MELQO

Measuring Early Learning Quality and Outcomes
Abbie Raikes, Technical Lead
Brookings Institution, UNICEF, UNESCO and World Bank
What is MELQO?

• Consortium to promote measurement of early childhood development and quality of learning environments

• Intended to produce feasible, open-source tools that countries can adapt to build into ongoing measurement systems

• Led by Brookings, UNICEF, UNESCO and World Bank with group of more than 50 experts participating
What are the goals of MELQO?

• Focus on national measurement:
  • Create two tools – one on child development and learning outcomes and one on quality of settings – that are conceptually linked
  • Build on existing tools, to create a common set of items that could be integrated into existing measures and help inform global monitoring, while promoting national-level measurement
  • Develop tools and processes for using them that are feasible, actionable and adaptable for use at the national level
Why national measurement?

• National assessments can be longer, more frequent and adapted to local settings – *but don’t contain the same set of items, so can’t be considered globally comparable*

• Local data are important for policy and programmatic development
  • Design of curricula; connections with teacher training
  • Inform policies and funding decisions
  • More detailed information on inequities within countries

• May be possible to inform global tracking over time
National Measurement is Critical

• Global monitoring is just one aspect of monitoring

• National measurement is very important
  • More sensitive to local goals and cultures
  • Useful for national decision-making on resources & policies
  • Possible to include broader range of indicators
Measuring Children’s Development At or Near the Start of School
Measuring Contributes to Improvement

Use data to improve learning environments through policies, teacher support, parent information

- Measurement of CDL and Quality
- Create global and national pressure
- Increased country focus on ECD for Advocacy
Important to measure together ...

Child Development and Learning

Quality

Integrated policies and practices to promote learning
Goals of Child Development/Learning

• Make national measurement easier by identifying a common set of items that are used in many assessments now

• Examine the feasibility of adapting these items to national standards and cultural priorities for young children

• Test these items to determine the validity of the items and how well they work across countries
Two themes of MELQO

- **Content**: What’s in it?
  - Constructs that are scientifically valid and relevant
  - Item reliable and accurate; technically sound
  - Emphasis on “teachable” and “actionable” items

- **Usability**: How will it be designed?
  - How the data will be collected
  - How the results will be shared and used to improve practice – risks like high-stakes!
In sum ...

• National efforts can complement work at global level

• Some indicators may be easier to develop first at the national level, which then can help inform global efforts

• Challenges around item comparability and ensuring proper use are important to recognize
MELQO Phase 1: Consensus to Country Action

1) Convene expert groups on quality and child development/learning

2) Use *existing measures* to gain consensus on common set of items

3) Conduct institutional assessment on scaling the assessment

4) Validation – first nationally-representative study underway
Framework for Child Development/Learning

- **Core**
  - **Social/Emotional**
- **Items**
  - **Domain-General** (i.e., Executive Function, Approaches to Learning)
  - **Domain-Specific** (i.e., early literacy, language, early math)
- **Nationally-Specific Items**
What is included in the MELQO instruments?

Child Development & Learning:
- Teacher Interview
- Parent Interview
- Direct Learner Assessment

Quality:
- Head Teacher Interview
- Teacher Interview
- Classroom Observation
How is information gathered?

CHILD DEVELOPMENT & LEARNING
- Teacher Interview
- Parent Interview
- Direct Learner Assessment

QUALITY
- Head Teacher Interview
- Teacher Interview
- Classroom Observation

Oral Interviews
Oral-based assessment
Observation
## Construct Items: Mathematics

