and 90 percent of students had perfect attendance throughout the three-week period despite a tumultuous political environment in Haiti at the time. School staff and volunteers showed considerable commitment, and local communities again demonstrated their excitement and support for the program. For example, families supplemented the meals by bringing things from home to improve the meals for students. Teachers valued the more student-centered approaches used during the camps, and many expressed the intention to incorporate these methods into their teaching practice throughout the year.

POST-TEST RESULTS FROM SUMMER CAMPS



Level 0: Pre-Letter Level (unable to identify letters) Level 1: Letter Level (can identify individual letters Level 2: Word Level (can read simple words) Level 3: Paragraph Level (Can read a set of simple sentences) Level 4: Story Level (Can read brief story with longer sentences)

RESULTS:

To evaluate the results of the pilot summer camps, the partners used a pre/post test design at the beginning and end of the three-week camp based upon students' ALiK scores. All students enrolled in the camp started at either a level 0 (lacking letter knowledge) or 1 (able to identify letters) on ALiK. As shown above, the results show that 73 percent of students improved one or more levels (individual word reading or above) and 38 percent improved two or more levels (short paragraph or short story reading), representing large learning gains in a very short time.

CHALLENGES AND LESSONS:

In terms of challenges or lessons learned, after the first summer, a few activities were regarded as too complex or too time consuming and were removed from the planned activities of the camp. Also, the daily schedule was regarded as overloaded and was streamlined for the second summer. Partners saw benefits of smaller student to teacher ratios and thus sought to keep the size of small groups under 10 students. Partners also identified the need for additional training for volunteers or the greater use of teachers as camp instructors so as to improve the quality of the learning experiences during the camps. Finally, school directors expressed a desire to increase the number of students participating and the funding for meals, ideally providing a full breakfast and lunch each day.

3) AFTER-SCHOOL PROGRAM / PEER TUTORING

Partners launched after-school remedial programming and peer tutoring in 16 schools in January 2019 in the same set of schools that had participated in three-week summer camps in the summer of 2018. Program staff worked to inform school communities about the program, meet the tutors' parents, and select and train the peer tutors in the months leading up to the launch of the after-school program in Spring 2019.

An average of 29 students participated per school and received an average of 13 after-school sessions per month, or roughly three days per week. Approximately 40 percent of the after school sessions involved peer-tutors, while 60 percent were teacher-led.

Results:

The program appears to be benefiting participating students and offers a leadership opportunity for older students to help younger students. The program has also helped teachers to be more aware of struggling learners and to see the benefits of after-school remediation activities. While some teachers complain about an extra burden on their time, most school directors appreciate the activity and wish to continue into the future. Similarly, system-level leaders desire to scale the program to the rest of the treatment schools in the region. Over the course of the intervention, participating students reported more positive feelings about school in general (15 percent increase), more positive feelings about learning to read (9 percent increase), and feeling more confident about learning to read (8 percent increase).

Combined Results for Summer Camps and After-School Program/Peer Tutoring:

The broader evaluation of the literacy program among the 90 schools used an annual EGRA (Early Grade Reading Assessment) test at the end of each academic year to measure the impact of the program. This allowed evaluators to compare schools receiving the literacy program and the extra, targeted support programs (i.e., the summer camps and the after-school program/peer tutoring) to the schools that were only participating in the literacy program. In other words, it allowed evaluators to examine whether there was any learning boost or average effect from these new, supplemental programs.



Evaluators examined the results in 11 schools receiving the supplemental programs to 39 schools receiving only the literacy program, and no supplemental supports. The results are from one year of implementation and use EGRA data from second grade students tested in May 2019. The results showed higher mean scores and lower zero scores (students who had zero correct answers for a given sub-skill on the EGRA, such as zero words read or letter sounds identified correctly) for students in the 11 schools participating in the pilot supplemental programs on some emergent literacy skills, namely letter sounds read per minute and letter sounds recognized. The mean score is also higher for letter names read per minute.

Because the pilot schools were not randomly selected, to attempt to mitigate possible selection bias that may have resulted in pre-existing differences between the two groups of schools, evaluators also conducted a difference in difference analysis. This can account for differences in performance between the two samples at the end of the 1st midline (May 2018) and identify differences in growth rates from May 2018 to May 2019. This should provide a better indication of the possible impact of the supplemental programs by accounting for possible differences in the school samples. On the difference-in-difference analysis, evaluators found a statistically significant and positive effect (p < .10) for the 11 schools receiving the pilot supplemental program in two skill areas: letter sounds read per minute and letter names read per minute.

