Measuring ECD
What, When and How
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Overview ...

• What to measure: Descriptions of domains of development

• When to measure: Capturing skills at developmental stages

• How to measure: Selecting tools, implementation and analyzing data
The SDGs are Important Opportunity

• Global commitment from all member states (193 countries)

• Funding, political prioritization for goals and targets

17 Goals and 169 Targets ... Over 200 proposed indicators – Big Agenda!
Research, Measurement & Monitoring

• Research helps identify central elements of children’s development and tests key hypotheses about what will affect young children
  • Studies may be replicated, but not repeated on regular basis once hypotheses testing is done
  • Test development is part of research

• Measurement is ongoing, sustained and focused on defining end goals such as learning (i.e., national assessment systems)

• Monitoring is information designed to promote good implementation by collecting regular and systematic information on a regular basis
Research

*Most in-depth and exploratory*

- Can key constructs be measured?
- What is most important to measure?
- University partners

National Measurement

*Focused on key outcomes*

- Aligned to policy goals
- Sustained and repeated on regular basis
- Sits within ministry

Monitoring

*Ongoing information for implementation*
Education Commission: The Learning Generation

• Countries should develop their own national assessments as part of a sustainable infrastructure of data collection and analysis

• Data should be made public to enable communities and families to help drive results by holding leaders and schools to account

• To galvanize attention globally, a single global indicator of learning should be agreed on to complement national measures of learning and global partners should establish a Global Initiative for Learning

Why Measure Early Learning?

• Early childhood development is one of the best leading indicators of future school system and workforce performance.

• Early childhood development is at the center of one SDG target and contributes to several other goals.

• Measuring early childhood development can lead to better allocation of resources for stronger education, health and social protection systems.

However: Risks and rewards of measuring “developmentally on track”
Walker et al., 2007. Appears in World Bank Early Childhood Measurement Toolkit, Under Revision
Domains of Development

• Children’s development can be roughly divided into “domains”

  • Language/Communication
  • Cognition
  • Motor
  • Executive Function
  • Social/Emotional
But take this lightly ...

- Organizing by domains may make it easier for us to understand
  - But development does not proceed so neatly

- Domains are interconnected and fluid
  - What develops at one age leads to development later, across and within domains
Domains of Development to Measure

• Because development is holistic, multiple domains of development should be included in assessments

  • However, depending on the purpose of measuring, may be important to prioritize some domains over others

• Most, but not all, measures include multiple domains

• Some domains more predictive of later development than others

  • Early math can predict later reading; fine motor is a component of executive functioning
Measurement Before Age 2 Years

• Time before age two years is incredibly important for brain development
  
  • But if children are within the normal range, mixed evidence on whether the age at which children achieve milestones is important for later development
  
  • Early language may be most critical
  
• Measurement before age two years is certainly possible and is likely best complemented by measures of home/family environments
  
  • May be better predictors over time and more useful in interventions
Measurement in Preschool Years

• Domains become more solidified

• Measures are more predictive of later development

• Executive function emerges as critical for later learning
  • Communication skills, social/emotional development facilitate engagement in classrooms
  • Early math very important – early literacy depends more on teaching literacy skills
Cultural Adaptation

- Timing and expression of children’s development varies by culture
  - Meaningful variation between languages, countries and regions

- Be very careful when using a tool developed in another country
  - Look for global tools that have evidence of cross-cultural validity

- Norms and benchmarks generally do not cross borders
  - Norming and benchmarking can be very useful but not without a lot of attention
In Sum ...

- What to measure depends on purpose of measurement
  - Monitoring at population level should include all domains of development
  - Focus on specific domains may be more relevant if intended to inform design of new intervention
- Domains to watch for later cognition: Language and executive function (and math)
  - Social/emotional development also very important: Requires local adaptation
How to Measure

Approaches to Measurement
Things to Consider ...

• Method
  • Parent report, teacher report, direct assessment can all produce reliable information (but on different areas of development)

• Sample
  • Representative samples may be essential for informing policy; building benchmarks
  • Household surveys necessary for representative samples for young children

• Cost
  • Direct assessment requires more training and more assessors

• Data interpretation
  • Absolute scores, or comparison between groups?
Selecting a Tool

Define Purpose
- National assessments
- Impact studies

Clarify key domains
- National assessments: Align with goals and standards
- Impact: Align with focus of intervention and review research to estimate effects

Estimate cost
- Size, scope of sample
- Equity in data collection: Who is included or not?
- Type of information needed
- University or other partners

Plan Data interpretation
- Comparing between groups
- Reporting on national standards
- Creating country-specific norms
Steps for Sound Administration

Adaptation
- Check items against local standards

Pre-field-testing
- Try out items with small population; adjust

Field-testing
- Try out items with larger population

National sample
- Collect full sample
How do I know if my measure is working?

• Types of Validity
  • Related to parent/home characteristics
  • Sensitive to age
  • Reliable between observers

• For national monitoring: Will this tool be feasible to repeat over time? Who will do it, and how much capacity will be required?
Translation of Measurement into Monitoring

• Many measures and items originally designed for research studies

• Items now being used for national monitoring

  • Align with national standards

  • Clarify alignment with policy questions

  • What works in a research tool may or may not work well to inform national policies
How to Use Data

• Quality + child outcomes data can be powerful combination in describing what is going well and not

• Knowing whether children are able to reach national standards can help inform curricula, teacher training, even without benchmarks

• Measuring development of children prior to age 3 can lead to better interventions in health, nutrition and stimulation
Use MELQO when ...

• There is a clear interest in building national capacity for ongoing measurement

• There are local researchers available to help with the adaptation and field-testing of the modules

• There are specific policy questions that can be answered by looking at differences between groups of children – those who have had pre-primary; differences by region, gender, mother tongue
East Asia Pacific Region

- Engaged in regional effort to build standards
- Used standards to inform design of measurement
- Collected data in coordinated fashion across 8 countries
- Used data to reduce and create “short form” for ongoing measurement and monitoring
Summary

• Children in diverse settings develop in many of the same ways, as reflected in many commonalities across measures
  
  • Cultural differences matter too – important to find balance
  
  • More critical than picking the “right” tool: Adapting to local context

• Decisions on measurement must be driven primarily by purpose for measurement

• Range of options available once purpose is clear – but don’t forget about capacity required
Steps to Common Framework

• Agree on main domains of development
  • But don’t worry too much about details – instead, see what resonates in different countries and compare over time
  • Many valid items to use

• Create opportunities for sharing experiences with large-scale data collection

• Generate shared technical standards and pathways towards integrating data