Research Brief

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Frequently Asked Questions about Kindergarten Entry Assessments

Sarah Daily and Kelly Maxwell

The foundation for school success begins early in a child's life. Children learn from the time they are born, and their early childhood experiences shape their physical and language development, their cognition, and their social and emotional development.[1] Children who enter kindergarten with low levels of these skills and abilities fall behind and struggle to catch up to their peers.[2]

Over the past decade, policymakers and other stakeholders have become increasingly interested in understanding the strengths and needs of kindergarteners. This understanding can help stakeholders (i.e., policymakers, state and local administrators, and teachers) better determine the supports and services that young children need prior to kindergarten to set them on a trajectory of success in school.

Assessments of children's skills and abilities conducted at the start of kindergarten—typically called Kindergarten Entry Assessments or Kindergarten Readiness Assessments (KEAs or KRAs)—are designed to measure important aspects of children's development. These aspects include, for example, the ability to problem solve; complete tasks; communicate thoughts and emotions effectively; and recognize, comprehend, and use letters, sounds, words, and numbers in the right context. Often, these assessments also aim to measure children's physical health and motor skills, such as their ability to run, jump, and write legible letters and numbers. Currently, 33 states require a kindergarten entry assessment, and many others are exploring or piloting a KEA.[3]

How should KEA data be used?

Appropriate uses of KEA data include:[4]

- **Assessment to guide ongoing instruction**: KEAs can gather information on children's progress toward learning specific skills and behaviors. This information can help teachers tailor their instructional approaches to support the learning needs of individual children.

  For example, in North Carolina, the K-3 formative assessment is used by kindergarten teachers to guide their instruction. The information that teachers gather during the first 60 days of kindergarten creates a child profile of each child's early learning development in key areas. Teachers then use this information—as well as information they collect throughout the school year—to support the specific learning needs of each child.[5]

- **Assessment to understand trends over time:** Assessment data aggregated at the county, district, or state level can inform administrators and policymakers about the needs of the population of children they serve. These aggregate data can also provide insights about how multiple investments in early childhood may collectively support children's development. Or,

this information can inform policymakers' efforts to strengthen aspects of the early childhood system—for example, by identifying areas of professional development for early childhood teachers.[6]

As one example, from 2001 to 2014, the Maryland State Department of Education released *Children Entering School Ready to Learn*—an annual report on the readiness levels of incoming kindergarteners as measured by the Maryland Model for School Readiness. Maryland redesigned its kindergarten assessment in 2014–2015. In every year since, the state has released Readiness Matters, its kindergarten readiness assessment report, which provides school readiness results for Maryland's children—statewide, by subgroups, and for each of Maryland's 24 local jurisdictions.[7]

What are *inappropriate* uses of KEA data?

Research and best practice indicate two ways in which KEA data should *not* be used.[8]

- **High-stakes accountability for programs, teachers, or children.** KEA data should never be used by policymakers or administrators as the only source of information to make decisions about schools, programs, teachers, or children. For example, these data should never be used to determine whether a child should attend kindergarten. Instead, states should rely on age as the requirement for kindergarten entry (e.g., age 5 by September 1).[9]
- **Screening or diagnosis.** KEA data should never be used as a screening or diagnostic tool. Screening tools, such as the Ages and Stages Questionnaire (ASQ), are used to identify children who may need additional follow-up assessments to determine whether they have a developmental delay that would require further supports. KEAs are not designed to provide diagnostic information. Similarly, if a state or district is already using a screening tool, the information gathered from these assessments cannot be used as a KEA. Screening tools are not designed to assess the full range of skills typically included in a KEA. In addition, KEA tools are often selected because they align with a curriculum used in the school or district, whereas a screening tool is not tied to any particular curriculum.

If KEA data cannot be used for accountability purposes, can these data ever be used to evaluate programs?

The data generated from KEA assessments *could* potentially serve as one data point in an evaluation study, but state efforts to ensure the validity and reliability of the data collected would first need to be well-established. Evaluating program effectiveness requires clear questions and an evaluation study carefully designed to answer them. Evaluation studies require multiple data sources; no one source of information should be used to determine a program's effectiveness.[10] For example, before one could expect to see changes in children's development, available data must indicate that the program being evaluated has been implemented as intended.

