High-Quality Early Childhood Assessment

Learning From States' Use of Kindergarten Entry Assessments

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Abstract

Early childhood assessments can provide important information to guide instruction and inform policy. Given the widespread and growing use of statewide kindergarten entry assessments (KEAs), in particular, it is important that policymakers understand how to choose and use assessments wisely. This brief summarizes research showing how authentic assessments grounded in guided observation and well-chosen performance tasks can be used to chart children's progress in multiple domains of development and inform instruction. It provides recommendations for state policymakers about how to select, develop, and implement high-quality assessments that can both support instruction and inform policy to improve systems.

The report on which this brief is based can be found online at https://learningpolicyinstitute.org/product/high-quality-kea.

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High-quality early childhood programs aim to foster children's learning through developmentally appropriate practices and environments. Early childhood assessments, when well designed and well implemented, can support such learning experiences by providing information to guide instruction and support whole child development. As early childhood programs become part of state education systems, educators and policymakers are seeking strong early childhood assessment systems that begin at or before preschool and can carry through the early elementary years in an aligned system. In an ideal world, such systems would be constructed to inform curriculum and instruction that match children's developmental needs.

While some states use early childhood assessments during preschool, most states begin assessing children's skills and knowledge with a kindergarten entry assessment (KEA). KEAs, administered in the early weeks of kindergarten, provide a snapshot of individual children's development. Some KEAs are part of assessment systems that begin before kindergarten and/or continue throughout the kindergarten year or into the primary grades. As of 2021, 38 states have a KEA—more than a fivefold increase in 10 years, which was spurred by federal policy that required states receiving Race to the Top–Early Learning Challenge grant funds to implement statewide KEAs.

As KEAs have become more common, they have been subject to controversy. Assessments that are highly scripted, inauthentic, or too long can be inappropriate for young children or unfeasible for teachers. Assessments that are narrowly focused on discrete skills and exclude essential developmental domains can limit early childhood curriculum and foster inappropriate teaching strategies.² Bias in assessment design or in implementation practices can lead to deficit perspectives of certain children, particularly when children

come from diverse cultural or linguistic backgrounds or have special needs.³ The inappropriate choice or use of assessment can inaccurately measure the abilities of certain groups of children and actually perpetuate the systemic disadvantages they are meant to address.

Given the widespread and growing use of KEAs, the research study underlying this brief aims to inform policymakers by answering several questions: What types of assessments are currently used at kindergarten entry? What might policymakers look for in a high-quality assessment? What training and support are states providing to support the effective use of KEAs for instruction? How are states supporting continuous improvement of their KEA systems, and what cautions can be gleaned from their experiences?

To answer these questions, we synthesized the research literature on the features of high-quality early childhood assessments and examined common KEAs states use. We conducted interviews and reviewed documents about the use of KEAs in two states, Georgia and Illinois, and in two districts, Elgin U-46 in Illinois and Tulare City School District in California. We selected these states for their high-quality KEAs, their use of KEAs for informing and advancing developmentally appropriate instruction, their appropriate uses of KEA data, and their purposeful evaluation and improvement of their systems. We selected the districts to illustrate how they use high-quality KEAs as part of an aligned assessment system from preschool through early elementary school to support developmentally appropriate instruction and inform community initiatives to improve early learning opportunities for all children. We also conducted targeted interviews in six additional states that experts identified as having promising KEA practices reflecting current recommendations from the field.

Understanding High-Quality Kindergarten Entry Assessments

Assessment tools employ a range of formats and approaches. In general, early childhood assessments include direct assessment, observation-based assessment, or a combination of the two. Direct assessment usually involves an adult, such as a teacher, asking a child to respond to a prompt, and it can include performance tasks. Observation-based assessments require teachers to gather and record data during typical, everyday activities, such as playtime, whole class instruction, or learning center activities.

A growing body of research suggests that high-quality early childhood assessments have the following components (see Table 1):

- content that measures essential domains of child development in ways that are appropriate and culturally relevant and that is part of a system of ongoing formative assessment;
- administration procedures that are fair for all children and practical for teachers; and
- results that are valid for all children being assessed.

