Adapting and Scaling Evidence: The Ghana Teacher Community Assistant Initiative

Annie Duflo, June 19th, 2015
LARGE LEARNING GAPS

Dede and Hawa like flowers. They plant seeds. They water the seeds. Plants begin to grow. Dede and Hawa now have many flowers.

English Test Scores

- P1: 11
- P2: 20
- P3: 31

- Expected Grade Level Score (%)
- TCAI School Score (%)

Grade Level
HETEROGENEOUS LEVELS

English

Math
OUTLINE

• THE PROBLEM

• WHAT HAVE WE LEARNED?

• ADAPTING LESSONS TO A NEW CONTEXT

• EVALUATION DESIGN AND IMPLEMENTATION

• ANALYSING AND UNDERSTANDING RESULTS

• NEXT STEPS AND POLICY IMPACT
WHAT WORKED?

Kenya: Adding extra teachers most effective when class split by ability

India: Community-based volunteers running remedial classes in communities (Read India Program)

India: Pull-out remedial classes for low-performing students by community tutors (Balsakhi)

FOCUSING INSTRUCTION AT THE CHILD LEVEL IS KEY
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ADAPTING RESULTS TO A NEW CONTEXT, WITH A VIEW TO SCALE

- Key insights (i.e. Theory of change)
- Understand the context
- Political feasibility
- Financial sustainability
EMBEDDING AND TECHNICAL ASSISTANCE

- IPA Country Director
- Steering Committee
- Technical Assistance Unit
- National Coordinator
- 4 Regional Coordinators

Government Structure
- National level
- GES and consultants
- NYEP
- Regional Directors
- District Directors
- Circuit Supervisors
- District Coordinators
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EVALUATION DESIGN

Nationally representative sample: 500 schools across 42 Districts

Randomly allocate to:

A
Assistant: Remedial classes during school

B
Assistant: Remedial classes after school

C
Assistant: revision groups, randomly split

D
Targeted instruction through teachers only

E
Control

A sample of grade 1, 2 and 3 pupils in 500 schools across all 10 Regions, 42 Districts (42,000 children)
### DATA COLLECTION AND COHORTS

<table>
<thead>
<tr>
<th></th>
<th>2010-11</th>
<th>2011-12</th>
<th>2012-13</th>
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<tbody>
<tr>
<td>P1</td>
<td>P2</td>
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<tr>
<td>P1</td>
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Baseline | EL 1 | EL 2 | Observational Surveys
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OVERALL IMPACTS

Overall Oral Test Scores (SD) :
P1-P4

Control 0.08* Remedial Classes During School 0.075+ Remedial Classes After School 0.05 Extra Assistants 0.04 Teacher-led Targeted Instruction

Targeted Test Sections:
- 0.08 to 0.11 SD
- Positive and significant for Teacher Intervention (0.1 SD)
**IMPACTS DRIVEN BY GRADES 3-4**

**Overall Test Scores (SD) - P3 & P4**

<table>
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<th>Treatment</th>
<th>SD</th>
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<tbody>
<tr>
<td>Control</td>
<td>0</td>
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<tr>
<td>Remedial Classes During School</td>
<td>0.14*</td>
</tr>
<tr>
<td>Remedial Classes After School</td>
<td>0.13*</td>
</tr>
<tr>
<td>Extra Assistants</td>
<td>0.11**</td>
</tr>
<tr>
<td>Teacher-led Targeted Instruction</td>
<td>0.08*</td>
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- Effects persist for P4 students, 1 year after intervention’s end
- Only 0.02 SD lower than P3 students
GRADE 3-4: BASIC AND WRITTEN SKILLS

Targeted Sections:
- 0.12 to 0.18 for Remedial Assistants Interventions
- 0 to 0.09 for Extra Assistants
- 0.08 to 0.17 for Teacher-Led
DESPITE IMPLEMENTATION ISSUES

Attendance and Time on Task

- Assistants absent 40% of time
- Teachers split classes 15% of time
**IMPLEMENTATION OVER TIME**

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<th>2012-13</th>
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<th>Impact EL1</th>
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<tr>
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<td>P2</td>
<td>P3</td>
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<tr>
<td>P1</td>
<td></td>
<td>P2</td>
<td></td>
<td>0.04</td>
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![Attendance of TCAs over time chart](chart.png)

- **Baseline**: Initial data before intervention.
- **EL 1**: First year of intervention.
- **EL 2**: Second year of intervention.

The chart shows the attendance of TCAs (Tutoring Center Assistants) over time, with separate data for school hours and after-school hours.
LARGE REGIONAL VARIATIONS LINKED TO IMPLEMENTATION VARIATIONS

More than 3 times as effective

No effect

TCA vs. Teacher Attendance by District

LARGE REGIONAL VARIATIONS LINKED TO IMPLEMENTATION VARIATIONS
DURING OR AFTER SCHOOL?

- Mostly depends on the school environment
  - Multigrade
  - Likelihood of class taking place?

- After school works better for girls than boys
  - Up to 0.13 SD
  - Works for girls in P1-2

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<th>Loc Lang</th>
<th>Math</th>
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<tbody>
<tr>
<td><strong>During school</strong></td>
<td>0.30*</td>
<td>0.26*</td>
<td>0.43*</td>
<td>0.34*</td>
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<tr>
<td><strong>After School</strong></td>
<td>0.21*</td>
<td>0.17*</td>
<td>0.26*</td>
<td>0.17*</td>
</tr>
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<td>0.12**</td>
<td>0.13**</td>
<td>0.11</td>
<td>0.1+</td>
</tr>
<tr>
<td><strong>After School</strong></td>
<td>0.14**</td>
<td>0.16**</td>
<td>0.14+</td>
<td>0.1*</td>
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Mostly depends on the school environment - Multigrade - Likelihood of class taking place?

After school works better for girls than boys - Up to 0.13 SD - Works for girls in P1-2
Teachers teach more often

Modest Effects, especially on literacy

But changing practices is difficult

Enforced TI 15% of the time
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WHAT’S NEXT?

• Policy Engagement:
  o Embedding Targeted Instruction Concept into the System

• Up Coming Research:
  o Increasing Teachers’ Enforcement of Targeted Instruction through Enhanced Supervision
EMBEDDING EVIDENCE: LESSONS

• *Perception of context differences:*
  -- Exposure trips are useful

• *Politics:* Many factors influence the decision to adopt a program or not
  – All stakeholders need to be involved

• *Project vs policy:* embedding successful ideas into the system
  -- Important to leverage existing systems and to link to government plans/priorities

• *Policy Engagement:* This requires an active engagement and an iterative process

• *Implementing and Monitoring at scale:* difficult

• *Local variations:* Nation-wide policies or interventions can take them into account