Defining and Measuring Quality in Early Childhood Education

**The Early Years Count:**
**Quality in Early Head Start and Head Start**

For nearly two decades, we have contributed to a better understanding of how Early Head Start and Head Start give low-income children a foundation for success in school.

**Early Head Start.** The comprehensive Early Head Start Research and Evaluation Project examined family functioning and child development during the first three years of life. Children were also followed in preschool and through the fifth grade. Findings in the final report to Congress show that the program promotes children’s learning and the parent-

ing that supports it within the first three years of life. Children in Early Head Start had significantly better cognitive, language, and social-emotional development than their peers who were not in the program. Early Head Start also influenced parenting and the home environment, and it supported parents’ progress toward economic self-sufficiency.

With funding from the Office of Planning, Research and Evaluation (OPRE) in the U.S. Department of Health and Human Services’ Administration for Children and Families, we continue to explore continue to explore Early Head Start through the national Early Head Start Family and Child Experiences Survey (Baby FACES).

**Head Start.** Head Start is the nation’s premier preschool program for low-income children and their families. The 2006 and 2009 cohorts of the Family and Child Experiences Survey (FACES) collected national data on Head Start children’s progress toward school readiness.

Our recent report, Child Outcomes and Classroom Quality in FACES 2009, describes the demographics of Head Start children and families; children’s health and their cognitive, social-emotional, and physical development over the course of a year in the program; and key attributes of Head Start teachers, classrooms, and local programs across the country. Although the 3- and 4-year-olds

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**Baby FACES**

- Describes Early Head Start services, their frequency, and quality
- Identifies key characteristics of Early Head Start families
- Tracks how Early Head Start children and families fare over time
- Explores the relationship between particular Early Head Start services and child and family well-being

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Momentum is building toward making high quality preschool available to all children. The federal government, states, and communities are carefully considering their options for investing in early childhood education. And research shows that children will be better off if they have access to the best possible care and education at an early age. The question is, what constitutes high quality early childhood care and education, and how do we measure it? What do we know about what works and what doesn’t? Where do we focus the research on early childhood going forward?

From toddler care to curriculum content and school readiness, Mathematica’s research on early childhood development and education has produced policy-relevant findings that legislators and education professionals can use to help define, measure, and improve the quality of early care. By setting the standard for research on early childhood education, we are helping to build the evidence base that will lead to better outcomes and success in school and life.
Head Start Participants’ Gains in Cognitive Development

<table>
<thead>
<tr>
<th>Category</th>
<th>At Head Start Entry</th>
<th>At Head Start Exit</th>
<th>Average for same-age children</th>
</tr>
</thead>
<tbody>
<tr>
<td>Letter-Word Knowledge</td>
<td>95.8</td>
<td>101.3</td>
<td>98.2</td>
</tr>
<tr>
<td>Early Writing</td>
<td>94.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Early Math</td>
<td>89.5</td>
<td>91.8</td>
<td></td>
</tr>
</tbody>
</table>

who entered Head Start scored below national norms in language, literacy, and math, they made significant progress during the year in letter-word knowledge, early writing, and early math. FACES is funded by OPRE.

**Evaluating a Universal Preschool Initiative**

Since 2007, Mathematica has evaluated Los Angeles Universal Preschool (LAUP) programs through the Universal Preschool Child Outcome Study (UPCOS). The study, funded by First 5 LA, has addressed child outcomes, teaching interactions, and quality enhancement efforts in LAUP’s centers and family child care homes. Specifically, we have assessed progress in multiple cohorts of culturally and linguistically diverse children, identified instructional practices that support English language learners, and examined coaching for LAUP teachers focused on effective teaching interactions with young children.

**Understanding and Evaluating Quality Rating and Improvement Systems (QRIS)**

Quality Rating and Improvement Systems are tools to assess, improve, and promote quality in early child care and education. QRIS are used by parents in selecting child care, by practitioners as a benchmark to improve care and education, and by programs to demonstrate their accountability for the large public investments made in early child care and education.

Mathematica has assisted states and municipalities in gathering, analyzing, and organizing information that underpins the development and evaluation of QRIS. Our work also helps decision makers understand the consequences of early child care and education policy and implementation options. With funding from OPRE, our early childhood experts have developed a suite of QRIS resources, including:

**Resources and Tools for Measuring Quality in Early Child Care and Education**

Few measures of quality focus specifically on child-adult interactions, especially in the earliest months of life. We are helping to close this gap by developing a new measure to assess the quality of interactions between infants and toddlers, and their nonparental caregivers. The measure, developed for the Quality of Caregiver-Child Interactions for Infants and Toddlers (Q-CCIIT) project, will be appropriate for center based and family child care settings as well as single- and mixed-age classrooms.

Our work is helping to clarify the association light on the association between the quality of early education and child outcomes. In the Child Care and Early Education Quality Features, Thresholds, Dosage, and Child Outcomes Study Design (Q-DOT), we identified whether certain thresholds, or doses, of quality need to be met or whether particular aspects of quality need to be present before the link between education and outcomes appears. Q-CCIIT and Q-DOT are funded by OPRE.

**What Works in Early Childhood Education**

All studies of preschool effects on children’s cognitive development are not created equal. In the What Works Clearinghouse (WWC)—Early Childhood topic area, experts review this research, rate the quality of the evidence, and summarize findings from the high quality, scientifically based studies that practitioners can trust. The WWC is funded by the U.S. Department of Education and managed by Mathematica.

For more information about Mathematica’s early education research and expertise, please contact:

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