KEAs vary across states, ranging in quality. While no KEA features all the characteristics of high-quality assessments, some come closer than others. Furthermore, some assessments are backed by studies conducted by independent researchers; others are primarily backed by developer reports. We briefly describe six of the most popular assessments and the research supporting them below.

Table 1
Guiding Considerations for Choosing High-Quality KEAs

Component	Guiding Considerations
Content	 Measures the essential domains of child development, including social-emotional development, cognitive development, language and literacy development, mathematical and scientific reasoning, and physical development. Aligns to developmentally appropriate early learning and kindergarten standards, curricula, and instruction. Places children's skills along a developmental continuum or learning progression. Provides information that is relevant and sufficiently detailed to guide instruction. Connects to ongoing formative assessment across p-3. Contains content that is inclusive of all children assessed, regardless of socioeconomic, cultural, or language backgrounds.
Administration	 Has procedures that are appropriate for young children. Is administered flexibly to accommodate a range of abilities, languages, and cultures and allows children to demonstrate skills in a variety of ways. Takes place in a natural and familiar setting. Is supported by adequate professional development to administer the assessment fairly and reliably, with minimal bias. Is supported by timely teacher and administrator resources—reports, data summaries, and administrative manuals.
Validity	 Documents what children know and can do in real, authentic situations. Has well-documented evidence that the tool is valid and reliable, with reasonable accommodations for all children being assessed, regardless of culture, language, ability, or special needs. Aligns with purposes for the data, including informing instruction.

Teaching Strategies GOLD (TS GOLD), the most common KEA, is used in 12 states. TS GOLD is an authentic, formative, observation-based assessment for infancy through 3rd grade. It has a significant research base showing that results align well with direct assessments of the same skills, which points to validity. The research also shows, however, that it may be difficult for teachers to reliably differentiate skills within individual children, especially for children who are dual language learners.⁴ With 73 items across 9 domains, TS GOLD is quite lengthy, so some states have sought to create shorter, state-specific versions.

The **Desired Results Developmental Profile–Kindergarten** (**DRDP-K**), the second most commonly used KEA, is used in six states. The DRDP-K is an authentic, formative, observation-based assessment that is part of a suite of assessments for infancy to age 12. The DRDP has been the subject of numerous validation studies suggesting that DRDP scores are consistent between teachers and demonstrate minimal bias against children who are dual language learners. Studies also show that the DRDP may benefit from some reorganization to address redundancies across domains as well as high correlations between some DRDP domains and

unrelated domains on other validated assessments.⁵ The DRDP-K has three validated versions of different lengths, ranging from 25 measures in 5 domains to 47 measures in 9 domains.

The **Work Sampling System (WSS)** is an authentic, portfolio- and observation-based, formative assessment for children age 3 through 3rd grade. Research demonstrates moderate to strong correlations between the WSS and other direct assessments of similar skills, strong internal coherence among items, and high agreement in teacher ratings. However, there is a lack of research on the use of the WSS to assess children who are dual language learners. The WSS portfolio component covers 5 domains, and the observational component includes 73 items across 7 domains.

The Maryland-Ohio Kindergarten Readiness Assessment (MD-OH KRA) is used in four states. It includes a combination of multiple-choice and performance-based items that teachers administer individually to children, as well as observational items. The MD-OH KRA is designed specifically for use at the beginning of kindergarten. Teachers criticized the original KRA 1.0 for not being developmentally appropriate or useful for informing instruction.⁷ In response, Maryland developed the 50-item KRA 2.0, and Ohio developed the 27-item KRA-R. Reports suggest that both modified versions are valid and reliable tools⁸ but that some teachers still have concerns that it is time consuming.⁹

Twelve states use **Star Early Literacy**, **BRIGANCE Early Childhood Screens III**, or other screeners, which are useful for indicating the need for further evaluation for special needs but are insufficient as KEAs for informing instruction. Star Early Literacy is popular but lacks many characteristics of a high-quality early childhood assessment, such as measuring multiple domains and observing children in natural settings. BRIGANCE measures multiple domains of development but provides limited data to inform instruction. Research shows it is highly accurate in identifying children who may need additional supports or early interventions, including children who may need more challenging learning activities.¹⁰

Eleven states use other state-developed assessments that vary in content, format, length, and research base. Eight states use a variety of other childhood assessment tools, such as the Ages & Stages Questionnaires and the HighScope Child Observation Record. Four of these states allow local district discretion in choosing a KEA. (See Appendix C of the full report for KEAs by state.)

