



## Issue Brief

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# WHAT WE KNOW AND DON'T KNOW ABOUT MEASURING QUALITY IN EARLY CHILDHOOD AND SCHOOL-AGE CARE AND EDUCATION SETTINGS

Child Trends

## INTRODUCTION

Measures assessing the quality of children's environments and interactions in nonparental care settings were developed originally for use in child care research and as self-assessment tools for practitioners. Within the last decade, however, these measurement tools have moved into the public policy arena, where they are now used to make programmatic decisions and inform consumers about the quality of settings. As new demands are placed on quality measures to be used in accountability systems, important questions emerge about how measures function in these new contexts and in what ways measurement strategies could be strengthened. This brief provides an overview of what we know and what we don't know, given the current status of the research, about three key questions concerning the measurement of quality. It also provides suggestions for ongoing research and dialogue related to each question.

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## WHAT ASPECTS OF QUALITY ARE IMPORTANT TO MEASURE?

### WE KNOW THAT...

- The starting point for determining what aspects of quality are important to measure is the *purpose*. For example:
  - If the purpose is to confirm that supports are in place to help children’s readiness for school, especially children at risk for poor early school adjustment or achievement, then it is important to measure aspects of the environment and of practice that contribute to these components of school readiness. Preliminary evidence suggests a stronger prediction to child outcomes when the components of quality that are measured are closely “aligned” with the aspect of development of interest (for example, when a subscale on instructional quality is used to predict early academic achievement outcomes).
  - If the purpose is to confirm that a curriculum is being implemented in the intended way, then it is important to focus on whether identified features of the curriculum are being carried out with fidelity.
  - If the purpose is to provide parents with a broad and general picture of quality in different early care and education settings, then a broad or global measure that summarizes across multiple facets of quality is needed.
  - If the purpose is to determine how well the early care and education environment is fostering mastery of English for children whose home language is not English, then what is needed is a measure of the quality of supports for language development that encompasses the development of children learning a second language.

### WE DON’T KNOW...

- The full “library” of measures appropriate for every purpose. Active work on measures development is in process. But in the interim, the measure that best fits the underlying purpose of measuring quality should be selected.

### ONGOING RESEARCH AND DIALOGUE ARE NEEDED TO...

- Continue initial steps to identify the specific aspects of quality that are important to differing components of children’s early development and school readiness. It will be important to follow

up on these initial steps by developing further measures of quality that focus on supports for specific aspects of development.

## WHAT ASPECTS OF QUALITY ARE WELL COVERED BY EXISTING MEASURES?

### WE KNOW THAT...

- Quality in early care and education can be measured in different ways:
  - through structural measures (measures of group size, ratio, and caregiver education),
  - through process measures (measures that focus on environmental supports and/or interactions, like the extent and quality of caregiver-child interaction), and
  - through global measures (measures that rate both physical features and routines in the care setting as well as interactions).
- Process measures of quality appear to be most directly linked with child outcomes, though the associations are small. Structural measures are also linked with child outcomes, but they appear to be connected through the way they increase or decrease the likelihood of stimulating and supportive interactions.<sup>1</sup>
- Emerging evidence suggests that prediction of specific child outcomes, like development in the area of language and literacy, is more effective when measurement focuses on specific aspects of the environment that promote development in this area.<sup>2</sup>
- In large evaluations, the measurement of specific instructional practices in addition to the measurement of global quality has been useful in the prediction of children’s outcomes.<sup>3</sup>

### WE DON’T KNOW...

- How best to capture aspects of quality that are related to children’s development in specific domains of development such as language and literacy development, social and emotional development, health, early mathematics, science and general cognitive development. Researchers are further along in specifying the aspects of quality that are important to particular domains for some areas, like language and literacy development, than for other areas, like for children’s early mathematical thinking.<sup>4</sup>

