Northwest Comprehensive Center
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research brief

# Overview of Approaches to Kindergarten Entry/ Readiness Assessments

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## Early Childhood Accountability Systems: An Overview

We have entered a new era in early childhood education. Parents understand more than ever the relationships between early learning and development and kindergarten readiness and future academic success. Every day, early childhood teachers are confronting the challenges of serving all children equitably. And, policymakers are carefully analyzing reported outcomes for children served by publicly funded early education programs. Aside from all these interests and concerns, the growing emphasis on accountability has all stakeholders eager for high-quality data upon which to base program, curriculum, and instructional decisions (Schultz & Kagan, 2007).

Until recently, many states had no systematic method for collecting extensive data on kindergartners. The initial round of the Race to the Top–Early Learning Challenge (RTT-ELC) grant program cast a spotlight on early childhood assessment. The intention of the RTT-ELC program is to support states' development and use of high-quality assessments at kindergarten entry. Kindergarten Entry Assessments (KEAs) have become increasingly common (U.S. Department of Education & U.S. Department of Health and Human Services, 2013).

But, not all stakeholders in early childhood education are of like mind about increasing performance demands on young children. It is not known what the effects of performance assessments might be on young children's development or on early childhood practice. Most stakeholders agree that well-designed assessments and evaluations could enhance the credibility of early childhood programs and provide support for investments in program improvement

and expansion. And, linking accountability to program improvement and resources is essential to warrant the immense effort required to collect assessment data (Schultz & Kagan, 2007).

Some states are developing Early Childhood Accountability and Improvement Systems that assess children's development and learning to inform curricular and instructional practices. These systems also assess program quality to inform state policy decisions, investments, and improvement efforts that link early education programs through grade 3 standards, curriculum, assessments, and program improvement efforts.

Establishing such a system presents challenges that are structural, conceptual, technical, and resource-related. The structural challenges are due to the disjunction between policies for preschool and those for public schools as most data collected on preschool children are fragmented and do not connect with data collected later. New approaches to early childhood assessment, program evaluation, and program management are challenging existing conceptual frameworks. And, the need for tools and methods that are appropriate for assessing increasingly diverse student populations is presenting technical challenges. In addition, limitations and inequities in funding for early childhood programs and infrastructures present great resource challenges.

Any approach taken by a state should include a system that is powerful enough so all the state agencies can adapt it to meet their changing needs and priorities. Basically the system should be designed with vital supports to ensure high-quality assessments; timely, accurate reporting; and appropriate understanding and use of assessment data. The system plan should provide multiple approaches for assessing and improving early childhood programs. The plan should allow states to align and integrate standards and curricula from prekindergarten through grade 3 to foster continuity of instruction, assessment, and program improvement efforts (Schultz & Kagan, 2007).

## Kindergarten Entry Assessments (KEAs)

KEAs are evaluations conducted within the first few months of kindergarten to collect data on children (Maxwell, Scott-Little, Pruette, & Taylor, 2013). While KEAs may be used to collect demographic data and determine children's living conditions, they often serve to assess children's developmental skills. In other words, KEAs are used to determine early childhood education readiness.

Statewide early assessment systems vary greatly in terms of the instruments used and the types of learning that are assessed (Maxwell et al., 2013). As such, state educators seek technical assistance in defining school readiness and developing an effective early childhood assessment system.

While the exact developmental skill areas and indicators vary across states and organizations, general consensus currently indicates that readiness should be evaluated according to five domains:

- Physical and motor development
- Social and emotional development
- Language and communicative development

- Approaches to learning
- Cognitive development or general knowledge
  (Hanover Research, 2013)

While past assessments concentrated on literacy and math, to be meaningful, evaluations should also include social, emotional, and physical factors. Some assessments also include factors related to self-expression, such as arts and creativity.

Although the primary purpose of early childhood assessment should be formative assessment and instructional improvement, KEAs are frequently used for other reasons, such as screening and accountability. State departments of education can use a comprehensive school readiness system to raise public awareness about the skills necessary for success in early learning. A comprehensive school readiness system includes supporting infrastructure like regular professional development, opportunities for collaboration between kindergarten teachers and early childcare providers, family engagement, and actionable data reporting. Some systems, such as Washington's assessment system, emphasize family connection and early learning collaboration (Hanover Research, 2013).