Purposes of Kindergarten Entry Assessments

Experts have identified several appropriate uses of KEAs:

- Informing instruction: Assessments administered at the beginning of the school year can help teachers get to know their students and plan instruction based on students' strengths and needs. KEA data can enable teachers to avoid reteaching content that students already know and to differentiate instruction for small groups of children.
- Engaging with families: Schools can use the KEA to communicate and engage with families and provide families with supports that are tailored to children's individual needs.
- Understanding community-level strengths and needs: Aggregated KEA data can inform equitable resource allocation and investments in early childhood programs.

• Evaluating large-scale initiatives: When used as a measure of growth between preschool and kindergarten, KEA data can help policymakers measure the effectiveness of policy or large-scale initiatives, such as state preschool.

There are also several inappropriate uses of KEA data. These include:

- Evaluating teachers or individual programs: Researchers suggest that it is inappropriate to use point-in-time KEA scores as a measure of teacher or preschool program effectiveness because children's scores are affected by a multitude of factors that schools cannot control.
- **Delaying kindergarten entry:** Schools should not use KEAs to exclude children from kindergarten, since this practice can deny children access to education from which they can benefit.¹¹
- Diagnosing a learning disability: KEAs do not provide sufficient detail for this purpose. 12

State Examples of Implementation

Georgia and Illinois provide examples of comprehensive, scaled-up KEA implementation, with thoughtful tools designed to inform instruction and productive data use at the state level. We also highlight two school districts, Elgin Area School District U-46 and Tulare City School District, that have integrated their KEAs into a continuous assessment system from preschool through the early elementary grades.

Georgia Kindergarten Inventory of Developing Skills (GKIDS) Readiness Check: Since 2016, Georgia has assessed kindergarten readiness using the GKIDS Readiness Check. Georgia is a useful model for other states because of the way it has integrated its KEA with other statewide assessments and uses it to inform instruction. Georgia also demonstrates how a state might balance teachers' need for detailed information to inform instruction with the time constraints they face in the beginning of the year.

The Readiness Check, which teachers administer in the first 6 weeks of kindergarten, is the first part of the yearlong GKIDS assessment system. Teachers use the Readiness Check to document skills that Georgia educators and the research literature consider to be essential to student success upon kindergarten entry. They continue to use GKIDS throughout the school year to monitor children's development and to attain information to guide instruction.

The Readiness Check focuses on skills related to social-emotional learning, English language arts, and mathematics, yet it is relatively brief. Ten of the 20 items are direct assessment performance tasks—such as naming letters and counting aloud (see Figure 1). The other 10 are observation-based—such as evaluating a child's ability to use a writing tool with the correct grip or competence following multistep directions. By keeping the assessment to 20 items and designing tasks that can be incorporated into typical kindergarten classroom activities, the state balanced the need to provide sufficient information to teachers while minimizing the time necessary to administer the assessment.

The state requires teachers to administer the Readiness Check to all children, regardless of ability. The assessment allows teacher discretion to use universal accommodations, such as nonverbal responses and environmental adjustments, based on individual children's abilities and special needs. One caveat is that the Readiness Check must be administered in English per state law; consequently, children who might be competent at a skill, such as counting, in another language might not be able to fully show their abilities.



Source: Georgia Department of Education. (2017). GKIDS Readiness Check [Video]. https://gkidsmediastorage.blob.core.windows.net/gkidsvideo/overview.webm (accessed 06/22/21). (Used with permission.)

All new kindergarten teachers must complete professional development on the GKIDS assessment system, including the Readiness Check. There are six online modules, most of which teachers can complete together. One module includes quizzes and practice scoring, and many include videos of kindergarten teachers conducting KEA activities and provide targeted strategies to help teachers use the tool flexibly within normal instructional routines. The state also provides a "Next Steps Guide" with concrete suggestions for follow-up activities for teachers to support students based on assessment results.

Results of the Readiness Check are not published statewide and, thus, are not used for resource allocation. This may be why Georgia has been able to keep the focus on instruction, although it may also be a missed opportunity to examine trends in school readiness.

