The Ghana Teacher Community Assistant Initiative (TCAI)

Annie Duflo, Executive Director, Innovations for Poverty Action, March 28th, 2017
Dede and Hawa like flowers.
They plant seeds.
They water the seeds.
Plants begin to grow.
Heterogeneous Learning Levels

English

Math
What Had We Learned as of 2010?
Focusing Instruction at the Right Level is Key

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

India: Volunteers run remedial classes in the community.

India: Community tutors conduct remedial classes for low-performing students.
From India to Ghana, With a View to Scale

- **The key concept** that made earlier programs successful: **targeted instruction**

- **Context**: What is similar; what is different? How will that affect implementation?

- **Financial feasibility**: Using existing mechanisms
Program Design and Support

The intervention was implemented through the GES and NYEP, with support from IPA and the GNAT

- During or after school?
- Is it targeted instruction that matters, or an additional resource?
- Do we really need assistants? Can we train teachers to do this?
500 schools across 42 districts in all 10 regions

Randomly allocated to:

- Comparison group
- Assistant-led remedial classes during school
- Assistant-led remedial classes after school
- Assistant-led review for randomly selected students
- Teacher-led targeted instruction

42,000 grade 1-3 children were tested with an orally administered test
Results
Overview
Targeted instruction works

- Small but significant effects of assistants-led remedial classes before & during school for P1-P4
- Larger impact in P3-P4, and larger for reading and computation sections
- Teacher-led targeted instruction also had effects in P3-P4, but smaller, due to less consistent implementation
- Effects persisted 1 year after program implementation (P4 students)
- Implementation challenges suggest high impact potential if implementation is improved
### Positive Impacts

Small but significant effects of TCA remedial education before & during school

#### Overall Test Scores (P1-P4)

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Overall Test Scores</th>
<th>Comparison</th>
<th>Assistant-led Remedial Ed During School</th>
<th>Assistant-led Remedial Ed After School</th>
<th>Assistant-led Review for Randomly Selected Students</th>
<th>Teacher-led Targeted Instruction</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>4.8%*</td>
<td>4.3%*</td>
<td>2.7%</td>
<td>2.1%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>0.083 SD*</td>
<td>0.075 SD*</td>
<td>0.047 SD</td>
<td>0.036 SD</td>
</tr>
</tbody>
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*Statistically significant at the 0.05 level.
Effects Mostly Driven by P3-4, and Long Lasting
Positive effects on all interventions in P3-4: Higher needs, and longer/better exposure?

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

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Percentage Increase</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comparison</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assistant-led Remedial Ed During School</td>
<td>6.6%**</td>
<td>0.14 SD**</td>
</tr>
<tr>
<td>Assistant-led Remedial Ed After School</td>
<td>6.2%**</td>
<td>0.13 SD**</td>
</tr>
<tr>
<td>Assistant-led Review for Randomly Selected Students</td>
<td>5%**</td>
<td>0.11 SD**</td>
</tr>
<tr>
<td>Teacher-led Targeted Instruction</td>
<td>3.9%*</td>
<td>0.08 SD*</td>
</tr>
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</table>
Higher Impacts on Reading and Computation Skills

Test score increases: between 6% and 18% for targeted skills

![Bar chart showing test score increases for English, Local Language, and Math sections.](chart-image-url)
Despite Relatively Low Exposure

• Implementation design overall was followed

• Assistants teaching remedial class 30% of the time

• Teachers split classes by ability 15% of the time

• However teachers overall were teaching more often (45% vs 34% of the time)
Large regional variations linked to implementation variations

More than 3 times as effective

No effect
Which program is most cost effective?

“How much do I need to invest for each unit of additional learning per child?”

SOURCE: Cost effectiveness report: TCAI
The Way Forward

Improving Teacher-led Targeted Instruction: with the GES and UNICEF

- How to motivate teachers to target instruction?
- Circuit supervisor role?
- Intrinsic motivation?
- STARS study: Adrienne Lucas, Willa Friedman, and Moussa Blimpo

Adopting the Assistant-led model: Exploring using the NSS

- National Service Personnel \(\rightarrow\) Teaching Assistants
- Teaching Assistants implement targeted instruction
Takeaways: What Have we Learned?

- Targeted instruction works for P 3-4 students
- It could have larger impacts with greater exposure to the intervention
- It is critical to find ways to increase the teachers’ motivation/ability to implement targeted instruction