High-Quality Early Childhood Assessment

Learning From States' Use of Kindergarten Entry Assessments

Cathy Yun, Hanna Melnick, and Marjorie Wechsler

LEARNING POLICY INSTITUTE

AUGUST 2021

High-Quality Early Childhood Assessment: Learning From States' Use of Kindergarten Entry Assessments

Cathy Yun, Hanna Melnick, and Marjorie Wechsler

Acknowledgments

The authors thank the many state and local administrators who participated in this study for generously sharing their perspectives and insights. We would like to thank Sarah Crow, Rolf Grafwallner, Sam Meisels, Elliot Regenstein, and G. G. Weisenfeld for their thought partnership and expertise. We would also like to thank our Learning Policy Institute colleagues Aneesha Badrinarayan, Linda Darling-Hammond, Iris Hinh, Tara Kini, Patricia Leal-Gutierrez, Monica Martinez, Sara Plasencia, Abby Schachner, Caitlin Scott, and Patrick Shields for their support and contributions to the research. In addition, we thank Erin Chase and Aaron Reeves for their editing and design contributions to this project and the entire LPI communications team for its invaluable support in developing and disseminating this report. Without their generosity of time and spirit, this work would not have been possible.

This research was supported by the Heising-Simons Foundation. Core operating support for LPI is also provided by the S. D. Bechtel, Jr. Foundation, William and Flora Hewlett Foundation, Raikes Foundation, and Sandler Foundation. We are grateful to them for their generous support. The ideas voiced here are those of the authors and not those of our funders.

External Reviewers

This report benefited from the insights and expertise of two external reviewers: Linda Espinosa, Professor Emeritus, Early Childhood Education at the University of Missouri, Columbia; and Deborah Stipek, Judy Koch Professor of Education at Stanford University. We thank them for the care and attention they gave the report.

The appropriate citation for this report is: Yun, C., Melnick, H., & Wechsler, M. (2021). *High-quality early childhood assessment: Learning from states' use of kindergarten entry assessments.* Learning Policy Institute.

This report can be found online at https://learningpolicyinstitute.org/product/high-quality-kea.

Report originally published August 5, 2021 | Document last revised August 23, 2021
Revisions are noted here: https://learningpolicyinstitute.org/hqkea-update

Table of Contents

List of Figures and Tables

Executive Summary

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 developmentally appropriate early learning experiences by providing information to guide instruction and support whole child development. As early childhood programs are becoming part of state education systems, many 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 common 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 of these 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 several kinds of controversy. Assessments that are highly scripted, inauthentic, or too long can be inappropriate for young children and unfeasible for teachers. Assessments that are narrowly focused on discrete skills and exclude essential developmental domains can, if they are used in a high-stakes fashion, limit early childhood curriculum and foster inappropriate teaching strategies. Bias in assessment design or in implementation practices can lead to deficit perspectives of certain children, such as those from diverse cultural or linguistic backgrounds or those with special needs.

Given the widespread and growing use of KEAs, this report aims to inform policymakers about the features of KEAs and other early childhood assessments, the implications of using different kinds of assessments, and the possibilities for supporting high-quality early learning through well-chosen and well-implemented assessments. We sought to answer 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 Georgia and Illinois, two states that embed their KEAs in an ongoing assessment system, and in two districts, Elgin Area School District U-46 in Illinois and Tulare City School District in California, to understand their KEA implementation more deeply. After a nationwide scan of practices, we selected these states for their high-quality KEAs, use of their KEAs for informing and advancing developmentally appropriate instruction, appropriate uses of KEA data, and 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 KEAs

Researchers point to the following as key components of appropriate practice in early childhood assessment.

A high-quality KEA has content that measures essential domains of child development in ways that are appropriate and culturally relevant and is part of a system of ongoing formative assessment. High-quality KEA content aligns with developmentally appropriate kindergarten standards, curricula, and instruction; is based on a learning progression; provides information that is relevant and sufficiently detailed to guide instruction; connects to formative assessment across p–3; and is inclusive of all children regardless of their socioeconomic, cultural, or linguistic backgrounds. An assessment that measures only discrete reading or numeracy skills is not appropriate as a KEA.

