Outline

1. Starting Primary School in Southern Mali: The SIRA School Readiness Study
   - SIRA program & research goals
   - Study design & tools
   - Result framework & next steps

2. Toward equitable ECE Access in Bhutan
   - Center-based ECE
   - Home-based ECE
   - Integrated 0-3
SIRA program & research goals
Implementation overview

Core program components:

1. Early grade reading materials
   - Conflict & gender sensitive
   - Mother-tongue focused

2. Teacher training
   - Professionalization & certification
   - Incentives for teachers
   - Teacher management

3. Parent and community support

4. Research
   - Policy-oriented research activities to help illuminate the national education situation and needs of early-grade teachers, schools, and students.
SIRA program & research goals

Research

Inefficiency of LMIC early learning systems, specifically the transition into primary school, is leading to increased dropout rates, repetition, and poor learning outcomes in primary school.¹

• Increased enrollment in early primary grades,
• Lack of pre-primary participation, and
• Children’s weak early cognitive skills

Mali is among the countries with the highest levels of dysfunction in the primary system and the lowest levels of access to pre-primary education.²

• 48% primary school completion rate
• 17% primary school net intake rate
• Gross pre-primary enrollment < 5%

² http://data.uis.unesco.org/
Study design

Sampling

Research questions
- Are there differences in children’s school readiness skills by district?
- Are there differences in children’s school readiness skills by gender?

Sample
- Representative sample in each of 4 implementation districts
- 24 schools per districts (96 total)
- 10 children per school (960 total)
- Children entering grade 1

\[ n = 4 \left( \frac{CL_{value} \times DEFT \times SD}{CI_{width}} \right)^2 \]

## Study design

### Tools

<table>
<thead>
<tr>
<th>Gross and Fine Motor Development</th>
<th>Emergent Literacy and Language</th>
<th>Emergent Numeracy</th>
<th>Social-emotional Development</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hopping on one foot</td>
<td>Print awareness</td>
<td>Measurement and comparison</td>
<td>Peer relations</td>
</tr>
<tr>
<td>Copying a shape</td>
<td>Expressive vocabulary</td>
<td>Classification/Sorting</td>
<td>Emotional awareness</td>
</tr>
<tr>
<td>Drawing a human figure</td>
<td>Letter identification</td>
<td>Number identification</td>
<td>Empathy</td>
</tr>
<tr>
<td>Folding Paper</td>
<td>Emergent writing</td>
<td>Shape identification</td>
<td>Conflict resolution</td>
</tr>
<tr>
<td></td>
<td>Initial sound discrimination</td>
<td>One-to-one correspondence</td>
<td>Self-awareness</td>
</tr>
<tr>
<td></td>
<td>Listening comprehension</td>
<td>Simple operations</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Problem solving</td>
<td></td>
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</tbody>
</table>
Results framework & Next steps

Coming soon!

- Composition of grade 1 classrooms (age & gender)
- Learning profiles in grade 1 classrooms
- Skill differences within and across schools
- Alignment of skills with grade 1 curriculum
Toward equitable ECE access in Bhutan
Bhutanese ECE landscape: 2015

Classroom-only

1 year of pre-primary education for all

Center-based ECE

MoE

Other (NGO/CSO/private)

Coverage: 17%
2015 National ECCD Study

Goals

To enable data-driven decision making at various levels from community to National policy making, and to create evidence for internal and external advocacy for resource mobilization.

- ECCD programming started in early 2004 in Bhutan and more intensively from 2007 but there has been no systematic evaluation completed.
- Results of a small case study in 2014 recommended that a national level comprehensive evaluation study considering critical factors that influence the learning and developmental outcomes in children be undertaken.
- ECCD centre and parenting education programs are expanding rapidly with different models available throughout the country and it is not known which are the most impactful and sustainable models relative to resources required.
2015 National ECCD Study

Key findings: Classroom learning environments matter

Classroom Quality (ECERS) & IDELA Learning Gains, Community Centers

% IDELA Gain

<table>
<thead>
<tr>
<th>Overall Quality (ECERS) Rating</th>
<th>% IDELA Gain</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>11%</td>
</tr>
<tr>
<td>2</td>
<td>17%</td>
</tr>
<tr>
<td>3</td>
<td>22%</td>
</tr>
<tr>
<td>4</td>
<td>28%</td>
</tr>
</tbody>
</table>
2015 National ECCD Study

