Setting Reading Benchmarks: Evidence from India

USAID All Children Reading-Asia
USAID/India

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Important distinctions

**Goal** is an aspiration for the future, maybe without numerical value

**Metric** is a valid, reliable unit of measurement

**Benchmark** is numerical representation of the goal using the metric

**Target** is the number of children reaching the benchmark in a given time period

**Goal**: All children in Grade 2 should read fluently and with comprehension

**Metric**: “correct words per minute in passage reading”

**Benchmark**: 45 correct words per minute, understand 80% of what they read

**Target**: 60% of Grade 2 children achieving the benchmark in 3 years.
All Children Reading – Asia (ACR – Asia)

EGRA Benchmarks and Standards Research Report

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Activity Start Date and End Date: September 30, 2016, to September 29, 2021
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The benchmarking process

1. Clearly define aims and scope
2. Obtain relevant data
3. Convene participatory workshop with representation from a range of stakeholder groups
4. Review data (in light of curriculum, context, and language)
5. Set appropriate and achievable benchmarks and targets
6. Institutionalization
I. Aims and Scope

First large-scale benchmarking activity across languages in India

1. Include the reading assessment results of USAID India’s reading projects in the Global Count

2. Report Indicator E.S.1-1 for five projects: “Percent of learners who demonstrate reading fluency and comprehension of grade level text at the end of grade 2 with USG assistance.”
2. Relevant Data

- **Assessment**: Combined EGRA/ASER instrument
- **Student sample**: ~14,467 Standard 2 students at baseline (across five projects)
- **Geographic locations**: Seven states
  1. Uttarakhand
  2. Chhattisgarh
  3. Maharashtra
  4. Uttar Pradesh
  5. Odisha
  6. Karnataka
  7. Rajasthan
- **Language(s)**: Intervention language of instruction was used for the assessment.
  - Hindi, Marathi, Oriya, Kannada, and English
3. Participatory Workshop

- 43 participants from 20 organizations
- Set reading benchmarks across all five languages
- Innovations based on EGRA Benchmarks and Standards Report
  1. Multiple data sources used (EGRA and ASER subtasks)
  2. No a priori assumption about which variable would be used for benchmarking
     a) Participants were provided with analyses and relationships across all administered subtasks (EGRA and ASER)
  3. Multiple methods were presented instead of reliance on traditional “mean” method
4. Review Data

- Which skill(s) should be benchmarked?
  - Reading comprehension
  - Oral reading fluency
  - ASER Std 2 level
  - ASER Std 1 level
- Direct or indirect measurement?
- Oral reading fluency as indirect measure of comprehension
- Reading comprehension is difficult to assess reliably
- Oral reading fluency is often referred to as bridge between decoding and comprehension
4. Review Data (continued)

• Which method(s) should be used?
  – Normative
  – Mean/median
  – Logistic regression
  – All of the above

• What outcome is most appropriate?
  – Reading comprehension (overall)
  – Reading comprehension (of attempted)
  – ASER Std 2 level
  – ASER Std 1 level

• Should there be one benchmark for all languages or a separate benchmark for each?
The Mean/Median Method

Median/Mean of ORF for children with 
> =4 questions correct
Logistic Regression Method

Data from Nepal, Grade 2
Fluency at probability of 0.5
Upper Bound – 41.0 cwpm
Lower Bound – 28.0 cwpm
Confidence interval – 13 cwpm
<table>
<thead>
<tr>
<th>Outcome</th>
<th>Method</th>
<th>Oral Reading Fluency Level</th>
<th>Lower Bound Estimate (95% Confidence)</th>
<th>Upper Bound Estimate (95% Confidence)</th>
<th>R2</th>
<th>Number of Students Reaching Standard</th>
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<tbody>
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<td><strong>ASER Standard 1 Level</strong></td>
<td>Logistic</td>
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<td>13</td>
<td>16</td>
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5. Set Benchmarks

• Which method(s) should be used?
  – Use all available information, as opposed to reliance on a single method

• What outcome is most appropriate?
  – Preferred outcome was reading comprehension (of attempted)

• Should there be one benchmark for all languages or a separate benchmark for each?
  – Create separate benchmarks for each language

• Consensus was reached on benchmarks for all five languages
Limitation and Future Research

• Concerns about Indian language orthography and visual complexity—and relationship between fluency and comprehension.

• Discussion on the impact of mother tongue on benchmarking method

• Limited comprehension measures
  – ASER does not directly assess comprehension
  – EGRA could be improved (e.g. using separate passages to assess fluency and comprehension).
Conclusions

• Overall, participants viewed the activity as a valuable exercise (first of its kind).

• More is better: more data, more methods, more engagement.

• Expected to serve as the starting point for a larger conversation regarding methods and use for early grade reading benchmarks in India.