<table>
<thead>
<tr>
<th>Domain</th>
<th>Construct</th>
<th>TCR-parent</th>
<th>TCR</th>
<th>DA</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mathematics</strong></td>
<td>Number &amp; Operations</td>
<td>How high can child count?</td>
<td>How high can child count?</td>
<td>Verbal Counting</td>
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<tr>
<td></td>
<td>Count out Objects from Larger Set (3, 6, 14)</td>
<td>Count out Objects from Larger Set (3, 6, 14)</td>
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<tr>
<td></td>
<td>Number Identification</td>
<td>Number Identification</td>
<td>Number Identification</td>
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<td></td>
<td>Mental Addition</td>
<td>Mental Addition</td>
<td>Addition with Two Sets</td>
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<td></td>
<td>Quantitative Comparison of Two Sets</td>
<td>Quantitative Comparison of Two Sets</td>
<td>Quantitative Comparison of Two Sets</td>
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<tr>
<td><strong>Measurement</strong></td>
<td>Measurement Vocabulary (largest, smallest, longest, shortest)</td>
<td>Measurement Vocabulary (largest, smallest, longest, shortest)</td>
<td>Measurement Vocabulary (largest, smallest, longest, shortest)</td>
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<td>Mental size comparison (taller)</td>
<td>Mental size comparison (taller)</td>
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<td>Mental weight comparison (heavier)</td>
<td>Mental weight comparison (heavier)</td>
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<td>Time (Yesterday, Today, Tomorrow)</td>
<td>Time (Yesterday, Today, Tomorrow)</td>
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<td><strong>Spatial Sense</strong></td>
<td>Spatial Vocabulary</td>
<td>Spatial Vocabulary</td>
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<td>Spatial Visualization</td>
<td>Spatial Visualization</td>
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<td>Shape Naming</td>
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<tr>
<td>Domain</td>
<td>Construct</td>
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<td>TCR</td>
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<tr>
<td><strong>Literacy</strong></td>
<td>Motivation</td>
<td>Would you say (name) is interested in reading (inquisitive/curious about the meaning of printed material)?</td>
<td>Would you say (name) is interested in reading (inquisitive/curious about the meaning of printed material)?</td>
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<td>Expressive Language</td>
<td>Can (name) communicate his/her own needs/what s/he wants in a way understandable to adults and peers?</td>
<td>Can (name) communicate his/her own needs/what s/he wants in a way understandable to adults and peers?</td>
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<td>Name animals</td>
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<td>Phonological</td>
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<td>Initial sound discrimination</td>
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<td>Awareness</td>
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<td>Initial sound identification</td>
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<td>Familiarity with</td>
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<td>Print Concepts</td>
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<td>Child opens book right side up, to right page, points to part of text</td>
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<td></td>
<td>Alphabet Knowledge</td>
<td>Letter name identification</td>
<td>Letter name identification</td>
<td>Letter name identification</td>
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<td></td>
<td>Listening</td>
<td>Can (name) understand on first try what is being said to him/her?</td>
<td>Can (name) understand on first try what is being said to him/her?</td>
<td>Responds to comprehension questions associated with story</td>
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<tr>
<td>Site</td>
<td>Sample Size</td>
<td>Purpose for Data Collection</td>
<td>Instrument/Version</td>
<td>Partners</td>
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<tr>
<td>Mongolia</td>
<td>533 (4, 5 6 year olds)</td>
<td>World Bank project on pre-primary education</td>
<td>Teacher report and DA</td>
<td>World Bank; Save the Children</td>
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<td>Tanzania</td>
<td>209 (average age about 5.5 years) for Direct Assessment; 199 teacher and 72 parent</td>
<td>UNICEF partnership to measure at population-level to inform policy</td>
<td>Teacher report, parent report, and DA</td>
<td>RTI; UNICEF</td>
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<tr>
<td>Laos</td>
<td>200 (3, 4, 5, 6, 7 year olds)</td>
<td>World Bank project</td>
<td>Teacher report and DA</td>
<td>World Bank; Sally Brinkman</td>
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<tr>
<td>Bangladesh</td>
<td>463 (mostly 4, some 5 year olds)</td>
<td>Save the Children project</td>
<td>Parent report and DA</td>
<td>Save the Children</td>
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<tr>
<td>Kenya</td>
<td>300 (4, 5, 6, 7 year olds; most 5 or 6 years)</td>
<td>RTI project</td>
<td>DA only</td>
<td>RTI</td>
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<td>Madagascar</td>
<td>200 (4 to 6 year olds)</td>
<td>World Bank project</td>
<td>Parent and teacher report only</td>
<td>World Bank</td>
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<tr>
<td>Sudan</td>
<td>166 (3 to 6; mostly 4/5)</td>
<td>World Bank project</td>
<td>DA only</td>
<td>World Bank; Tricia Kariger</td>
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</tbody>
</table>
Summary of Results So Far ...

• Math, early literacy and executive function can be measured

• Teachers, parents and direct assessment of children are all valid ways to learn about children

  • But they do not always agree with one another

• Math and executive function may be easier to measure across countries
Adapting Items is Critical

• Some items are relevant across countries

  • For example: Asking children to count as high as they can (early math); and being able to remember things (early executive function)

• Others may vary based on country

  • For example: Is it appropriate for children to ask many questions in class, or is that not considered appropriate?
Four Main Questions

Planning

Selecting Items

Using Results

Building capacity
Themes and Questions

• What information on children’s learning and development is most useful for informing policy choices?

• How can items be adapt to meet cultural expectations for children’s development?

• What capacity is required to successfully carry out assessment, and how can we build on existing capacity?