Kindergarten Individual Development Survey (KIDS): Illinois began statewide implementation of KIDS in 2017. Illinois is the most populous state in the United States to require a comprehensive KEA, and its example is useful to other states because of the way it has thoughtfully communicated the purpose and results of the assessment and supported implementation at the local level.

The KIDS assessment is based on the Desired Results Developmental Profile-Kindergarten (DRDP-K). Of its three assessment versions, only the shortest, the State Readiness Measures, is required for all districts. This version includes 14 items across 4 domains: approaches to learning/self-regulation, social-emotional development, language and literacy, and mathematical thinking.

Teachers complete KIDS documentation for every child during the first 40 days of kindergarten. Scores are based on teacher observation of child behaviors over multiple authentic, developmentally appropriate activities

in their natural classroom settings (see Figure 2). Teachers also may use child work samples to inform their ratings, and they are encouraged to ask for input from family members who have opportunities to observe child behaviors over time across a wide range of activities and settings.

The KIDS assessment is based on developmental progressions along a continuum and is appropriate for children with a wide range of strengths and needs. For dual language learners, teachers consider what children know and can do in any language. The assessment also includes four optional items in an English language development domain for children who are dual language learners and an alternate Spanish form for children in Spanish language or bilingual immersion classes.

The state offers a virtual, synchronous implementation workshop in which teachers engage with each other in real time over the course of a full day. The workshop includes an overview of KIDS, covers topics such as play-based learning and observational assessment methodology, and engages teachers in reviewing and discussing child evidence to rate example items. Since 2018, the Illinois State Board of Education and philanthropic partners have also hosted a Mastering KIDS Summit, a statewide event bringing together teachers, school leaders, and district administrators to engage in deeper learning about KIDS. Illinois also has been able, through philanthropic partnerships, to provide KIDS coaches who facilitate a range of professional development.

The state provides annually aggregated state-level KEA data, reports, and resources on the KIDS website. Data from past years reflect large gaps by race and ethnicity, ¹³ indicating "systemic inequity in both funding and opportunity" that can be addressed through informed strategic state and local investments in the early childhood system.

Figure 2
Teachers Collect KIDS Observations While Interacting With Children During Play



Source: Illinois State Board of Education. (n.d.). *IL districts embracing KIDS: West Chicago*. https://www.isbe.net/Documents_KIDSWebsiteResources/WChicago_Case_Study.pdf (accessed 06/22/21). (Used with permission.)

Local Implementation of KEAs

In **Elgin Area School District U-46 in Illinois**, teachers administer KIDS three times per year even though the state only requires it once. Peggy Ondera, Director of Early Learning Initiatives at Elgin U-46, explained:

In order to make [KIDS] relevant for teachers, I really feel like it needs to be done more than one time per year ... for teachers not to see it as busywork [but] as an integral part of teaching and assessing.

KIDS adoption coincided with two related district activities that catalyzed implementation: (1) a revised kindergarten program that shifted from teacher-centered direct instruction to a more developmentally appropriate play-based approach aligned with the developmental progressions in KIDS, and (2) the use of KIDS measures rather than a traditional kindergarten report card.

As Ondera described, the assessment was instrumental in helping to "ground teachers in what is developmentally appropriate and what are reasonable expectations and milestones." The concurrent shift to using KIDS measures on report cards helped create buy-in among teachers, since it reduced time spent on other assessments. The district added 7 measures to the 14 state-required KIDS items—for example, addressing development of dramatic play, sharing behaviors, writing, and scientific thinking. These changes made KIDS manageable but also meaningful for Elgin teachers.

Once the district implemented KIDS across the kindergarten year, it aligned preschool assessment by implementing the DRDP, the tool on which KIDS is based. The goal of this shift was to create continuity in assessing what children know and can do as they transition from preschool to kindergarten.



Tulare City School District (TCSD) in California chose an observational kindergarten assessment—the DRDP-K—to help educators move toward more developmentally appropriate practice, with less seat time and teacher-driven instruction. Jennifer Marroquin, Director of Early Childhood Education in TCSD, explained that changing assessments was key to shifting instructional practice:

We were making this whole shift in a developmental approach to education, [so] we couldn't keep using the same assessments that we were doing in the yes/no, drill-and-kill format. We needed to change the assessment to match the instruction.

