ASER: Evolution, Design & Impact

JPAL TaRL Webinar II, October 27, 2017
Pratham: Every Child in School & Learning Well

- Since 1996, Pratham has worked with children who have been “left out” or “left behind”.

- It was relatively easy to bring children to school. But to add ‘value’, accelerated learning was the only way. We were frustrated by our own ability to accelerate pace of change in children’s learning.

**CHALLENGE : At local level in communities & schools... Do we really know our children? Large families / multi grade classrooms**

- Parents “send” children to school and are concerned about “inputs”. Parents often over-estimate what children can do (J-PAL study)

- Teachers “teach” the course for the grade level. Teachers often over-estimate what children can do (SchoolTELLS)

- Schools usually not structured to identify or to help those who fall behind

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**Learning delayed is learning denied.** Children need to learn satisfactorily at the right time to make adequate progress through the education system to complete at least the elementary stage.
Can children read?

What can we do at ground level?
Simple assessment tool was useful for instruction. Also for engaging parents and teachers about what to do.
Steps leading to an annual national effort

**PRELIMINARY STEPS**
- Tools were being used in Pratham network widely in 5 states in almost 120 districts
- In UP, invited a group of 30 NGOs to participate in workshop to see if the tools and process was useful

**STEPS LEADING UP TO ASER IN 2005**
- New government in power – focus on outlays to outcomes
- Presentation to Planning Commission about rapid assessment
- All states sample based rapid assessment of basic learning done in 1 district in 20 days
- Results presented to Planning Commission

Now the confidence grew to try to replicate what we had done in villages and schools at national level. Bringing **learning** to centre of the stage for policy and action ...
### The challenge of measuring learning outcomes

**Inputs are easy to measure**

Measurement of schools, teachers, infrastructure is relatively easy.

These are visible and do not change much over time.

Regular data collection for these variables happen annually and at every level by the government.

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**Outcomes are difficult to measure**, especially learning outcomes

What do you want to know? Why?
- What to measure: basic, grade level
- Who to measure: all or sample
- When to measure: once, periodically
- Where to measure: school, home
- Who will measure: external/internal

What will be done with the data?
How quickly will it be available?

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In 2005 there was no data available on learning outcomes in the public domain.
The architecture of ASER

STANDARD LEARNING ASSESSMENTS
- Grade level, subject-wise, pen & paper test
- School based testing
- Done by teachers
- Often not done annually (NAS)
- Data not in the public domain (NAS)

ASER
- Same test to all children.
- Only reading & arithmetic each year.
- Individual one-on-one testing
- Household based
- To capture ALL children regardless of their ability, school/attendance status
- Done by ordinary citizens
- Done at the same time every year
- Representative sample of each rural district
- So that data is accessible by all and can inform policy

ASER was designed to suit the ground realities in India and in many other developing countries
ASER – Scope & Scale

Reach:
- 589 rural districts
- 17473 villages visited
- 350232 households reached
- 562305 children surveyed

Cost:
- ~ 1.3 million USD in 2016

Time Frame:
- August: Kick off
- Sept-Oct-Nov: Field work
- Mid Jan: Report released

People involved:
- 500 + district level organizations
- 1000 + master trainers
- 25000 + volunteers

Sampling:
- 30 randomly selected villages in each district
- 20 randomly selected households per village
- All children age 3 to 16 in the household

ASER national survey in India has been done every year - 2005 to 2014 & 2016

Citizen led assessments in the 6 other countries in Africa & Asia have similar patterns of scope & scale.
This tool is in Hindi. In ASER 20 similar regional language tools are used.

- Each child is assessed one on one/individually.
- The highest level that the child can read is recorded.
- Other citizen led assessments in Africa & Asia have similar tools for assessing reading and arithmetic.

Reading is a basic foundational skill. Without learning to read, a child cannot progress meaningfully through the education system.

ASER 2016: All India rural % Children enrolled in different grades who can at least read Grade II level text

<table>
<thead>
<tr>
<th>Grade</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>III</td>
<td>25.2</td>
</tr>
<tr>
<td>V</td>
<td>47.8</td>
</tr>
<tr>
<td>VIII</td>
<td>73.1</td>
</tr>
</tbody>
</table>

After 5 years of schooling only half can read. Not much change since 2005.
Children’s ability to do basic arithmetic has been declining since 2005, with slight improvement has been seen in 2016.

