The state of the evidence in education: A global perspective

Esther Duflo, JPAL and MIT
Ghana education evidence Summit
IPA and Ghana Ministry of Education
Accra, March 2017
Achieving Education Goals
Education: focus on quality & learning in SDGs vs MDGs

Millennium Development Goals

- Net primary enrollment in developing countries 91% in 2015

Sustainable Development Goals

4.1
By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes.
Enrollment gains stunning but attendance often lags

- In poorest countries education has gone from the exception to the rule in a single generation, an extraordinary achievement
  - Number of children in primary school in SS Africa more than doubled from 1990 to 2015
- In most countries more days lost to infrequent attendance than failure to enroll
- We know a lot from RCTs about how to increase enrollment and attendance
  - Small reductions in cost – eg free school uniform
  - Information on the costs and benefits of education
  - 10 cent deworming pill
- Surprising that such small changes can have big effects given the magnitude of the investment of time and effort in education
The new access issues

• Secondary education
  – Much lower than primary in most countries, although fast progress as well
  – Barriers are:
    • Achievement
    • Cost
  – Evidence is limited, although major experiment in Ghana shows secondary school completion increased by 26 percentage points (from 47.5% to 83.5%) when children who had qualified, but did not initially attend for lack of fund were offered a scholarship

• Early Childhood program
  – RCT In Mozambique finds that pre-school in village leads to increase in For example, in one recent randomized trial in Mozambique, access to preschool increased children's primary school enrollment, fine motor skills, and problem solving, but not their later language development
  – Need for more research on what constitute quality ECD (in terms of preparation for primary): existing experiment largely disappointing.
A learning challenge in developing country schools

Sabarwal, Evans, and Marshak, 2014

**Sierra Leone**: Numeracy levels in 350 disadvantaged schools in 5 randomly chosen districts

Rolleston 2015

**Andhra Pradesh (India)**: 12 year olds performed less well on math tests in 2013 than in 2006
Why is learning so limited in developing countries?
Relative cost-effectiveness of education programs

• All results from randomized trials
• All results are standardized to unit-free measure (SD)

• Cost-effectiveness measured in SDs per $100
  – 1SD per $100 is very good value for money
Access can increase learning
Business-as-usual inputs don’t work
School-based management is hard
Changes in pedagogy are key

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<thead>
<tr>
<th>Intervention</th>
<th>Additional SD per $100</th>
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<tr>
<td>Adding computers to schools, Colombia</td>
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<td>One Laptop Per Child (QLPC), Peru</td>
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<tr>
<td>Diagnostic feedback, India</td>
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<td>Read-a-Thon, Philippines</td>
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<td>Individually-paced computer assisted learning, India</td>
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<td>Extra contract teacher + streaming, India</td>
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<td>Remedial education, India</td>
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<td>Tracking by achievement, Kenya</td>
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Teacher accountability matters

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<td>Contract teachers, Kenya</td>
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<td>Teacher incentives (year 1), Kenya</td>
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<td>Teacher incentives (year 2), Kenya</td>
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<td>Contract teachers (year 1), India</td>
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<td>Contract teachers (year 2), India</td>
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<td>Camera monitoring, India</td>
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<td>Paying teachers based on school-wide performance (year 2), India</td>
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<tr>
<td>Paying teachers based on performance of their students (year 2), India</td>
<td>2.91</td>
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Results highlight underlying structural issues

- Much spending is on teachers and standard inputs
- Very heterogeneous levels of learning
- Curricula of often way above head of poor children
- Teachers are not accountable
- Teachers teach to the top of the class
- Disadvantaged children fall further and further behind

*Pratham’s numeracy interventions*
Conclusion: Highlights for Ghana

- At the primary level, key challenge is to improve learning outcomes
  - Changing Pedagogy to Teach at the Right Level
  - Children can learn and we do know the tools (see Annie Duflo’s presentation later): it is a matter of signaling to teachers that it is the priority.
- Thinking about pre-primary as a way to reduce heterogeneity in learning level at the onset of primary:
  - Expose children to materials that can help them build on their own naturally developing capacity
- Access to Secondary education:
  - Financial barrier are important
  - Impacts on cognitive scores, fertility, tertiary, labor markets
The Impact of Free Secondary Education: Experimental Evidence from Ghana

- Scholarships awarded by lottery among 2,064 Ghanaian students (aged 17 on average), tracked to age 25+.

- Scholarship winners:
  - Scored higher on a math and reading comprehension test.
  - Were more likely to attend tertiary education (especially women)
  - Women were 10.7 percentage points (or 18%) less likely to have ever been pregnant, significantly less likely to have ever lived or cohabited with a partner, and had .217 fewer children.
  - Were 5.5 percentage points (10%) more likely to have positive earnings and had significantly higher earnings on average.