Annexure-5

MHRD meeting
New Delhi
January 4, 2012
Guiding questions

- How much do children learn during a year in primary school, and do some groups of children learn more than others?
- How do key elements of school organization and functioning influence teaching and learning?
- What are the key characteristics of teachers and the essential elements of teachers’ practice that are related to more effective student learning?
- In what ways do routine aspects of school functioning and classroom practice translate into systematic inequalities in access to learning opportunities for specific groups of children?
Sample description

5 states: purposively selected
AS, HP, RJ, JH and AP

3 districts per state: purposively selected

60 govt schools per district: PPS sampling DISE 2007-8

2 classes per school: Std 2 and Std 4:
  Baseline in Std 2 & endline in Std 3
  Baseline in Std 4 & endline in Std 5

25 children per class: randomly selected from enrollment register
Conceptual map

HOME & FAMILY
- Household characteristics
- Characteristics of family members
- Child: caste, gender, age

CLASSROOMS
- Organization of space
- Teaching methods
- ‘Child friendly’ classrooms

INFLUENCES ON CHILDREN’S LEARNING

SCHOOL FUNCTIONING
- Inputs, facilities
- Enrollment, attendance, grouping
- Organization and use of time, and resources in the school

TEACHERS & TEACHING
- Teacher background
- Teacher capability to teach:
  - Content knowledge
  - Ability to spot & correct mistakes
  - Ability to explain
  - Ability to devise problems
Assumption: Children in each class are fairly homogenous.

Reality: Class composition is complex...

### Assumptions and reality - 1

#### Age distribution: Std 4
- Age < 8: 23.2%
- Age 8-9: 63.1%
- Age 10: 11.1%
- Age 11+: 2.6%

#### Distribution of total math score in endline: Std 4, AP and JH

- **AP**:
  - 0-19: 0%
  - 20-39: 5%
  - 40-59: 15%
  - 60-79: 25%
  - 80+: 30%

- **JH**:
  - 0-19: 0%
  - 20-39: 10%
  - 40-59: 20%
  - 60-79: 30%
  - 80+: 40%

#### Multi grade classrooms: Std 4
- Single grade: 19.7%
- 2 grades together: 45.6%
- 3+ grades together: 34.7%
Assumption: A child in Std 2 has mastered Std 1 content.

Reality: Most children are at least two grades behind...

% Std 2 students who can:
- Read a 2 letter word
- Read a Std 1 level text
- Add 2 digits (numeric)
- Add 2 digits (word prob)

% Std 4 students who can:
- Read a Std 3 level text
- Add 3 digits (word prob)
- Subtract 3 digits w/borrow

Baseline (Std 2) □ Endline (Std 3) □ Baseline (Std 4) □ Endline (Std 5) □
Assumptions and reality - 3

Assumption: Textbooks are at appropriate age/grade level

Reality: Textbooks have unrealistic expectations

% Std 2 students who could read two letter words

<table>
<thead>
<tr>
<th></th>
<th>AP</th>
<th>AS</th>
<th>HP</th>
<th>JH</th>
<th>RJ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline (Std 2)</td>
<td>40</td>
<td>30</td>
<td>50</td>
<td>60</td>
<td>70</td>
</tr>
<tr>
<td>Endline (Std 3)</td>
<td>80</td>
<td>70</td>
<td>90</td>
<td>100</td>
<td>110</td>
</tr>
</tbody>
</table>

Extract from the Std 1 language textbook in Rajasthan

दीवाली आई। घरों और बाजारों में सफाई होने लगी। राधा के घर में भी पुनाई हुई। मां ने घर की सफाई की। राधा और मोहन ने काम में मदद की। औँगन में रंगोली बनाई। सामान जमाया। सबने मिलकर घर सजाया। पिताजी बाजार गए। नए कपड़े लाए। पटाखे लाए। मोहन और राधा बहुत खुश हुए।
Assumptions and reality - 4

Assumption: Anyone can teach primary classes, it's easy.

Reality: No, it isn’t...

Teachers were asked to do these questions (Std 4/5 level)

<table>
<thead>
<tr>
<th>State</th>
<th>Question 3 (Percentage)</th>
<th>Question 4 (Area)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Wrong</td>
<td>Correct</td>
</tr>
<tr>
<td>ANDHRA PRADESH</td>
<td>26.2</td>
<td>68.7</td>
</tr>
<tr>
<td>ASSAM</td>
<td>41.5</td>
<td>53.5</td>
</tr>
<tr>
<td>HIMACHAL PRADESH</td>
<td>34.4</td>
<td>61.3</td>
</tr>
<tr>
<td>JHARKHAND</td>
<td>39.6</td>
<td>54.0</td>
</tr>
<tr>
<td>RAJASTHAN</td>
<td>41.6</td>
<td>48.1</td>
</tr>
<tr>
<td>TOTAL</td>
<td>35.5</td>
<td>58.2</td>
</tr>
</tbody>
</table>

38 children are enrolled in a class. Out of these 23 are present. What percentage of children are absent?

In order to plant a mango tree, you need 25 m square area. If a field is 80 m long and 70 m wide, how many mango trees can be planted in this field?
Assumptions and reality - 5

**Assumption:** Knowing theory is enough to change practice.

**Reality:** Teachers understand the importance of child friendly practices. But classrooms are not friendly at all.

<table>
<thead>
<tr>
<th>Assumption Indicator</th>
<th>Std 2/Std 4 Classrooms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students ask teachers questions</td>
<td>20%</td>
</tr>
<tr>
<td>Students' work displayed in classroom</td>
<td>30%</td>
</tr>
<tr>
<td>Teacher smiles/laughs/jokes with students</td>
<td>40%</td>
</tr>
<tr>
<td>Teacher uses local info to make content relevant</td>
<td>40%</td>
</tr>
<tr>
<td>Teacher gets children to work in small groups</td>
<td>50%</td>
</tr>
<tr>
<td>Teacher uses TLM other than the textbook</td>
<td>0%</td>
</tr>
</tbody>
</table>

- None of 6 ‘child friendly’ indicators observed in 40% of all classrooms
- >3 ‘child friendly’ indicators observed in 9% of all classrooms
Teaching and learning are fundamentally misaligned in our schools. RTE provides an opportunity to rethink what is needed in order to guarantee eight years of quality education to every child.

- On the teaching side, large numbers of new teachers will be recruited and trained. Specifying minimum qualifications is not enough to ensure good teaching. Serious thought needs to be given to developing systems to provide teachers with the abilities and skills they need in order to teach well.

- On the learning side, each school’s resources (people, time and space) need to be organized using children’s current abilities as the starting point. In particular, textbooks need to be realistic, designed with clear learning goals and sequenced in developmentally appropriate ways.
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