Further, an evaluation study of program effectiveness typically includes an assessment of children's skills and development at two points in time to assess their growth in that program. For example, the Arizona Early Childhood Development and Health Board, also known as First Things First, recently commissioned a research study to determine the extent to which a new initiative designed to enhance the quality of early care and education programs was promoting young children's kindergarten readiness. This study will gather data about both program quality and children's skills.

Kindergarten readiness skills will be measured by the Kindergarten Developmental Inventory, the formative assessment implemented in the two public school districts in Tempe, Arizona.

What do validity and reliability mean and why are they important?

Validity and reliability are complementary features of any assessment tool. Validity measures how accurately the tool assesses the skills and abilities it is designed to measure. Reliability measures the consistency of an assessment's results, regardless of who administers the tool, or when or where it is administered. The stronger these features are, the more confident policymakers can be that an assessment will accurately assess the skills and abilities important for children's development.[11] Especially in districts or states that have a diverse child population, it is important to ensure that an assessment is reliable and valid for use with children from different racial/ethnic, linguistic, cultural, and socioeconomic backgrounds.

Can we use our KEA data to serve multiple purposes?

State and district leaders are cautioned against using KEA data for multiple purposes. Assessments are designed and validated for one purpose—for example, to inform classroom instruction. Using one assessment for multiple purposes poses the potential risk that the data may not be accurate for a second purpose. If leaders intend to use child assessment data for more than one purpose, then there should be sufficient evidence that the child assessment data are also reliable and valid for the additional purpose.

Some states do use KEAs for dual purposes, typically to inform instruction in the classroom and to aggregate state-level school readiness data. For example, the state of Washington, like many states with a KEA, supports teachers in implementing the assessment at the start of the school year. The data these teachers collect are then aggregated at the state level for monitoring trends and identifying needs across jurisdictions and the state. However, the data may also be used by teachers to inform instruction; in some states, teachers may be encouraged or supported in repeating the assessment in the winter and/or spring of the kindergarten year to track individual children's progress toward meeting learning objectives.

How many years are required before KEA data are valid and reliable?

Experts recommend that a KEA be implemented for at least three years before the data are of sufficient quality (i.e., valid and reliable) for public reporting or use in policy discussions.[12] This recommendation is also supported by implementation science, which suggests that full program implementation can take two to four years.[13] Successful implementation of a KEA requires ongoing training and professional development, and implementers should remember that the training and professional development modules and approach are also nascent at the start of KEA implementation. During these early years, KEA implementers' efforts are best spent focusing on a phased approach to implementation. During the first phase, administrators focus primarily on the quality (i.e., reliability and validity) of the early waves of KEA data, and on refining training and ongoing professional development to best support the quality of the resultant data and teacher's use of this information in the classroom.[14]

In the 2012–2013 school year, Delaware piloted its first kindergarten entry assessment, the Delaware Early Learner Survey (DE-ELS). Over the next three years, to refine the training and supports provided, the state expanded the implementation of the assessment and collected

feedback from teachers and administrators about what was and was not working. After four years of implementation and refinement, Delaware released the first statewide results of the DE-ELS from the 2015–2016 school year.[15]

Why are KEAs implemented differently than other tests used in elementary school?

KEAs are designed to collect information about a child's development and skills by observing them over a few weeks at the beginning of the kindergarten year or by conducting tasks with individual children. Tests used with older elementary school students (for example, third grade reading or math tests) are designed for children to complete on their own. These tests become appropriate when a child obtains test-taking skills, such as reading and using a pencil to bubble-in or write out their answers. Assessments that allow children multiple opportunities to demonstrate their skills and knowledge work best for young children because the pace at which such children learn and develop varies widely. Children may display a set of skills one day that they do not demonstrate the next. Allowing children multiple opportunities to demonstrate a behavior or skill in multiple settings with different peers, objects, and materials results in a more valid assessment of their abilities.[16]

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References

1. Phillips, D. A. & Shonkoff, J. P. (Eds.). (2000). *From neurons to neighborhoods: The science of early childhood development.* Washington, DC: National Academies Press.

