¿HOW IS CHILD CARE QUALITY MEASURED?
A toolkit
OUTLINE OF PRESENTATION

1. Motivation
2. Definition of quality
3. Measurement of quality
4. Contributions of the book
5. Measuring quality, step by step
   5.1 Before
   5.2 During
   5.3 After
6. Conclusion
1/ MOTIVATION
1.a. DELAYS AND INEQUALITY IN ECD OUTCOMES

Economic gradients in vocabulary, rural areas, 4 yr olds

Source: Own calculations based on Schady & coauthors (2015)
1.b. LOW QUALITY

Crèche and preschool quality in Brazil

Source: Verdisco & Alfaro (2010)
1.b. LOW QUALITY

ITERS score Cuna Mas, Peru

ITERS score CIBV, Ecuador

N=302
Mean: 3.6 (0.8)

N=404
Mean: 2.24 (0.64)

Source: Araujo, Lopez Boo et al. (2015)
1.c. IMPORTANCE FOR 0-3 yr OLDS

High quality is crucial to obtain positive impacts.

Low-quality childcare can have long-lasting, negative effects.

Particularly important for 0-3 yr. because:

• Infants immune systems are developing
• Attachment and stimulation are key in this period of life
• Higher need for individualized attention (i.e. higher costs)
• Low quality associated with higher levels of cortisol

Peisner-Feinberg et al. (2001); Berry et al. (2013); Li et al. (2012); Howes et al. (1992); Bowlby (1969) & Barker et al. (2015)
Childcare centers have the largest coverage of all ECD programs in LAC:
- ~3.1 million children served by over 114,000 publicly funded providers (2011)

The challenge: ensuring quality in a context of growing access

Quality standards: when they exist, it is complex to monitor/enforce them

Recommended child-to-adult ratios: in general, not respected

Very little known about the quality of “counterfactual” care

Araujo, López Bóo and Puyana (2013)
2/ DEFINITION OF QUALITY
2. DEFINITION

- **Process variables:** Quality of interactions between the children and their caregivers and between the children and their peers, as well as the activities they engage in. (e.g. caregiver uses a variety of simple and precise words to communicate with children)

- **Structural variables:** Identify the resources that facilitate those interactions: group size; the caregiver’s education, experience and salary; infrastructure and safety; curriculum and materials

Lopez Bóo et al. (2016)
In a center with high levels of *process* quality:

“... caregivers encourage children to actively participate in activities;

have frequent and positive interactions including smiling, touching, and talking at the level of the child,

respond promptly to questions/demands, invite them to talk about their experiences, ideas and feelings,

Listen attentively, make open questions, extend actions and vocalizations of children with more complex ideas or materials, interact individually and in small groups...

use techniques of positive orientation and encourage independence.”

3/ MEASUREMENT OF QUALITY
3. WHY MEASURE QUALITY?

From a **programmatic perspective**, quality measurement can:

– identify critical areas of improvement and resources needed
– inform parents’ choices and decisions

From a **systemic perspective**, quality measurement will:

– inform key policy decisions (including licensing, budget, staffing, and regulations)
– contribute to quality enhancement processes (e.g. accreditation)
– render accountability on the use of public and private resources
3. MEASURING QUALITY: THE HOW

Process variables

Observational instruments: they capture the quality, frequency, and intensity of interactions by means of the observation of daily routines in the center during a predefined number of hours.

Structural variables

Checklists and interviews: collect information on infrastructure, health, security, the group of children and the caregiver.
3. MEASURING QUALITY: EXAMPLES

<table>
<thead>
<tr>
<th>Table 1: Structural and Process Variables, some examples</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Structural Variables</strong></td>
</tr>
<tr>
<td>Health &amp; Safety</td>
</tr>
<tr>
<td>- Public health measures, health and safety procedures, documents</td>
</tr>
<tr>
<td>Groups of Children</td>
</tr>
<tr>
<td>- Group size</td>
</tr>
<tr>
<td>- Child-caregiver ratio</td>
</tr>
<tr>
<td>Score: years of education, training in child development, previous experience and professional development</td>
</tr>
<tr>
<td>Lesson planning</td>
</tr>
<tr>
<td>Caregiver supervision</td>
</tr>
<tr>
<td>Salary</td>
</tr>
<tr>
<td><strong>Process Variables</strong></td>
</tr>
<tr>
<td>Health &amp; Safety</td>
</tr>
<tr>
<td>- Observed health and safety practices.</td>
</tr>
<tr>
<td>- The caregiver helps the children follow safety rules and explains the rationale behind these rules.</td>
</tr>
<tr>
<td>Groups of Children</td>
</tr>
<tr>
<td>- Children interact with each other for much of the day.</td>
</tr>
<tr>
<td>- The caregiver helps the children empathize with their peers; she explains children’s actions, intentions and feelings to other children.</td>
</tr>
<tr>
<td>- The caregiver interrupts a negative interaction between children and helps them understand the effects of their actions on others.</td>
</tr>
<tr>
<td><strong>Caregiver Behavior:</strong></td>
</tr>
<tr>
<td>- Caregivers are attentive to all children, even while working with an individual child.</td>
</tr>
<tr>
<td>- How the caregiver responds when a child cries; the caregiver does not express annoyance or hostility toward the child.</td>
</tr>
<tr>
<td>- How many times the caregiver uses abrupt movements when feeding a child, complains about his behavior, or has a threatening attitude.</td>
</tr>
<tr>
<td>- Caregivers greet/say goodbye to each child and his parent during arrival and departure times.</td>
</tr>
<tr>
<td>- Caregivers react quickly to solve problems.</td>
</tr>
</tbody>
</table>
Domain: Language Modeling

