Building Resilient Education Systems:
Evidence from Large-Scale Randomized Trials in Five Countries

Authors: Noam Angrist, Micheal Ainomugisha, Sai Pramod Bathena, Peter Bergman, Colin Crossley, Claire Cullen, Thato Letsomo, Moitshepi Matsheng, Rene Marlon Panti, Shwetlena Sabarwal, Tim Sullivan
A Strong Partnership Coalition

Implementing and Research Coalition

Funding Partners

UBS Optimus Foundation

Jacobs Foundation

Youth Impact

New Globe

Global School Leaders

Street Child of Nepal

Echidna Giving

IPA

J-PAL

Teach for Nepal

Iason/SNF

Stavros Niarchos Foundation

Building Tomorrow

Algkit

World Bank Group

University of Oxford

Columbia University

Learning Collider

Douglas B. Marshall, Jr. Family Foundation
Replicated & Scaled via RCTs in 5 other countries

**Partners:** Governments (MoEST in Nepal and DepEd in the Philippines), World Bank, Teach for All, Street Child, NewGlobe, Global School Leaders, Alokit, IPA, Building Tomorrow.

➔ 33,550+ students

➔ 500+ educators
Context: Reaching Out-of-School Youth

COVID-19 Has Forced 1.4 Billion Students To Stay Home

Countries with country-wide or localized school closures (as of Mar 23, 2020)

Source: UNESCO
Mobile Phones: High-Access, Low Cost

Household Availability of Technology

- Own Mobile
- Own TV
- Own Radio
- Internet Access

<table>
<thead>
<tr>
<th></th>
<th>Low-Income</th>
<th>Low/Middle Income</th>
<th>Middle/Upper Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low-Income</td>
<td>40</td>
<td>60</td>
<td>80</td>
</tr>
<tr>
<td>Low/Middle</td>
<td>20</td>
<td>40</td>
<td>60</td>
</tr>
<tr>
<td>Middle/Upper</td>
<td>80</td>
<td>80</td>
<td>80</td>
</tr>
</tbody>
</table>

% of Households
Focus on foundational skills through 1-on-1 tutoring.

**Adaptation: New Model, Same Principles**

1. Meeting people where they are.
2. Target instruction.
3. Focus on foundational skills through 1-on-1 tutoring.
Design: Randomized Control Trial

Control Group  SMS-only Group  Phone call + SMS Group
The Intervention: ConnectEd

1x simple SMS p. week with practice math problems

Welcome to Week 1!

**ADDITION**
14+46=?
18+33=?

**SUBTRACTION**
He picked 32 apples and gave his friend 13. How many is he LEFT WITH?

**MULTIPLICATION**
23x3=?
14x2=?

**DIVISION**
DIVIDE 10 apples evenly between 3 friends. How many will each get?

20-minute weekly tutoring calls to households

Hello Mina,
my name is Kago from Young Love.
I'm calling to make sure you received our SMS. Has your child, Sunshine attempted to solve any of the SMS problems? Please can we include your child in our call and put the phone on loud speaker so we can hear the session. Sunshine, let's do a question together. I will share the number 284, how many hundreds, tens and units?
Learning: Large improvements from Phone + SMS

- Both improved learning, but impact delivered by SMS was small - only slightly effective.

- **SMS + Phone calls were 3X as effective as SMSes by themselves.**

- This is one of the most effective education interventions in the literature.
Learning: NGO & Government Equally Effective

- Teachers and NGO tutors were equally effective at improving learning.
Uganda Zoom In on Learning: Community Education Volunteers Extremely Effective

Less than three hours of remedial tutoring by Community Education Volunteers delivers over one year of high-quality schooling.

Learning gains for learners in the SMS+phone treatment group tutored by CEVs for 160 minutes were 0.886 standard deviations.

Learning gains for the SMS+phone treatment group in Uganda were equivalent to up to 1.1 learning-adjusted years of schooling (LAYS).
1. Students in control group forget learning from baseline to endline.

2. Phone call students fully recover this lost learning.

3. The program improves learning by more than a standard year of schooling.
Implementation: Trial-by-trial: Improved Targeting of Instruction
Comparing Across Trials: Uganda Stands Out

Consistently large and robust effect sizes of phone call tutorials on learning across contexts with average effects across all five countries between 0.30 – 0.35 standard deviations. Uganda stands out as having the largest effect size.
Policy Implications

Extremely Cost Effective: Average cost of $12 per child, & 3-4 years of high-quality schooling per USD 100

Scaleable: effective when implemented through governments & NGOs

An effective delivery mechanism for proven tutoring + targeted instructional approaches.
**Next Steps: 2023 & Beyond!**

Youth Impact will continue **scaling in Botswana** as a complement to its TaRL program.

**Optimized A/B testing** across different settings & contexts, including Uganda.

**Support scale in 3-5 countries** (ie. the Philippines), where gov’t partners are heavily involved in ConnectEd delivery.
Building Tomorrow… Ewaka

A/B testing in collaboration with Youth Impact...

Building Tomorrow will continue to scale its Community Education Volunteer model as key implementers of its Roots to Rise (TaRL-based foundational learning) program