2. Halle, T., Forry, N., Hair, E., Perper, K., Wandner, L., et al. (2009). *Disparities in early learning and development: lessons from the Early Childhood Longitudinal Study–Birth Cohort (ECLS-B).* Bethesda, MD: Child Trends. Available at https://www.childtrends.org/wp-content/uploads/2013/05/2009-52DisparitiesELExecSumm.pdf.

3. No author. (2018). *State kindergarten-through-third-grade policies: Are kindergarten entrance assessments required?* Denver, CO: Education Commission of the States. Available at: http://ecs.force.com/mbdata/MBQuest2RTanw?rep=KK3Q1811.

   Weisenfeld, G. G. (2017). *Information and Resources on Developing State Policy on Kindergarten Entry Assessment (KEA) - Update.* CEELO FastFacts. Center on Enhancing Early Learning Outcomes. Available at http://ceelo.org/wp-content/uploads/2017/10/ceelo_fast_fact_KEA-update-6.23.2017.pdf.

4. National Research Council. (2008). E*arly childhood assessment: Why, what, and how.* Committee on Developmental Outcomes and Assessments for Young Children, C.E. Snow and S.B. Van Hemel, (Eds.). Board on Children, Youth, and Families, Board on Testing and Assessment, Division of Behavioral and Social Sciences and Education. Washington, DC: The National Academies Press.

5. No author (n.d.). Off to a good start: Formative assessment for kindergartners. Public Schools of North Carolina. Available at: http://nck3fap.ncdpi.wikispaces.net/file/view/KEA%20Flyer%20COMBO_4.4.18%20%281%29.pdf/630477815/KEA%20Flyer%20COMBO_4.4.18%20%281%29.pdf.

6. Regenstein, E., Connors, M., Romero-Juado, R., & Weiner, J. (2017). *Uses and misuses of kindergarten readiness assessment results.* Chicago, IL: The Ounce of Prevention. Ounce Policy Conversations, (6). Available at: http://www.theounce.org/wp-content/uploads/2017/03/PolicyConversationKRA2017.pdf.

7. For more information, visit: https://earlychildhood.marylandpublicschools.org/prek-grade-2/maryland-early-learning-framework/ready-4-kindergarten/2017-18-kindergarten-readiness.

8. National Research Council. (2008).

9. Diffy, L. (2018). *Fifty-state comparison: State kindergarten-through-third-grade policies.* Denver, CO: Education Commission of the States.

10. National Research Council. (2008). *Early childhood assessment: Why, what, and how.* Committee on Developmental Outcomes and Assessments for Young Children, C.E. Snow and S.B. Van Hemel, (Eds.). Board on Children, Youth, and Families, Board on Testing and Assessment, Division of Behavioral and Social Sciences and Education. Washington, DC: The National Academies Press.

11. Moodie, S., Daneri, P., Goldhagen, S., Halle, T., Green, K., et al. (2014). *Early childhood developmental screening: A compendium of measures for children ages birth to five (OPRE Report 2014 11).* Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

12. National Research Council. (2008).

13. Fixsen, D. L., Naoom, S. F., Blase, K. A., Friedman, R. M., & Wallace, F. (2005). *Implementation research: A synthesis of the literature.* Tampa, FL: University of South Florida, Louis de la Parte Florida Mental Health Institute, The National Implementation Research Network.

14. Scott-Little, C. & Maxwell, K. (2000). School readiness in North Carolina: Strategies for defining, measuring, and promoting success for all children. R*eport of the Ready for School Goal Team.* Greensboro, NC: SERVE.

    Regenstein, E., Connors, M., Romero-Juado, R., & Weiner, J. (2017).

15. For more information, visit: https://www.doe.k12.de.us/cms/lib/DE01922744/Centricity/Domain/432/DE-ELS%202016%20Key%20Findings.pdf.

16. Fewell, R.R. (2000). Assessment of young children with special needs: Foundations for tomorrow. *Topics in Early Childhood Special Education,* 20, 38–42.