A number of limitations of the evaluation methodology are worth noting. Schools were not randomly selected to receive the pilot intervention, so we cannot completely rule out the possibility of selection bias. Secondly, due to a small sample size, the evaluation lacked statistical power and is thus less likely to detect statistically significant program effects. Finally, it is likely that these results under estimate the effect from the summer camps, because relatively few rising second graders (the cohort tested on EGRA in May 2018 and 2019) participated in the camps in the summer of 2018. Rising third graders were prioritized for participation, as these students were regarded as further behind academically and their need for remediation a more urgent priority.

All together, these results point to positive trends in some emergent skill areas, particularly knowledge of letter sounds and letter name identification, and we suspect that they may underestimate the possible impact of the supplemental programs due to small sample size and due to low participation of the tested cohort in the summer camps during year one.

IN-SCHOOL PULL-OUT CLASSES ACROSS GRADE LEVELS

In all 40 schools affiliated with the local network, Summits Education, an additional remediation strategy was piloted. Students who had not mastered decoding and phonics skills in grades one through six received two hours of weekly remedial, pull-out instruction during the school day. The course was multi-grade and used the first grade literacy curriculum, *Ane Ale and J'Pale Bien France*, which focusses on these skills. Often the best teachers, even if they were not the first and second grade teachers, were engaged to teach these remedial classes, and Summits Education provided teachers with training in identifying and coaching students through common challenges with decoding.

Results

An analysis of the EGRA evaluations provide strong suggestive evidence of the effectiveness of this approach. Compared to the other 50 schools participating in the programin Catholic and EFACAP schools, the 40 Summits schools had far lower proportions of students that scored zero on different components of the EGRA assessment from the May 2019 data collection. While the mean performance of Summits Schools was comparable to the average performance of the Catholic schools in the project, and their zero scores had been comparable in the previous year, the proportion of zero scores dropped significantly in Summits schools in oral reading fluency, reading comprehension, and decoding. This indicates that Summits' strategy for promoting mastery for all students, especially those in need of additional support, worked well, as nearly all of their students were demonstrating progress on key literacy skills after a year of the pilot program. However, because there was no control group or counterfactual because all Summits schools participated in the pilot, we cannot rule out other possible factors that might explain why Summits schools experienced a significant reduction in zero-scores. We are reasonably confident that the remediation program was the primary driver of these gains.

As a result of the apparent effectiveness of this approach, efforts are underway to replicate and scale-up the in-school, remedial, pull-out classes using the Summits Education design in up to 150 additional schools engaged in Notre Dame-sponsored literacy projects in Haiti.



THE WAY FORWARD

The initial experience of combining elements of "Teaching at the Right Level" with a broader, scripted earlygrade literacy approach appear to be highly promising. Multiple forms of evaluation have demonstrated positive and statistically significant effects on learning outcomes. Additionally, stakeholder feedback has been overwhelmingly positive, and the programs are relatively low-cost and scaleable. As the projects in Haiti explore the replication and scaling of these methods, a set of additional questions are worth ongoing attention:

- 1. *Instructional practice:* Which are the most important "high-yield" instructional practices for effective remediation that should be incorporated in targeted, extra support programs? Which literacy skills are or should be targeted?
- 2. *In-school interventions:* Which design appears to be the most effective and promising for in-school (i.e. during the school day) remediation? Pull-out remedial classes or in-class ability grouping and differentiated instruction? What are the strengths and challenges of each option?
- 3. *After-school Programs:* How much should the focus be on teacher-led remedial instruction versus peer-tutoring? What are the most effective ways of using and including peer-tutors?
- 4. *Efficacy:* Are some program components more effective than others? Anticipating possible future replication and scaling, which program elements should be prioritized or incorporated into a scalable design? Which aspects are the most cost effective?

Additional research and design efforts on these supplemental support strategies could significantly advance the standardization of these practices and efforts to inform future replication and adoption at a policy level. A more rigorous, randomized evaluation would provide further evidence of their efficacy, and a cost-effectiveness analysis can significantly inform plans and feasibility of going to scale. Finally, these initial experiences and emerging evidence from Haiti suggests that scripted literacy and approaches to teaching at the right level can be combined with beneficial effects, and may point to a broader marriage of two leading approaches to improving learning outcomes in low-income contexts.

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