Marroquin described the DRDP as giving teachers an understanding of how skills and competencies develop incrementally over time, providing teachers with a road map for instructional planning. Marroquin explained that the tool provides "key teaching points and teaching levels to know how to move kids along in each domain."

Through in-depth professional development, teachers learn how to collect DRDP evidence and identify next steps for instruction. They use the DRDP three times a year to document children's developing skills and competencies in the context of peer interactions and authentic activities. It has helped teachers incorporate more hands-on learning activities, establish physical classroom spaces for literacy activities and peer interactions, and reintroduce songs and dramatic play into the curriculum.

TCSD has also used the assessment as a tool for strengthening alignment between its preschool, kindergarten, and 1st-grade classes. Marroquin worked with grades 1 and 2 to identify anchor standards for those grades based on DRDP measures and California State Standards. Each year, teachers receive reports based on these anchor standards for their incoming students.

Considerations for Early Childhood Assessment Implementation

There is no single approach to KEA adoption, but our findings offer insights into how to support implementation of KEAs and other early childhood assessments from the perspectives of system leaders in the states and districts we studied: Colorado, Kansas, Maryland, Michigan, North Carolina, and Washington, in addition to Georgia, Illinois, Elgin U-46, and TCSD.

Informing and Improving Instruction

The primary purpose of KEAs is to inform instruction. States use a range of strategies to develop teachers' understanding of this purpose, to support them in using the data in their instruction, and to make the assessments manageable. Illinois provides in-classroom coaching to support developmentally appropriate instruction. In Georgia, where the KEA is linked to a yearlong kindergarten assessment, teachers can monitor children's growth and adjust instruction over time. Maryland and Washington provide resources such as release time and instructional aides who can assist teachers with documentation or data entry.¹⁴

Strengthening Early Learning Systems

States and districts are strengthening early learning systems by using KEAs to promote family engagement; align preschool, kindergarten, and 1st grade; and inform strategic initiatives. For example, Washington allows districts to use 3 school days for kindergarten teachers to meet with each child's family. Washington also requires districts to connect with preschool providers around its KEA, which is a modified version of the state's preschool assessment, to promote alignment and ease the transition to kindergarten.

While a majority of states say they plan to use KEA data to inform state-level decisions, we found few concrete uses of the data to inform state investments or evaluate large-scale initiatives. We did, however, find examples of how KEA data are beginning to inform statewide conversations about system-level needs and spur community initiatives at the local level. Illinois state-level administrators are using KEA data to make the case for increased investments in publicly subsidized preschool and access to early learning.

State officials mentioned potential misuse of their KEAs and discussed the importance of using their influence to help local districts adhere to a KEA's intended purposes. Interview participants expressed concern about local use of the KEA to identify children with disabilities and to determine children's kindergarten eligibility. Finally, in some states, participants mentioned interest in using the KEA to determine whether some preschools were performing "better" than others. The use of KEA data to identify preschool programs' success is particularly concerning given that states generally were not collecting pre- and post-test data to show the impact of preschool programs on students' growth.

Supporting Statewide Implementation and Continuous Improvement

States and districts support KEA implementation and continuous improvement by involving multiple stakeholders, communicating about the KEA's purpose and use, and allowing for local flexibility. In Georgia, all assessment materials and websites prominently state that the KEA is a formative tool, and Illinois reaches out proactively to reporters to discuss the KEA's purpose. Some states, such as Colorado, allow districts to choose

from a menu of assessments to promote curricular alignment at the district level. Others, such as Illinois, have a single statewide KEA but provide districts with the option to use a longer, more in-depth assessment form.

In addition to administrative support, states need sufficient and ongoing resources to implement a KEA successfully, including resources to provide professional development and support continuous improvement of the KEA system. States and districts also have at least one staff position responsible for KEA oversight, professional development, data reporting, and KEA resources. In Illinois, philanthropic funding has played a large role in getting the KEA off the ground, but the state continues to build infrastructure and capacity to enable continued KEA support.

