Assessing Learning Progress in Ethiopia: challenges and approaches for effective measurement in Young Lives

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Household survey
- 5 regions
- 20 sites
- 3,000 children in 2 cohorts

School survey 2012-13
- 7 regions (extension to Somali & Afar)
- 29 sites
- Site-level school ‘census’
- All pupils in grade 4 & 5
- ~11,000 children
SETTING THE SCENE: A COMPLICATED LINGUISTIC ENVIRONMENT

- 80+ languages
  - From Semitic, Cushtic, Omotic and Nilo-Saharan roots
  - In both Ge’ez and Latin script
  - With varying levels of difficulty and diverse literate histories and environments

- 1994 Education and Training Policy
  - Watershed in way languages were used for teaching and learning
  - Shift toward teaching in mother tongue or nationality languages at the primary level
There is significant diversity of mother tongue across Young Lives children.

Table 1: Mother tongue of Young Lives children

<table>
<thead>
<tr>
<th>Mother tongue</th>
<th>Younger Cohort</th>
<th>Older Cohort</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>%</td>
</tr>
<tr>
<td>Afar</td>
<td>5</td>
<td>0.3</td>
</tr>
<tr>
<td>Amharic</td>
<td>830</td>
<td>43.4</td>
</tr>
<tr>
<td>Guraghe</td>
<td>93</td>
<td>4.9</td>
</tr>
<tr>
<td>Hadiyya</td>
<td>101</td>
<td>5.3</td>
</tr>
<tr>
<td>Oromiffa</td>
<td>305</td>
<td>16.0</td>
</tr>
<tr>
<td>Sidama</td>
<td>98</td>
<td>5.1</td>
</tr>
<tr>
<td>Silti</td>
<td>4</td>
<td>0.2</td>
</tr>
<tr>
<td>Tigrigna</td>
<td>386</td>
<td>20.2</td>
</tr>
<tr>
<td>Wolayta</td>
<td>90</td>
<td>4.7</td>
</tr>
<tr>
<td>Other</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Total</td>
<td>1912</td>
<td>-</td>
</tr>
</tbody>
</table>

Source: Young Lives data
THERE IS SIGNIFICANT DIVERSITY OF MEDIUM OF INSTRUCTION ACROSS STUDY SITES

Table 2: Main languages of instruction used for most subjects by region

<table>
<thead>
<tr>
<th>Region</th>
<th>G1-4 MOI policy</th>
<th>G5-6 MOI policy</th>
<th>G7-8 MOI policy</th>
<th>G4 MOI in survey schools</th>
<th>G5 MOI in survey schools</th>
</tr>
</thead>
<tbody>
<tr>
<td>Addis Ababa</td>
<td>Amharic</td>
<td>English</td>
<td>Amharic</td>
<td>Amharic; English</td>
<td></td>
</tr>
<tr>
<td>Amhara</td>
<td>Amharic; Awingi; Hammittenena</td>
<td></td>
<td>Amharic</td>
<td>Amharic; Oromiffa</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Oromiffa</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oromia</td>
<td>Oromiffa; Amharic</td>
<td></td>
<td>Oromiffa; Amharic</td>
<td>Oromiffa; Amharic</td>
<td></td>
</tr>
<tr>
<td>SNNP</td>
<td>Multiple including: Amharic; Hadiyya; Sidama; Silti; Wolayta</td>
<td>English</td>
<td>Amharic; Wolayta; English; Sidama; Hadiya</td>
<td>Amharic; English</td>
<td></td>
</tr>
<tr>
<td>Tigray</td>
<td>Tigrigna</td>
<td></td>
<td>Tigrigna</td>
<td>Tigrigna</td>
<td></td>
</tr>
<tr>
<td>Afar</td>
<td>Amharic; Afar (ABE)</td>
<td>Amharic</td>
<td>English</td>
<td>Amharic</td>
<td></td>
</tr>
<tr>
<td>Somali</td>
<td>Somali; Amharic</td>
<td></td>
<td>Somali; English</td>
<td>Somali; Afar; Amharic; English</td>
<td></td>
</tr>
</tbody>
</table>

Source: adapted from Heugh et al, 2007 in Vujcich, 2013 forthcoming
THIS COMPLEXITY RAISES SERIOUS ISSUES OF CROSS-LANGUAGE & CROSS-CULTURAL COMPARABILITY

**Aim:**
Good ‘outcome’ measures that enable meaningful comparison across groups and over time

**Problem:**
Cross-language & cross-cultural setting raises questions:
- Does the ‘construct’ mean the same thing?
- Is there equal familiarity with the method of admin?
- Do the items mean the same thing?

**Impact:**
Are differences between groups the result of some child or household characteristic, or a result of non-comparable outcome measures?
EXAMPLE: ETHIOPIA SCHOOL SURVEY 2012-13

- ~11,000 children
- 7 regions (core + Somali & Afar)
- 7 mediums of instruction
- All grade 4 and grade 5 classes in all schools in sites
- Assessments of Maths and Literacy linked to varying degrees to the Minimum Learning Competencies (MLCs)
ASSESSMENT DESIGN AND CONCEPTUALISATION

- Development of common framework, in relation to MLCs & textbooks
  - separate process for maths and literacy

- Identification of appropriate ‘test adaptors’ in each language

- Developed prototype test in English, then worked to develop that into Amharic

- Then each language test adaptor began adaptation process

  Key point being **maintenance of difficulty level across tests**

  NOT simple translation
PILOTTING AND REFINEMENT

- Pilotted in 6 regions & 6 languages
- In each region visited 1 school & 2 classes
- Administered pilot assessments
- Used ‘Item Response Theory’ to examine item function and refine items to minimise the potential impact of inconsistent across-language item adaptation
- Aiming for conceptually sound and consistent tests rather than ones which need a lot of post-hoc adjustment
REVIEWING DIFFERENTIAL ITEM FUNCTIONING

Item 11

P(X=1|\Theta)

Theta
REVIEWING THE ‘DISTRACTORS’

1. Donkey

   a) [Blank]

   b) [Image of a donkey]

   c) [Image of a stool]

A – Solid; B – Dash; C – Dash + Dot
- Review of final assessment data from Ethiopia looks promising

- Next step is analysis of reliability & validity & creating of scores

- **Key points**
  - Working in multiple languages presents significant challenges
  - Addressing them at the design phase is time-consuming and often costly
  - But importance of engagement with issues can’t be understated
FINDING OUT MORE...

www.younglives.org.uk

- methodology and research papers
- datasets (ESDS International)
- publications
- child profiles and photos
- e-newsletter

“Nothing is impossible for me”
Stories from Young Lives children