Key findings: Home learning environments matter

Home Learning Activities & IDELA Gains

- No learning/play at home: 15%
- Some learning/play at home: 20%
- Lots of learning/play at home: 24%
2015 National ECCD Study

Key findings: Rural children at a disadvantage

Children in urban areas display stronger cognitive development than children in rural areas

- Motor: Rural 21%, Urban 36%
- Math: Rural 24%, Urban 33%
- Literacy: Rural 13%, Urban 23%
- Social-emotional: Rural 19%, Urban 28%
- IDELA: Rural 23%, Urban 35%

Save the Children
Background
Research calls for multi-sectoral solution to improve child development

“There is therefore an urgent need to increase multi-sectoral coverage of quality programming that incorporates health, nutrition, security and safety, responsive caregiving, and early learning.”

Source: Lancet Series 2016
C4CD Plus

Program components

Care for Child Development (C4CD)
- Implemented at health centers throughout Bhutan
- Health, hygiene and stimulation practices for children and families

Early Literacy and Math (ELM)
- Used by ECCD programs throughout Bhutan
- Teaching parents how to engage in pre-literacy and math skills with their children at home

C4CD Plus
- C4CD + ELM for holistic development of 3-5 year old children
- 9 sessions (7 ELM + 2 Health & Hygiene) delivered by HA/VHWs in communities without ECCD centers
Study Sample

Cluster Random Sample

- 4 districts chosen (Haa, Lhuentse, Zhemgang, Tsirang)
  - Selected based on lack of ECCD center programming and presence of health workers
- Gewogs randomly selected for intervention/control groups (19 total)
- Chiwogs within each Gewog randomly selected for inclusion in the study (35 total)
- All children ages 3, 4 and 5 living in selected Chiwogs were eligible to participate in study
- Total sample desired: 400 children and parents/caregivers
Children development
C4CD Plus associated with stronger cognitive development

<table>
<thead>
<tr>
<th>Category</th>
<th>Effect Size</th>
</tr>
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<tbody>
<tr>
<td>Motor</td>
<td>0.17</td>
</tr>
<tr>
<td>Literacy***</td>
<td>0.63</td>
</tr>
<tr>
<td>Numeracy**</td>
<td>0.64</td>
</tr>
<tr>
<td>Social-emotional</td>
<td>0.26</td>
</tr>
<tr>
<td>IDELA**</td>
<td>0.51</td>
</tr>
</tbody>
</table>

*p < .05  **p < .01  ***p < .001
Equity
Equal benefits for all families and children

- Equal learning gains for children from poorer and wealthier families
- Equal learning gains for children from more and less educated parents

Average IDELA score at post-test by socio-economic status and maternal literacy

<table>
<thead>
<tr>
<th>% Correct (IDELA)</th>
<th>Literate mother</th>
<th>Illiterate mother</th>
<th>Lowest quintile SES</th>
<th>Highest Quintile SES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>34%</td>
<td>34%</td>
<td>34%</td>
<td>34%</td>
</tr>
</tbody>
</table>
Bhutanese ECE landscape: 2017
Formal & non-formal pathways

1 year of pre-primary education for all

- Center-based ECE
  - MoE
- Other (NGO/CSO/private)
- Home-based ECE
  - MoH

Potential for universal coverage
Bhutanese ECE landscape: 2018 & beyond
Full ECD sector perspective

1 year of pre-primary education for all

Center-based ECE
- MoE
- Other (NGO/CSO/private)

Home-based ECE
- MoH

Early stimulation
- Home-based early stimulation
- MoH
Thank you!

SIRA work in collaboration with:
- USAID
- Education Development Center, Inc. (EDC)
- Partners Institut pour l’Education Populaire (IEP)
- Oeuvre Malienne d’Aide à l’Enfance Sahel (OMAES)
- School-to-School International (STS)
- CRC Sogema


Bhutanese work in collaboration with:
- Royal Bhutanese Ministry of Education
- Royal Bhutanese Ministry of Health
- UNICEF


- More about IDELA: https://idela-network.org/