A high-quality KEA has administration procedures that are fair for all children and practical for teachers. High-quality early childhood assessments include children of diverse cultural and linguistic backgrounds and varying abilities; take place in a natural and familiar setting; and are accompanied by robust professional development and resources that support teachers in administering the tool and using the data. A traditional assessment that requires young children to stay seated and engaged for long periods of time is inappropriate.

A high-quality KEA yields results that are valid for all children being assessed. High-quality KEAs document how children demonstrate skills and competencies in authentic situations; are backed by rigorous research that includes children from diverse backgrounds; and align with how the data are used, including informing instruction. Assessments that are highly contrived may not accurately capture the full range of children's skills and competencies.

Purposes of KEAs

Experts have identified several appropriate uses of KEAs. For schools, KEA data should be used to inform instruction and support student learning, as well as to engage with families. For policy, aggregated KEA data can be used to identify system-level patterns, strengths, and gaps that can inform equitable resource allocation and investments in early childhood programs. 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.

It is inappropriate to use 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. Schools should not use KEAs to hold children back from kindergarten, since this practice can deny children access to education from which they can benefit. Finally, KEAs should not be used to diagnose a learning disability because they do not provide sufficient detail for this purpose.

State and Local Examples of KEA Implementation

Examples of KEA implementation in two states, Georgia and Illinois, and two local districts, Elgin Area School District U-46 in Illinois and Tulare City School District in California, provide useful models for other states.

Georgia Kindergarten Inventory of Developing Skills (GKIDS) Readiness Check: Georgia has been using the Readiness Check since 2016. Georgia is a useful model for other states because of the way it has integrated its KEA into other statewide assessments and uses it to inform instruction. The Readiness Check is the first part of the GKIDS assessment system, a yearlong suite of kindergarten assessments connected to state content standards that provides teachers with ongoing information needed to guide instruction. It also aligns with the Work Sampling System assessment used in Georgia's preschool program. 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 focuses on skills and concepts related to social and 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—and 10 are observation-based. Georgia has also recognized the need for professional development related to observational assessment. All new kindergarten teachers must complete initial professional development on the GKIDS assessment system. Ongoing professional development includes videos of teachers conducting KEA activities and content on how to use the tool as part of normal instructional routines.

Illinois Kindergarten Individual Development Survey (KIDS): 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. Illinois has used KIDS statewide since 2017. The primary goal of KIDS is to improve kindergarten learning experiences by informing instruction and facilitating communication with families. The state intentionally curates KIDS communications and resources to consistently convey these intended purposes. KIDS is based on the Desired Results Developmental Profile–Kindergarten (DRDP-K), which is part of the DRDP assessment system that seven states (including California) use in preschool. Of the three assessment versions of varying length, only the shortest, the State Readiness Measures, is required for Illinois districts. This version includes 14 items that measure skills in approaches to learning, social and emotional learning, language and literacy, and mathematics. Scores are based on teacher observation over multiple authentic, developmentally appropriate activities in children's natural classroom settings. Illinois has also invested in professional development from which other states can learn. It provides mandatory implementation workshops and offers substitutes to enable teachers to attend. Ongoing professional development includes tailored coaching and an annual summit for educators to engage in deeper learning about KIDS. The Illinois State Board of Education publishes aggregated state-level KEA data annually. These results have informed statewide policy conversations about expanding access to early learning.

District examples: Elgin U-46 uses a longer, customized version of Illinois's KIDS assessment and assesses children in the beginning, middle, and end of the year to gauge their progress over time. Elgin U-46 also uses the aligned DRDP for preschool. The district provides KIDS professional development to both kindergarten and 1st-grade teachers, building a common understanding of child development across the early learning continuum. In California, Tulare City School District

extends its use of the DRDP from preschool to early elementary grades as a tool for promoting child-centered teaching. The DRDP was key to shifting instructional practice and aligning curriculum across grade levels. Through in-depth professional development, teachers learn how to collect DRDP evidence and identify next steps for instruction.

