What is "high-quality" early care and education?

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Jane Waldfogel suggested the provision of "high-quality preschool" as one component of a strategy to reduce the intergenerational transmission of poverty; however, what constitutes "high quality" with regard to early care and education is not clear-cut. In this article, I offer some ways to consider this very challenging question by describing a study that looked at whether common indicators of preschool quality are related to child outcomes.

Quality early care and education

Recent increased investment has expanded low-income children's access to early care and education programs. Although, as Jane Waldfogel pointed out, there are disparities in preschool attendance between children from lower and higher socioeconomic status families, nevertheless a sizable proportion of low-income children attend center-based care in the United States. In this article, I do not look at how we can increase access to these programs, but rather at the experiences of children who are already attending centerbased care, and how we might think about measuring and improving those experiences.

Evidence of the effectiveness of early care and education at providing school-readiness skills varies: model programs from the 1960s and 1970s such as Perry Preschool and Abecedarian that served a small number of very disadvantaged children were found to be very effective. However, effect sizes got smaller as these programs were scaled up to statewide prekindergarten programs, and even smaller for Head Start, the largest federally funded program for low-income children. Even within a program, effectiveness may vary greatly; for example, a study across centers of the effects of Head Start on children's cognitive and socioemotional skills found that some centers had very large effect sizes and were much more effective than other locally available programs, while others were much less effective than local alternatives.¹

This large variation across and even within program models raises the question of *why* some programs produce larger effects than others. There are a number of different ways to consider this question, including who the comparison group is, which child outcomes are examined, characteristics of children included in the study (such as age, race and ethnicity), the location of the program, and the length and intensity of the intervention. However, here I focus on quality of the programs; that is, what it is about how the program operates that explains differences in effectiveness.

Measuring quality

Our thinking about quality can be somewhat circular, in that we identify programs as high quality *because* they produce results, rather than trying to identify the particular components that make programs effective. But early childhood programs are complex, with many moving parts. What drives quality, how to measure quality, and how to ensure quality in an early childhood setting have largely remained hidden in a "black box." While the field has taken initial steps to improve measures of quality, we need much better knowledge on what specific program inputs and practices are linked to which outcomes for children. We cannot invest in—or improve quality when we do not understand what it is.

I draw on theories from developmental psychology theory to try to focus more on the contexts in which children learn. Attachment theory suggests that when parents provide emotional support, and a predictable, consistent, and safe environment, children become more self-reliant and are able to take risks as they explore the world because they know that an adult will be there to help them if they need it. Socialmotivation theories suggest that children are most motivated to learn when adults support their needs. These theories apply to classrooms as well, suggesting that the primary caregiver in the classroom can act as a secure base to explore the world. Although curriculum may matter, it is really how the teacher implements the curriculum that makes the biggest difference.

A model of classroom quality must of course include structural elements of quality such as health and safety, class size and child-adult ratios, and staff qualifications. But we also need to consider process elements of quality such as the classroom environment and teacher-child interactions. However, when we think about regulating or assessing quality, the focus is usually on structural elements. These elements tend to be both relatively straightforward and relatively inexpensive to measure.

A popular way of assessing both structural and process elements is to use Quality Rating and Improvement Systems (QRIS), state-level rating systems that provide consumerfriendly levels of quality that can be easily accessed by parents. In addition, these systems also provide services and supports to providers that are specifically designed to raise the quality of early care and education programs. States can select individual indicators of quality, which are weighted to create an overall rating, with the intent that higher ratings represent higher levels of quality. Table 1 shows the proportion of states using particular measures to assess quality within their QRIS.

Table 1 Proportion of States Using Particular QRIS Measures	
Quality Indicator	Percentage of States Using Indicator for Rating in Quality Rating and Improvement Systems
Classroom Environment	98%
Staff Qualifications and Training	95%
Family Partnerships	90%
Program Administration, Management, and Leadership	88%
Curriculum	83%
Health and Safety	75%

While the QRIS model is popular and has been adopted by numerous states, implementation has far outpaced the research. There is no strong empirical evidence to establish whether the QRIS model is the best way to measure quality, particularly in the current landscape where many children are already attending programs that meet minimum regulations for quality, and most past research was done in the 1990s or early 2000s when the quality of care was much lower. The QRIS model assumes a direct relationship between all quality indicators and child outcomes, though it is not clear that this actually holds true.