ASER assesses children for foundational arithmetic skills that children are expected to learn during elementary education.

<table>
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<th>Grade</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>III</td>
<td>27.6</td>
</tr>
<tr>
<td>V</td>
<td>50.5</td>
</tr>
<tr>
<td>VIII</td>
<td>66.5</td>
</tr>
</tbody>
</table>

Grade IV level: Division

\[
\begin{array}{c}
4 \div 659 \\
\hline
- 48 \\
\hline
- 35
\end{array}
\]

Grade II level: Subtraction

\[
\begin{array}{c}
92 - 48 = 71 - 35 \\
\hline
24 - 79
\end{array}
\]

Number Recognition – 2 digits

\[
\begin{array}{c}
91 \\
\hline
24
\end{array}
\] \quad \[
\begin{array}{c}
86 \\
\hline
79
\end{array}
\]

Number Recognition – single digit

\[
\begin{array}{c}
8 \\
\hline
2
\end{array}
\] \quad \[
\begin{array}{c}
4 \\
\hline
9
\end{array}
\]
ASER: Impact on Policy

Policy change: National & State

2008: Allocations by central government for district annual work plans in elementary education for “learning enhancement” programs.

2011: 12th Five Year Plan stressed:
- Measuring learning in schools
- Improvement of basic skills

In 2013-14 & 2014-15 almost all states have done state level assessments (some have ASER like tools).

Since 2013: Many states have embarked on remedial programs, learning improvement interventions & a focus on basic skills in early grades.

Evidence: % Children who can do subtraction
Cohorts over time: Std III-VI
ASER All India (rural)

Data shows: Learning levels are low. Learning trajectories are flat over time & each subsequent cohort doing worse than previous cohort.

Every year with ASER, there is:
- Widespread media coverage
- Public debate in many forums/levels
- Questions in Parliament

Evidence: % Children who can do subtraction
Cohorts over time: Std III-VI
ASER All India (rural)
Evidence: ASER data for state of Bihar for Grades 3, 4 and 5

<table>
<thead>
<tr>
<th>Std</th>
<th>Not even letter</th>
<th>Letter</th>
<th>Word</th>
<th>Level 1 (Std I Text)</th>
<th>Level 2 (Std II Text)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>III</td>
<td>26.2</td>
<td>28.3</td>
<td>13.8</td>
<td>10.0</td>
<td>21.8</td>
<td>100</td>
</tr>
<tr>
<td>IV</td>
<td>12.7</td>
<td>22.6</td>
<td>15.6</td>
<td>13.4</td>
<td>35.6</td>
<td>100</td>
</tr>
<tr>
<td>V</td>
<td>9.7</td>
<td>14.7</td>
<td>13.0</td>
<td>14.6</td>
<td>48.1</td>
<td>100</td>
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</tbody>
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Acknowledgement/Awareness: State government sees problem & decides to act

Assessment: ASER tool used by schools to assess children in Grade 3, 4 & 5

Action: Learning improvement program – Teaching at the Right Level
- Children grouped by level rather than by grade in each school for two hours a day during school day.
- Teachers allocated to group rather than by grade.
- Instruction in each group using appropriate methods & materials
- Quick progress in basic reading & maths

Similar state wide programs in several states. JPAL evaluations of effectiveness of such programs conducted.
Learning assessment data for developing countries needs to be relevant & appropriate for bringing learning to the center of the stage and for providing information that is actionable for improving children’s learning.

In order to identify and implement actions to improve children’s learning, we need to assess where children are today and build from there, rather than assess where we think they ought to be.