Considerations for Implementation of Early Childhood Assessments

There is no single approach to adopting a KEA, but our findings offer insights about how to support implementation of KEAs and other early childhood assessments from the perspectives of system leaders in the states and districts we studied.

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 assessment 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.

Strengthening early learning systems: States such as Washington and Illinois and districts such as Elgin U-46 in Illinois and Tulare City School District in California are strengthening early learning systems by using KEAs to promote family engagement; align preschool, kindergarten, and 1st grade; and inform strategic initiatives. 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. At the state policy level, while a majority of states that have a KEA indicated that they want or 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, a potential missed opportunity. 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. Locally, Elgin U-46 is using KEA data to drive a community initiative to provide books in public spaces, and Tulare City School District is using the same assessment tool across multiple years to build an aligned, coherent early assessment system.

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 version. States and districts also have at least one staff position responsible for KEA oversight, professional development, data reporting, and KEA resources. KEA implementation is supported by a gradual phase-in, adequate funding, and ongoing improvement processes.

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—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 or restrict children's access to kindergarten.

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.

Introduction

Child assessments are increasingly being used as a measure of young children's knowledge and skills from preschool to 3rd grade. As of 2021, 38 states have a statewide kindergarten entry assessment (KEA)—more than a fivefold increase in 10 years,[1] which was spurred by a surge in federal investment. In 2011, the federal government established the Race to the Top–Early Learning Challenge (RTT-ELC) grant program, which required grantees to develop and implement a statewide KEA to promote coherence of early learning systems and support school readiness.[2] Twenty states were awarded RTT-ELC grants over 3 years (2011–13).[3] As RTT-ELC funding came to a close, some states continued to require the use of their KEAs statewide, while others dropped the statewide requirement and made the assessment optional.[4] This rapid proliferation of KEAs has come with many potential benefits, but as with any rapid change, it has also come with challenges. Given the widespread and growing use of kindergarten assessments, how can states use them as part of an aligned p–3 system, capitalize on their promise to inform practice and policy, and avoid their potential misuse? That is the focus of this report.

KEAs can provide valuable information for both practice and policy. Researchers agree that high-quality assessments, when well designed and well implemented, can provide important information on children's competencies at kindergarten entry that informs instruction and supports for children and families.[5] Experts also posit that aggregate data can reveal patterns of systemic inequities across and within communities that can inform more equitable investments in early childhood.[6] When a KEA fits into an early childhood assessment system, starting in preschool and continuing into the elementary grades, it can provide educators and policymakers with an understanding of how children are progressing over time. Having a high-quality tool for understanding children's ongoing development, including social-emotional development, is even more important with the COVID-19 crisis, which has delayed or interrupted formal learning and peer interactions for many young children. Having a high-quality assessment can help teachers thoughtfully assess the strengths and needs of students as they return to school.[7]

KEAs Are Just One Component of an Early Childhood Assessment System

This report primarily focuses on KEAs because for many children, they are the only state-mandated early childhood assessment given. We couple this landscape analysis with deeper dives into some states and districts that embed their KEAs in a more continuous approach to assessment that follows children's learning over time across domains and uses this information to support instruction. Ideally, early childhood assessment would begin in preschool and carry through the early elementary years in an aligned system that informs curriculum and instruction. Such a system would provide ongoing information about children's progress rather than a snapshot of learning at a single point in time. Most states, in reality, do not have an aligned assessment system spanning preschool through elementary school.[8] However, their existing KEAs can provide a starting point for building a system that provides useful information about children's knowledge and skills over time and supports teachers in providing the developmentally appropriate, high-quality learning experiences children need. Throughout this report, we highlight opportunities for states to move toward this vision, and most of the practices we describe for high-quality KEA assessment selection and implementation are applicable to preschool and other early childhood assessments as well.