- How best to measure quality in home-based settings. Many existing observational quality measures were developed for use in center-based care settings. With notable exceptions, fewer measures with documented reliability and validity are available for home-based settings and settings in which a relative is the caregiver.<sup>5</sup>
- Whether and how the measurement of certain quality dimensions should differ between center-based and home-based settings.<sup>6</sup>
- How best to measure practices appropriate for infants, toddlers, and school-age children.<sup>7</sup>
- How to measure effectively certain key features such as curriculum implementation, the role of peers, and a child's engagement in the setting.<sup>8</sup>
- In what circumstances a measure of practices across children is a more effective way to capture overall quality than a measure of practices with individual children (or some combination of the two). The choice of strategy may depend on the purpose of the quality assessment.<sup>9</sup>
- The adequacy of existing quality measures to capture the features of settings that are important for linguistically and culturally diverse children, as well as children with special needs.<sup>10</sup>
- There is variation across states in terms of which observational measure or measures are used, which structural measures are used, and how they are combined.
- There is also variation across states in terms of where they draw the lines between different levels of quality in their Quality Rating Systems, taking into account the full combination of quality measures they are relying on.

### WE DON'T KNOW...

- How well the *combinations* of quality measures and the thresholds for quality levels states are using in their quality initiatives predict children's development.
- How often and, for center-based programs, in how many classrooms, it is important to observe quality in order to get reliable observational measures of quality to contribute to ratings, though some states are beginning to carry out studies examining this question directly.<sup>11</sup>
- How often and how best to validate structural measures of quality, given emerging evidence that these measures may need to be reviewed for accuracy.

### ONGOING RESEARCH AND DIALOGUE ARE NEEDED TO...

- Establish best practices for quality measurement in accountability systems and contexts with financial incentives and rewards for programs. Best practices should specify the optimal frequency and scope of measurement within individual programs, reliability standards and procedures, and effective strategies for establishing thresholds for rating levels.

### ONGOING RESEARCH AND DIALOGUE ARE NEEDED TO...

- Provide further empirical evidence to delineate the aspects of quality—including environmental supports and interactions—that promote specific domains of children's development.
- Develop or refine a set of measures that are appropriate for use with diverse children and in diverse settings.

## WHAT MEASUREMENT STRATEGIES ARE MOST EFFECTIVE IN STATE QUALITY IMPROVEMENT INITIATIVES AND RATING SYSTEMS?

### WE KNOW THAT...

- Most states that are developing or already implementing widespread quality improvement initiatives, such as Quality Rating Systems (QRS), combine the use of global measures of quality (collected by direct observation) and structural measures (collected from program documents or administrative data).

- 1 Burchinal, P. (Manuscript submitted for publication). Differentiating among measures of quality: Key dimensions and their coverage in existing measures.
- 2 Burchinal, P. (Manuscript submitted for publication). Differentiating among measures of quality: Key dimensions and their coverage in existing measures; Goodson, B. D., & Layzer, J. I. (Manuscript submitted for publication). Defining and measuring quality in home-based care settings.
- 3 See endnote 1.
- 4 Child Trends. (2009). *Meeting summary of the roundtable on developing the next wave of quality measures for early childhood and school-age programs*. Prepared for the Administration for Children and Families, U.S. Department of Health and Human Services.
- 5 Halle, T., & Vick, J. E. (2007). *Quality in Early Childhood Care and Education Settings: A Compendium of Measures*. Washington, DC: Prepared by Child Trends for the Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.
- 6 Goodson, B. D., & Layzer, J. I. (Manuscript submitted for publication). Defining and measuring quality in home-based care settings.
- 7 Bryant, D. (Manuscript submitted for publication). Observational measures of quality in center-based early care and education programs; Halle, T., & Vick, J. E. (2007). *Quality in Early Childhood Care and Education Settings: A Compendium of Measures*. Washington, DC: Prepared by Child Trends for the Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.
- 8 See endnote 2.
- 9 See endnote 1.
- 10 See endnote 2.
- 11 See endnote 7.

*The information contained in this brief was drawn from a series of papers produced as an outgrowth of participation in the Developing the Next Wave of Quality Measures for Early Childhood and School-Age Programs meeting that was held January 23-25, 2008, in Washington, DC. A summary of this meeting will be available on the Child Care and Early Education Research Connections website, <http://www.childcaresearch.org>.*

*More detailed versions of these papers will be part of a forthcoming book entitled **Next Steps in the Measurement of Quality in Early Childhood Settings** which will be published by Brookes Publishing, Baltimore, MD.*