Markers of Structural and Process Quality and Child Outcomes in Multiple Preschool Settings

Thomas Schultz, Council of Chief State School Officers
Head Start’s 12th Research Conference
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Road Map

- Context: How Are Young Children & Early Childhood Programs Doing?
- How These Studies Add Value
- Communicating Findings to Educators & Policy Leaders
How Are Young Children Doing: Birth-3rd Grade & Beyond

- Early onset of achievement disparities and shortfalls.
- Disparities at Kindergarten entry expand over time.
- Majority of all students fail to achieve college- and career-ready standards.
- Significant trends in disparities over time.
Figure 3: Disparities in Mastery of Language and Cognitive Skills between Higher- and Lower-Income Toddlers at 24 Months

Mean score for all those above 200% poverty

Standard Deviation

Receptive Vocabulary | Expressive Vocabulary | Listening/Comprehension | Matching/Discrimination | Early Counting/Quantitative

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Figure 4: Disparities on the Bayley Cognitive Assessment at 9 and 24 Months by Race/Ethnicity

Mean score for non-Hispanic white children

Standard Deviation

Non-Hispanic Black
Hispanic
Non-Hispanic Asian
American Indian/Alaska Native
Other

9 months 24 months

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How Are Children Doing: At Kg. Entry

Maternal Education

- Less than HS
- HS
- Some College
- BA

Letter Recognition
Beginning Sounds
# & Shapes
Relative Size

(NCES, 2000)
Mathematics Achievement Scores of Kindergartners Followed Through Grade 8, by Kindergarten Score Quartile

Fall 1998, kindergarten
Spring 2000, grade 1
Spring 2002, grade 3
Spring 2004, grade 5
Spring 2007, grade 8

Lowest quartile
Middle two quartiles
Highest quartile

How Are Children Doing: 4th Grade

% 4th Grade "Proficient" Readers

<table>
<thead>
<tr>
<th>Group</th>
<th>Proficient Readers</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>43</td>
</tr>
<tr>
<td>Black</td>
<td>14</td>
</tr>
<tr>
<td>Hispanic</td>
<td>17</td>
</tr>
<tr>
<td>Asian</td>
<td>46</td>
</tr>
<tr>
<td>Native Am.</td>
<td>18</td>
</tr>
<tr>
<td>Poor</td>
<td>17</td>
</tr>
<tr>
<td>Non Poor</td>
<td>44</td>
</tr>
</tbody>
</table>
Are We Improving Over Time? 3\textsuperscript{rd} Grade Reading Proficiency In MA
2001-2012 MCAS by Income

Source: Massachusetts Comprehensive Assessment System (MCAS), Massachusetts Department of Elementary and Secondary Education.
How Are ECE - 5th Educators Doing?

- **Positive emotional climate**
- **Productivity**
- **Quality of feedback**
Low Rates of Stable Quality: 1\textsuperscript{st}, 3\textsuperscript{rd}, 5\textsuperscript{th} Gr.

<table>
<thead>
<tr>
<th></th>
<th>High</th>
<th>Low</th>
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<tbody>
<tr>
<td>Emotional</td>
<td>17%</td>
<td>18%</td>
</tr>
<tr>
<td>Instructional</td>
<td>14%</td>
<td>20%</td>
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</tbody>
</table>

- **Only 10\%** of poor children experience stable high instructional quality.
How Are Children & Educators Doing?

- We are eager for evidence on strategies to move the needle on early childhood outcomes.
- We want to ensure that measures used to evaluate programs, classrooms & teachers move the needle on outcomes.
How These Studies Add Value

- Expanded/more fine-grained data on program quality and child outcomes for:
  - Programs serving English Language Learners
  - Successive cohorts of Head Start programs in FACES
  - For different types of early care and education programs

- Studies confirm modest associations between program quality metrics and outcomes as well as threshold effects.
How These Studies Add Value

- Studies confirm that many quality measures, program inputs & teacher characteristics show no effects on child outcomes.
- Studies confirm that few if any early childhood classrooms exhibit high instructional support on the CLASS.
Communicating With Educators & Policy Leaders: Use Metrics with Meaning

- Speak to policy priorities:
  - Are children on track for on-time high school graduation with college- and career-ready skills?
  - Are we eliminating achievement disparities for subgroups of disadvantaged students?
  - Are we investing in interventions/improvement strategies with proven effectiveness?

- Central goal is improving children’s ability in relation to standards, not comparing treatment to control/comparison groups.

- Focus on metrics that highlight educational consequences for children (not effect sizes)
Metrics with Meaning for Educators & Policy Leaders

- Communicating child outcomes, e.g.:
  - Low-income 4-5-yr-old children are 12-14 months below national norms in language development. (Layzer)
  - 40% of low-income children did not know all the letters of the alphabet at the end of kindergarten (Head Start Impact Study).

- Communicating program quality data, e.g. A 2.0 in Instructional Quality on the CLASS means:
  - There are few if any conversations
  - Majority of teacher’s questions are closed-ended
  - Teachers do not use advanced language
  - Teachers rarely ask students to explain their thinking