Low (1, 2): Little or none conversational language in the classroom... If caregiver asks questions, answers are single-worded ("What is this?", "What color is this?", "Where is this?", “How many ...?")

Medium (3, 4, 5): Caregiver offers some opportunities for children to use language. Conversations are led by the teacher... There is a combination of responding and ignoring, using specific words to answer to children, such as “Would you like the ball?”, but in other instances words are less specific such as “Would you like this?”

High (6, 7): Caregiver uses conversational language and offers frequent opportunities for children to use language through conversation and questions... Caregiver uses open statements inviting for additional answers, such as “tell me about ...” or “wow! Marco, your dad told me you had a great week-end...”
### 3. MEASURING QUALITY

**How do governments measure child care quality in LAC?**

<table>
<thead>
<tr>
<th>Categories</th>
<th>Ecuador</th>
<th>City of Buenos Aires</th>
<th>Mexico</th>
<th>Mexico - Annex</th>
<th>Examples of Information Collected for Each Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supervision data</td>
<td>0.0%</td>
<td>1.2%</td>
<td>1.8%</td>
<td>0.0%</td>
<td>Date of supervision, supervisor in charge, status of the center (open or closed)</td>
</tr>
<tr>
<td>Center information</td>
<td>7.2%</td>
<td>3.9%</td>
<td>2.5%</td>
<td>4.5%</td>
<td>Location (state/province, county, city/town, district/neighborhood), address, phone number, director of the center, center opening date, modality, hours of operation</td>
</tr>
<tr>
<td>Condition of the property</td>
<td>12.6%</td>
<td>3.1%</td>
<td>6.5%</td>
<td>15.0%</td>
<td>Condition and materials of ceilings, walls, floors, bathrooms, the electrical system, and furnishings; condition and other uses of the property</td>
</tr>
<tr>
<td>Staff information</td>
<td>4.0%</td>
<td>29.8%</td>
<td>14.0%</td>
<td>0.0%</td>
<td>Gender, length of service at the center, level of education, training, availability of staff health records (director, teachers, aides, kitchen staff, etc.)</td>
</tr>
<tr>
<td>Population served</td>
<td>5.4%</td>
<td>8.1%</td>
<td>2.5%</td>
<td>8.5%</td>
<td>Number of boys and girls served, by classrooms or age groups, with or without financial support</td>
</tr>
<tr>
<td>Safety</td>
<td>70.4%</td>
<td>5.0%</td>
<td>57.5%</td>
<td>4.5%</td>
<td>Condition of the lighting, ventilation, stairs and furnishings; waste management; presence of chemicals; presence of safety elements such as fire extinguishers and a first aid kit; fire and disaster drills; emergency information</td>
</tr>
</tbody>
</table>
4/ CONTRIBUTION OF THE BOOK
4. CONTRIBUTION OF THE BOOK

- Revises the literature on quality of child care with focus on the 0-3 group

- Provides a menu of available instruments and compares them (in terms of benefits, attributes, costs and requirements)

- Describes the entire implementation process of these instruments and discusses practical considerations when conducting measurements
5/ MEASURING QUALITY

Before, During and After
5. MEASURING QUALITY: before

Define

1. Goal of the assessment. who, how, why and what to measure
2. Group under study: a country, region, a program
   3. Unit of analysis: classroom/s, a center

Data collection will depend on 1, 2 & 3, time and resources. It can be carried out through:

   – **Direct observation** and coding following an observational protocol
   – **Interviews** to caregivers, parents, or center/program directors
## 5. MEASURING QUALITY: before