Are common indicators of quality related to child outcomes?

A study I conducted with Sandra Soliday Hong, Robert Pianta, and Margaret Burchinal assesses whether the assumptions of the QRIS model are true. We looked at state-funded prekindergarten programs using five quality indicators: (1) staff qualifications, including teacher and director level of education and years of experience; (2) staff-child ratio and group size; (3) family partnerships; (4) learning environment; and (5) the quality of interactions between teacher and children. The first four indicators are among the most popular QRIS indicators; the fifth is an additional indicator we added that was not commonly used in ORIS at the time (this has since changed). Of the five indicators, we found that (5), the measure of teacher-child interaction quality, was the strongest predictor of children's learning in math, pre-reading, language, and social skills, followed by (4), the learning environment.² The structural quality measures of staff qualifications, staff-child ratio, and family partnership were less consistently associated with children's learning.

We then tried to replicate these results in a larger study including programs with a wider range of quality; we used data from six large studies of early care quality covering 2,078 programs attended by over 11,000 three- and fouryear-olds. The conclusions of this larger study were similar to the first, although we did find that the education level of the program director was related to child outcomes.³ In the larger study, we were also able to include a curriculum measure, and we found that to be associated with social skills.

Taken together, these two studies suggest that structural measures are not consistently associated with child outcomes, with the exception of the program director's education level, which may in fact be an indicator of program climate or some other process measure. We do find that teacher-child interactions are associated with children's learning. We recognize that this presents a challenge to those seeking to rate preschool programs, since it is expensive and time-intensive to conduct high-quality, reliable classroom observations using evidence-based tools. These observationbased measures were also not developed to be used in a setting where the continued existence of the program depends on the outcome, so it is an open question of whether it is the best tool to use within preschool accountability and monitoring systems. Overall, the studies suggest that we need to align our conceptual framework about quality to the ways in which we are actually measuring it, particularly in policy contexts.

Future directions

One interesting question that comes from this research is why we found no connection between family partnership and child learning. There is certainly evidence that parents play a very important role in children's development-Jane Waldfogel noted that parental education is strongly associated with children's achievement. So why are the measures that we typically use to assess family partnership not associated with child outcomes? We found that these measures typically focus on what parents are doing in their children's school-whether they are volunteering, visiting the classroom, and attending family events. Less attention is paid to direct services being provided to parents, including parenting interventions. There seems to be an opportunity to expand how we think about measuring family partnership in a way that captures something related to child outcomes. For example, we surveyed parents in Illinois to identify which types of education and financial support services they currently have access to through their children's early education program, and what they would like to have offered. We found several types of services, including career support, college support, and financial coaching, in which many more parents had an interest than had current access.

Overall, future efforts to measure quality need to focus more on processes rather than primarily on structural components. Great opportunities remain to improve our investment in early childhood by being thoughtful about program content.

¹H. S. Bloom and C. Weiland, "Quantifying Variation in Head Start Effects on Young Children's Cognitive and Socio-Emotional Skills Using Data from the National Head Start Impact Study," Working Paper, MDRC, March 2015.

²T. J. Sabol, S. L. Soliday Hong, R. C. Pianta, and M. R. Burchinal, "Can Rating Pre-K Programs Predict Children's Learning?" *Science* 341, No 6148 (August 23, 2013): 845–846.

³S. L. Soliday Hong, T. J. Sabol, M. R. Burchinal, L. Tarullo, M. Zaslow, and E. Peisner-Feinberg, "Early Care and Education Quality and Relations to Child Outcomes: A Meta-Analysis of Six Large Child Care Studies," (under review at Child Development 2016).