- Where are children? *Many are not regularly in school*
- Where are they relative to the curriculum? *Many are several grade levels behind*
- Where are they with respect to foundational skills? *Many have not acquired basic skills even after several years in school. If a child cannot read, pen-paper tests will not work.*

Evidence should be relatively straightforward to generate & to comprehend. Only then can it lend itself to action. Data needs to be easily understood by those who must act – whether policy makers, teachers or parents. Start simple. Tools & interventions can evolve over time as children make progress & as capability in the country rises.
For more information, log on to:
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www.asercentre.org

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History of Expansion and Contextualization of Citizen-Led Assessments across the PAL Network

JPAL TaRL webinar II: October 27 2017

@PALNetworkHQ
A brief history of PAL Network growth: 2005 - 2017
5 key principles of citizen-led assessments
Our History in numbers

- Over 7.5+ million children tested
- 11 years
- 600,000+ volunteers
- 14 countries
- 48 assessments
- 3 continents
- 30+ languages
3 important guidelines for creating new tests

1. NATIONAL CURRICULUM
   - Designed according to the national curricula expectations of Grade 2 level

2. LANGUAGE POLICY
   - What does policy say re: Language of instruction? Mother tongue instruction?
   - Availability of instructional materials
   - Language coverage – how widely is it spoken?

3. CONTEXTUAL RELEVANCE
   - Stories and short paragraphs must be familiar to the child
Are children learning?
Moving from Assessment to Action
Assessment

Dr. Rachel Glennerster
Executive Director, J-PAL
Scientific Director, J-PAL Africa
Co-Chair, J-PAL's Education sector
Part of the problem?
Is assessment part of the problem?

• Many countries use high stakes primary school leaving exams as a measure of school, teacher, and student success which may distort teacher activity.

• High stakes exams usually test for the top of the distribution:
  – The tests do not reward moving from single digit addition to two digit addition or basic subtraction

• Often high stakes exams are coupled with dense and ambitious curricula. This creates a system which incentivizes teachers to:
  o Teach to the top of the class
  o Focus on getting through the curriculum
  o Teach to the test

• Children often falling behind and never acquiring basic skills.
Can assessment be part of the solution?
Across successful ed program, teaching at the right level

- Textbooks only improved learning for those at level of the text book
- Splitting children by learning levels improved learning
- Remedial education for those falling behind improved learning
- Personalized learning computer software highly effective

Computer-Assisted Personalized Learning’s Impact on Math Outcomes
Could assessment be part of the solution?

**Problem/need**
High stakes leaving exams result in teaching to the top of the class and focusing on the curriculum rather than on level, which leads to the lack of basic skills acquisition.

**Input**
Information on learning levels from assessment results.

**Output**
Teachers are equipped with the information they need to tailor classroom practice to the needs of class.

**Outcome**
Teachers change their classroom practice using the assessment information and are motivated by the results. Classes are better tailored to children's needs.

**Impact**
Learning outcomes improve.
Is providing teachers with learning outcome data enough?
Experimental evidence from India

- Feedback and light touch monitoring
  - Changes in teacher behavior (likely due to being observed).
  - No improvement in learning outcomes.

- Feedback + light touch monitoring + performance based incentive
  - Improvements in learning outcomes.

**Lesson:** Providing feedback on its own is not enough to improve learning outcomes.

Is continuous assessment enough?
Experimental evidence from India

- Students in CCE schools (primary and upper primary) did no better than students in the comparison group on either oral or written tests for Hindi or math.
- Relative to the comparison group, students in LEP schools scored 0.15 standard deviations higher on the Hindi reading test and 0.135 standard deviations higher on the Hindi written test.
- Combining the LEP and CCE has no significant effect in comparison to the LEP programme alone.

Learning level information on its own may not be enough

**Problem/need**
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**Impact**
Learning outcomes improve.
In Kenya, extra teachers hired for Grade 1 classes

- Some classes split based on past student performance (tracking), others divided randomly
- Tracking improved test scores for both higher and lower-performing students

Teaching at the Right level
A tool for assessment driven classroom action

1. Quick one on one oral assessment

2. Regroup children according to learning level and focus on basic skills

3. Re-test children throughout the programme allowing them to accelerate through the levels

Testing basic skills signifies to teachers that basic skills matter

The tool is action orientated. This action is reinforced through having a dedicated time and intensive monitoring.

The one on one nature of the test creates an important connection between the teacher and the student
Key Insights

• What children are assessed on, when they are assessed, and how they are assessed creates incentive systems which influences how teachers behave.

• Giving teachers learning level information on its own may not be enough to improve learning outcomes.

• Learning level information when coupled with incentives or commitment and accountability devices (a dedicated hour a day and monitoring) can improve learning outcomes.

• Assessment is an important component of all Teaching at the Right Level programmes
  – Assessing basic skills, regularly, one on one may help promote tailored classroom practices in TaRL programmes.
Thank you