Another contributor to successful KEA implementation was developing a plan for gradual phase-in and continuing to engage in improving the KEA after initial implementation. North Carolina recently revised its KEA to be more clearly linked to learning progressions after a study showed that teachers still struggled with how to connect KEA data to instruction.¹⁵ In fall 2020, Michigan implemented a new KEA, this time with more educator input than its first KEA.

Policy Recommendations

States and districts can do the following to ensure that KEAs and other early childhood assessments support children's learning and development:

Choose high-quality, developmentally appropriate assessments. What is measured and how it is measured are factors that can drive the way children are understood and taught. States should therefore:

- assess key domains of child development—including social-emotional development, cognitive
 development, language and literacy development, mathematical and scientific reasoning, and
 physical development—in ways that are sufficiently detailed to inform instruction;
- measure learning in ways that are authentic and culturally and linguistically appropriate; that
 include observation of children in regular activities and real-world performance tasks; and that
 include children from diverse cultural, linguistic, and socioeconomic backgrounds and with
 varying abilities;
- assess children's progress over time, through a continuum of assessments from preschool to the early grades, to provide educators with a clear road map for children's development; and
- use assessments that yield valid and reliable results for all students and for their intended purposes.

Build assessment systems that inform instruction and support family engagement. With adequate support, assessments can foster teachers' and families' understanding of child development and developmentally appropriate practice. States and districts can:

- offer ongoing professional development for both conducting the assessments and using results to inform teaching;
- give educators the time and resources they need to assess and to reflect on the results;

- · make data systems accessible and easy to use; and
- engage families in assessments by sharing information and planning together.

Use assessment data to strengthen early learning systems—and be wary of misuse. Assessments can be used to inform policy as well as instruction, but inappropriate uses of data can cause harm. States should:

- share aggregated assessment results across grade levels and with key stakeholders, such as
 preschool educators and early learning programs, district leaders, policymakers at the local and
 state levels, and community advocates;
- use data to identify systemic needs for access and quality improvements, including investments in curriculum development and educator professional development; and
- avoid using KEAs to evaluate individual preschool providers, restrict children's access to kindergarten, or diagnose learning disabilities.

Support state-level implementation and continuous improvement. States can take action to support a strong launch and continuously improve their KEAs. For example, states can:

- include early childhood educators in developing or selecting the KEA and multiple stakeholders in communicating annual KEA data to policymakers, district leaders, advocates, and the public;
- fund state and regional KEA staff to support assessment implementation by providing coordination and administrative services, responsive professional development and coaching, and program review and resources; and
- continuously assess and improve KEA implementation through ongoing research on the extent to which the KEA informs instruction and is useful for educators and families.

KEAs are powerful tools, but they must be well chosen and well used. If assessments are inappropriate for young learners or poorly implemented, they can waste valuable resources and promote deficit-based thinking about children and communities. However, when implemented effectively, they have the promise to support equitable learning and policymaking.

Endnotes

- Key source documents include the following; see the full report for a list of all citations. Ackerman, D. J. (2018). Comparing the potential utility of kindergarten entry assessments to provide evidence of English learners' knowledge and skills [Research Report No. RR-18-36]. Educational Testing Service. https://doi.org/10.1002/ets2.12224; Ackerman, D. J. (2018). Real world compromises: Policy and practice impacts of kindergarten entry assessment-related validity and reliability challenges [Research Report No. RR-18-13]. Educational Testing Service. https://doi.org/10.1002/ets2.12201; Regenstein, E., Connors, M., Romero-Jurado, R., & Weiner, J. (2017). Uses and misuses of kindergarten readiness assessment results. The Ounce of Prevention Policy Conversations, 6, 1–48. https://www.theounce.org/wp-content/uploads/2017/03/PolicyConversationKRA2017.pdf; Snow, C. E., & Van Hemel, S. B. (Eds.). (2008). Early Childhood Assessment: Why, What, and How. National Academies Press. https://doi.org/10.17226/12446; Weisenfeld, G. G. (2017, March). Implementing a kindergarten entry assessment (KEA) system. CEELO Fast Fact. Center on Enhancing Early Learning Outcomes. http://ceelo.org/wp-content/uploads/2017/03/ceelo_fast_fact_kea_implementation_2017_03_final_web.pdf (accessed 05/06/21).
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