Because it is essential to align the assessments with state learning standards, leading-edge states develop original assessment instruments that fit their unique priorities. However, one emerging trend is to use an off-the-shelf device, such as Teaching Strategies GOLD or Work Sampling System, and customize the assessment to align with local standards and meet the needs of local stakeholders.

KEAs should gather input from multiple sources, including teachers and families, because children's behavior is likely to vary across settings. Assessments should generate a holistic child profile that includes family conditions and environmental factors, in addition to skills and abilities.

Experts suggest different communities and stakeholder groups have different priorities regarding school readiness and should develop a community-specific definition of school readiness. As such, education providers should engage communities, possibly through discussion forums, to reach a common understanding.

## KEA Practices

Determining the most effective assessment instrument is a challenge. There are a wide range of off-the-shelf assessment tools that emphasize different aspects of learning and development (Niemeyer & Scott-Little, 2001).

Researchers recommend these guidelines for selecting a tool:

- **Definition of school readiness:** Determine the domains of development that suit your needs and determine in which areas you already collect data. Perhaps you don't actually require new assessment tools. (See five domains of readiness above.)
- **Purpose for the tool:** If the purpose of assessment is to improve learning, be sure that the content of the assessment matches curriculum content.

- **Determine the characteristics of the children being assessed:** Characteristics include age, English proficiency, race/ethnicity, and disabilities. Check the characteristics of the children on whom the assessment tools were normed.
- **Thoroughly evaluate the technical properties of the assessment:** There must be evidence of adequate validity and reliability. The purpose of the assessments must match your purpose.
  (Niemeyer & Scott-Little, 2001)

Kindergarten entry assessments are becoming more prevalently across the U.S. A report from Maxwell et al. (2013) indicates that 43 states are currently using KEAs or have plans to develop one. One trend is for states to adopt a proprietary assessment tool and customize its entire KEA system to conform to the state's early childhood education priorities.

Types of KEAs include state developed assessments; no assessment or nonspecific assessments; off-the-shelf KEAs like Work Sampling System and Teaching Strategies GOLD; other multi-domain assessments; and simplified language and literacy assessments.

## KEAs: Child Screening Tools

Formative assessment is the process teachers use to collect data so they can tailor instruction to the individual needs of children. By collecting data from multiple sources, teachers can identify and target specific needs. Teachers use screening tools to determine what each child knows and is able to do; how the child processes information and solves problems; and how they interact with other children and adults.

While teachers use informal but systematic methods during every interaction with a child, they use vetted and published assessment instruments, home-grown assessment instruments, and data collection procedures that support their practices. To be effective in informing instruction for young children, formative assessment must be a part of daily routines and activities and instructional practices should be guided by data gathered over time. The process of formative assessment provides a critical link among standards, curriculum, and instruction.

Screening tools are critical in early identification and intervention for children with or at risk for disabilities and children who require further evaluation. Before using any screening tools, ascertain that the tool is developmentally appropriate for the child's age level and whether the assessment tool provides an extensive enough range of development to reach children developing at expectation, above expectation, and below expectation. Consider if the procedures used to collect data are age-appropriate and sensitive to children's developmental stages and if the tool is clear of bias or discrimination against any group of individuals.

Child screening tools assess domains important to parents and teachers that are critical and predictive of long-term academic success. The domains most frequently assessed by screening tools are:

- Physical well-being and motor development

- Social and emotional development
- Approaches to learning
- Language and literacy
- Cognitive skills including early mathematics and early science knowledge (From Raforth, Buchenauer, Crissman, & Halko, 2004)

There are two types of child screening tools: observational tools and standardized "direct" or "on-demand" instruments (Schultz & Kagan, 2007).

## Observational Tools

Observational tools are used by teachers or other adults to generate ratings or estimates of children's knowledge, skills, or abilities based on their performance, behavior, or work in the classroom or other settings. Such tools are commonly used by teachers to collect and systematize ongoing information on the progress of individual children for use in planning instruction and communicating with parents. In many cases observational tools are developed to accompany a specific curriculum; in other cases they are designed for general use.