KEAs have been controversial for both their content and their format, however. Although many assessments are developmentally appropriate for young children, many are not. For example, early educators are concerned about highly scripted, multiple-choice tests that unreasonably require children to bubble-in responses or spend long periods in front of a computer.[9] Some assessments, especially in their early iterations, consumed hours of class time that teachers felt could be better used on instruction.[10]

Child development experts and early educators are also concerned about KEAs that narrowly focus on reading and math skills to the exclusion of other essential developmental domains. Studies have linked a focus on a narrow set of academic skills to less time devoted to other areas, such as science, social studies, music, and art.[11] Teaching to the test can also lead to more teacher-led instruction at the expense of the active, experiential, play-based teaching and learning that young children need.[12] Yet the reverse is also true: Holistic, observational assessment can drive developmentally appropriate teaching and learning, as we will highlight in district examples later in this report.

Experts also have concerns about the validity of assessments that have not been developed and validated for children who are dual language learners, come from culturally diverse backgrounds, or have special needs.[13] Such assessments can lead to a misrepresentation of what those children know and can do.[14] Results may then be interpreted as showing that those populations, such as children of color and dual language learners, are "unready" or "falling short." Not only are the assessment results and resulting interpretations inaccurate, but these deficit-based labels can cast blame on children and families who have the least access to early childhood learning opportunities. (See "Defining Kindergarten Readiness.")

Defining Kindergarten Readiness

Kindergarten entry assessments (KEAs) are also often called "kindergarten readiness assessments," or KRAs. "Kindergarten readiness" refers to the extent to which children have a set of skills that supports their successful transition into kindergarten and school. These skills span many areas, including social-emotional, cognitive, language and literacy, mathematical and scientific reasoning, and physical development.[15] These skills are interrelated, and the extent of progress in developing one skill set can accelerate or impede progress in another. Children arrive at kindergarten with a wide range of backgrounds and experiences that affect their strengths and needs across developmental areas. These individual differences have often been framed as deficits attributed to the child who is or is not "kindergarten ready," and KEAs are sometimes used to label those children who are "unready." Such deficit framing can lead to blaming early learning programs, families, and the children themselves and fails to account for the numerous factors and opportunities that contribute to early development. If the assessments also reflect a narrow definition of "readiness" that excludes essential developmental areas, they can miss the strengths that children do bring with them. However, current perspectives are shifting to acknowledge that schools need to be ready to receive children as they are, to nurture children's individual strengths, and to meet the various needs that children bring to school. High-quality KEAs can be important tools for documenting these individual strengths and needs so that teachers can provide experiences that best support each child's holistic development.

The purpose of this report is to provide insights into how to choose high-quality assessments, the implications of different assessment choices, and how to effectively use KEAs as part of strong statewide early learning assessment systems. We sought to answer 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 assessments for instruction? How are states supporting continuous improvement of their KEA systems? What strategies, and cautions, can be gleaned from leading states' experiences?

To answer these questions, we examined what is currently known about defining, measuring, and supporting kindergarten readiness as well as research on how KEAs are used and how they function as part of broader early learning assessment systems that span p–3. Based on this background research, we examined two states and two local school districts that use a range of successful KEA practices and describe practices that state administrators report positively contribute to their KEA efforts at the state level. These state and district highlights were selected based on a national scan of KEA practices and expert consultation. They provide examples of scaled-up implementation of promising KEA practices that enact current recommendations from the field. We sought states and districts that are beyond the pilot phase of implementation; implement high-quality KEAs; have data and KEA information that are publicly available; and serve ethnically, culturally, and linguistically diverse student populations. In addition, we identified six other states that are engaging in promising practices around partnership with community stakeholders, KEA professional development, family engagement, and continuous improvement. Although KEA systems are still in development, the states we highlight provide valuable lessons that could inform ongoing KEA work.