Select the appropriate instrument

<table>
<thead>
<tr>
<th>Instruments</th>
<th>Number of Dimensions</th>
<th>Minimum Observation Time</th>
<th>Total Materials cost</th>
<th>Official Training?</th>
<th>Adapted to a country in LAC</th>
<th>Spanish Translation</th>
<th>Validity</th>
<th>Educationa l level of the interviewer</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLASS Toddler</td>
<td>8</td>
<td>2 h.</td>
<td>3</td>
<td>902.9 (*)</td>
<td>6</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>ITERS-R</td>
<td>7</td>
<td>3 h. 30'</td>
<td>5</td>
<td>22.9</td>
<td>2</td>
<td>No</td>
<td>Yes</td>
<td>Yes³</td>
</tr>
<tr>
<td>CC-IT-HOME</td>
<td>6</td>
<td>1 h.</td>
<td>1</td>
<td>40.3</td>
<td>3</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>MITRCC</td>
<td>N/A</td>
<td>3 h. 30'</td>
<td>5</td>
<td>0</td>
<td>1</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>ORCE</td>
<td>3</td>
<td>1 h. 30'</td>
<td>2</td>
<td>NA</td>
<td>N/A</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>

(*) The cost of the instrument (Class Toddler) includes an asterisk (*) due to the specific context or condition.
5. MEASURING QUALITY: before

Adaptation

• **Translation & adaptation** to language and local culture
  – Back translation to original language and comparison of equivalence between versions

• **Modify order or eliminate items** based on empirical analysis

• Compare instruments with **program standards**

• **Pilot** adapted instruments and adjust
5. MEASURING QUALITY: before

Costing

- licences
- translations
- adaptation and pilots
- fee to publisher for approval of modified version of instrument
- training and salaries of personnel (background matters)
- measure of child development
5. MEASURING QUALITY: during

Training

• Staff receives same training
  – Professional and certified trainers
  – Lots of time for practices, examples and case studies

• Document reliability before/during fieldwork
  – to ensure acceptable levels of reliability between observers and between trainers and observers (> 0.8)
5. MEASURING QUALITY: during

Logistics and key elements to consider:

- Location and frequency
- Operating hours/sessions per day
- Center routines (arrival/greeting, snack, nap)
- Organizational and HR structure
- Structure of the groups served
- Spaces where children’s routines occur
- Size of centers
- Language of the service’s users and staff
5. MEASURING QUALITY: during

Logistics: example of timetable of fieldwork in Ecuador

<table>
<thead>
<tr>
<th>Hour</th>
<th>Observer</th>
<th>Supervisor</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:30h</td>
<td>Arrival and preparation, Selection of <em>group</em> to be studied</td>
<td></td>
</tr>
<tr>
<td>8:00h-12:00h</td>
<td>Filming/coding <em>instruments</em></td>
<td>Structural quality questionnaire</td>
</tr>
<tr>
<td>12:00h-14:00h</td>
<td>Caregiver interview</td>
<td></td>
</tr>
<tr>
<td>14:00h-15:00h</td>
<td>Coordinator interview</td>
<td></td>
</tr>
</tbody>
</table>

5. MEASURING QUALITY: after

• **Scoring of instruments**, revising thresholds of quality (low, medium and high) and interpretation (e.g. are there instruments with more or less variability in the scores? Why?)

• **Analysis** (research, policy decisions, monitoring)

• **Frequency** of measurement: when to conduct next survey?
6/ CONCLUSIONS
6. CONCLUSIONS: Considerations to measure quality

1. Determine **goal of assessment**, available resources and **type of measurement**, structural or process variables?

2. **Important decisions before and during** the measurement
   - Translation/adaptation/copyrights of instruments
   - Lots of time for training (reliability)
   - Logistics

3. **Select instrument(s)** considering:
   - Goal, validity of instrument, population characteristics, direct (external) observation or self-evaluation (or both); context (center, community), cultural adaptation, resources and time.

4. **Analysis of data and reporting**
Child-caregiver ratios: 36 programs in LAC

- Programs define ratios in relation to international standards (3, 4, 5-8)
- However, most countries do not respect them…

Araujo, López Boo and Puyana (2013)
Childcare has impacts, but only if it is very high quality

- In the United States, the Abecedarian program provided high quality childcare to 0-5 year-old disadvantaged children:
  - 10 years later: \(0.35\) SD larger scores in tests of intelligence, maths & language (Campbell et al. 2002)
  - 15 years later: 23 p.points largest probability of attending college (Barnett and Masse 2007)
  - 30 years later: better health status (Campbell et al. 2014)

- However, in LAC impacts very modest and even negative
  - Bolivia (Behrman et al. 2004) Colombia (Bernal and Fernández 2013) & Ecuador (Rosero and Oosterbeek 2011)

Child care access: 0-3 year-olds

Brazil

Circa 2000 - Circa 2010

Chile

Circa 2000 - Circa 2010

Ecuador

Circa 2000 - Circa 2010

Uruguay

Circa 2000 - Circa 2010
Reliability

• Degree of coincidence in the evaluation of the assessment
  – Between two different persons.
  – One single person over time
• Observers are expected to be **reliable in 80% or + of the administered items**
• Should be achieved during the training with:
  – As many practices as needed
  – Practice with another observer
  – Practice with trainer
  – Work over discrepancies
• Important to verify reliability is maintained over time (not enough to obtain it during training)