Generally, this approach is associated with formats that are criterion-referenced, allowing comparison of children's performance against criteria for what children their age should know. In many instances, developers have aligned the content of their assessments to state or federal early learning standards. Some observational assessments allow data to be recorded electronically, including via hand-held devices, and can quickly generate a wide variety of reporting formats and analyses (Schultz & Kagan, 2007).

## Standardized "Direct" or "On-Demand" Instruments

These tools involve an assessor presenting a common set of questions or tasks for individual children and recording their responses. A modified version of the direct/on-demand approach, called the adapted direct approach, uses a two-stage method to tailor the level of difficulty of assessment questions to accommodate children's level of knowledge or competence, based on their responses to an initial set of items. This approach reduces the risk of children becoming frustrated/discouraged by too many difficult items or bored by too many items that are too easy. It also enables more accurate estimation of children's level of functioning with fewer items and in less time. An additional advantage is that it reduces the risks of teachers coaching children because different children receive somewhat different sets of questions (Schultz & Kagan, 2007).

Figure 1 provides an overview of some of the strengths and limitations of these two child assessment approaches, in the context of state-managed assessment and evaluation initiatives. Of note is the fact that both forms of assessment require ongoing state investment in training, oversight, and quality assurance mechanisms.

| Observational Tools | Direct/Adapted Direct Child Assessment Tools |
|---|---|
| **Strengths** | **Strengths** |
| • Available tools cover all domains of child development and learning.<br>• Assessors have the benefit of multiple opportunities to observe the children over time in a variety of contexts to confirm their ratings.<br>• Assessment process is unobtrusive and does not require removing children from their classroom or interrupting learning activities.<br>• Since teachers use this assessment format for instructional purposes, if data are aggregated for reporting in accountability/evaluation systems, additional costs/burdens are minimal.<br>• Risks of coaching/"teaching to the test" are minimized because assessments are not composed of individual questions. | • Due to the structured nature of questions and method of eliciting direct responses from children, there are lower risks of errors based on the assessor's judgment.<br>• Use of a common set of questions, similar to standardized assessments used with older children, creates the perception that results are more objective than ratings generated by observers.<br>• The scope, depth, and costs of training are typically lower than training for observational tools.<br>• The approach allows programs to compare the performance of children to norms for nationally representative samples of similar-aged children. |
| **Limitations** | **Limitations** |
| • Assessors must be well trained in order to carefully observe and analyze children's behavior, discourse, work samples, and other evidence and to generate consistent and accurate ratings.<br>• Bias in teacher ratings can occur if teachers don't share the same cultural and linguistic background as the children they are assessing.<br>• The accuracy of teacher ratings can decline over time or suffer from "drift."<br>• There are risks of teachers inflating ratings to show more rapid progress or higher end-of program outcomes if assessors perceive that results will influence the reputation of their local agencies or lead to changes in funding levels. | • Assessors must be trained to ensure consistent administration of questions, recording of responses, developing rapport with children, and addressing behavioral challenges.<br>• Some children may be distracted or may not perform at their best if they aren't comfortable with the assessor.<br>• Children must be able to process language well.<br>• Cultural differences among children and a program's pedagogical practices may influence how children respond to questions or tasks.<br>• This approach requires removing children from their classroom and assigning and/or compensating staff to administer the assessment.<br>• This type of tool is not appropriate for assessing some important goals, notably social and emotional development.<br>• Reliance on a specific set of questions creates the risks that, if items become known, teachers can coach children on the questions to inflate outcomes. |

*Source: From Schultz & Kagan, 2007.*

## KEAs: Program Assessment Tools

To be effective, early childhood assessments should be integrated into a larger system that provides a strong infrastructure ensuring that the assessments are effective. The infrastructure that supports program screening tools should include these components:

1. A comprehensive, well-articulated **set of standards** for program quality and children's learning.
2. **Multiple assessments** that document program quality, as well as children's learning and development. All assessments should be aligned to the standards.
3. An integrated database of assessment instruments and **reporting tools** that organize results, provide information on how scores relate to standards, and produce reports for various stakeholder groups.
4. Ongoing **professional development** opportunities for policymakers, program directors, administrators, and practitioners to increase their understanding of the standards, facility in the use of assessment tools, and sufficient skills to use the results obtained through the assessments to improve their outcomes.
5. **An opportunity to learn** about the children's learning environment through procedures that assess safety, enjoyment, and high-quality support for their learning.
6. The **assurances of inclusion** through procedures that ensure all children who are served by the program are assessed fairly, regardless of their language, culture, or disabilities.
7. The **financial resources** necessary to ensure the development and implementation of a viable system.
8. **Continuous monitoring and evaluation** of the system itself to ensure that it is operating effectively and that all the elements are working together to serve the best interests of the children.
(Snow & Van Hemel, 2008)

All components in the infrastructure should work together to form a coherent system in which curriculum, instruction, and assessment are all aligned with early learning and development standards. When KEAs are properly developed and implemented, they can contribute greatly to the success of early childhood programs and early elementary programming to identify and meet the needs of children entering kindergarten.

States may consider three approaches to standardized rating tools for assessing the quality of early education programs: global assessment of program environment; a focus on teaching strategies and adult-child interactions; and a focus on program administration and management systems.

### Global Assessment of Program Environment

The first type of tool is designed to generate a global assessment of a program environment. The tool documents properties associated with the setting (e.g., availability of age-appropriate materials and a safe physical environment), as well as such characteristics as predictable routines, a balanced set of activities, and adults who are supportive and available to children. Results from these tools are easy to interpret because they use anchored rating scales and have norming samples against which to compare ratings. These forms of assessment are widely used in major research studies, emerging state Quality Rating Systems, and many provider agencies for self-evaluation purposes; consequently, they are increasingly familiar to policymakers and the public. There are widespread support systems in place to train assessors and to assist local programs in moving from lower to higher rating levels. One example of this assessment approach is the Early Childhood Environmental Rating Scale-Revised (Harms, Clifford, & Cryer, 1998).

### Focus on Teaching Strategies and Adult-Child Interactions

A second approach to assessing program quality is focused more closely on 1) specific aspects of teaching strategies and 2) the quality of adult-child interactions. These types of tools examine how teachers provide learning opportunities in specific areas of curriculum content, their classroom management practices, and their emotional support for children. Results from these assessments can support teachers' professional growth because they focus on tangible behaviors and teaching strategies. This approach can be used to gauge the extent to which technical assistance or professional development efforts lead to actual improvement in classroom interactions and teaching strategies. Some research shows these process features of classrooms are stronger predictors of child outcomes, when compared to structural features examined in more global ratings (Early et al., 2005; LoCasale-Crouch et al., 2007; Sylva et al., 2006).

Two examples of this assessment approach are the Early Language and Literacy Classroom Observation (ELLCO) and the Classroom Assessment Scoring System (Planta, La Paro, & Hamre, 2008).

### Focus on Program Administration and Management Systems

A third approach to assessing program quality focuses on the leadership and management of local provider agencies, highlighting components such as human resource management, fiscal management, program planning, and evaluation. This assessment approach highlights the importance of management systems as the linchpin to implementing program quality standards, identifying and rectifying shortfalls in program performance, and creating the working conditions (including ongoing professional development) that enable teachers to foster children's progress in learning and development. One example of this assessment approach is the Program Administration Scale.

## Conclusions

The issues surrounding early childhood education accountability and improvement are important, challenging, and controversial. Everyone agrees that a formative assessment process supports parents, teachers, schools, districts, and state policy makers in being more effective in their response to the developmental needs and interests of young children.

Formative assessment at kindergarten entry permits teachers to be more systematic and consistent in how they look at each child in all areas of learning and development. And, in so doing, it allows all children to receive the individualized instruction they deserve.

Understanding the readiness of each child for kindergarten, enables higher-achieving children to go further, lower-achieving children to receive the support they need, the quiet children to be heard, and those with behavioral challenges to be understood beyond their behavior.

KEAs that examine the full range of child development, including cognitive development, socio-emotional development, family and community supports, and the individual child's needs and interests provide an invaluable system of support for curriculum, instruction, and program decisions.

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## Additional Resources

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