This report is organized into five additional sections:

1. "Understanding High-Quality Kindergarten Entry Assessments" reviews the components of high-quality KEAs.
2. "Purposes of Kindergarten Entry Assessments" describes the appropriateness of KEAs to meet various goals.
3. "State and Local Examples of Implementation" offers in-depth descriptions of KEA implementation and practices in two states, Georgia and Illinois, and two local districts, Elgin U-46 in Illinois and Tulare City in California.
4. "Considerations for Implementation of Early Childhood Assessments" examines common features of effective KEA implementation, such as how states and districts use their KEAs as a catalyst for instructional change, as well as what it took for them to be successful.
5. "Policy Recommendations" identifies policy implications for states and districts to consider as they support KEA use and implementation.

Understanding High-Quality Kindergarten Entry Assessments

Research points to key, interrelated areas of child development that are particularly important for early education, including social-emotional development, cognitive development, language and literacy development, mathematical and scientific reasoning, and physical development.[16] High-quality early childhood programs aim to foster children's learning across these five domains and others through developmentally appropriate practices and environments. Developmentally appropriate early learning environments provide play-based instruction and supports that match children's age- and ability-based, cultural, linguistic, and individual needs.[17] (See "What Is Play-Based Learning?")

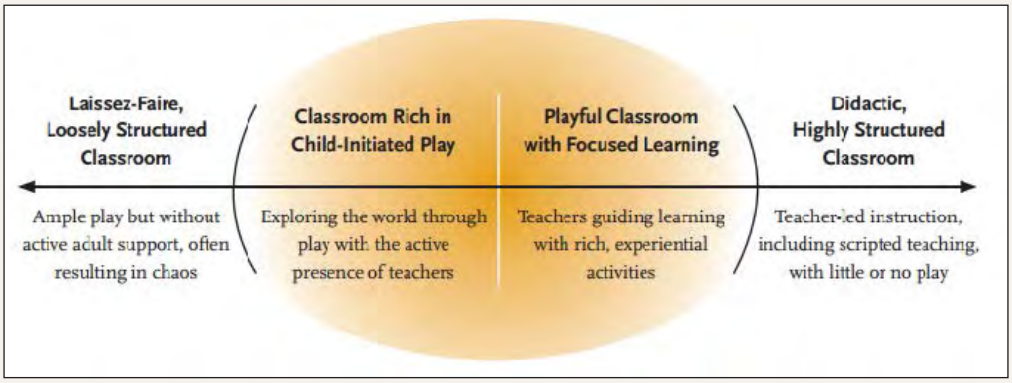
What Is Play-Based Learning?

With increasing emphasis on reading and math skills at younger ages, play is often mistakenly dismissed as a frivolous use of academic time. On the contrary, rigorous play-based teaching and learning, sometimes called "guided play," consists of complex interactions with peers, the environment, and adults that require skillful planning, specific goals, and intentional structure. Figure 1 highlights the balance of child-centered exploration and experiential learning with teacher facilitation and guidance that constitutes complex guided play.

Engaging in complex play has been associated with the development of cognitive, behavioral, emotional, and social competencies in young children. It also fosters the development of cognitive abilities in language, literacy, and mathematics and important cognitive regulation skills, such as planning, organizing, sequencing, and decision-making. Social competencies, such as cooperation, sharing, and negotiation, can also be fostered through play, as can creativity and imagination.[18]

Although play can consist of free play with minimal adult involvement, play-based teaching and learning require intentional and structured activities designed to foster purposeful development of skills and competencies.[19] Having the opportunities for play activities does not guarantee children's engagement in meaningful play. Adults, peers, children's prior experiences, and the physical resources available to children influence what they can learn from play.[20] Play should be intentionally scaffolded by teachers in purposeful ways that target individual children's strengths and needs, which requires a solid understanding of child development and pedagogical expertise.[21] Research-backed curricula that put these principles into practice for teachers are limited, an area for further development.

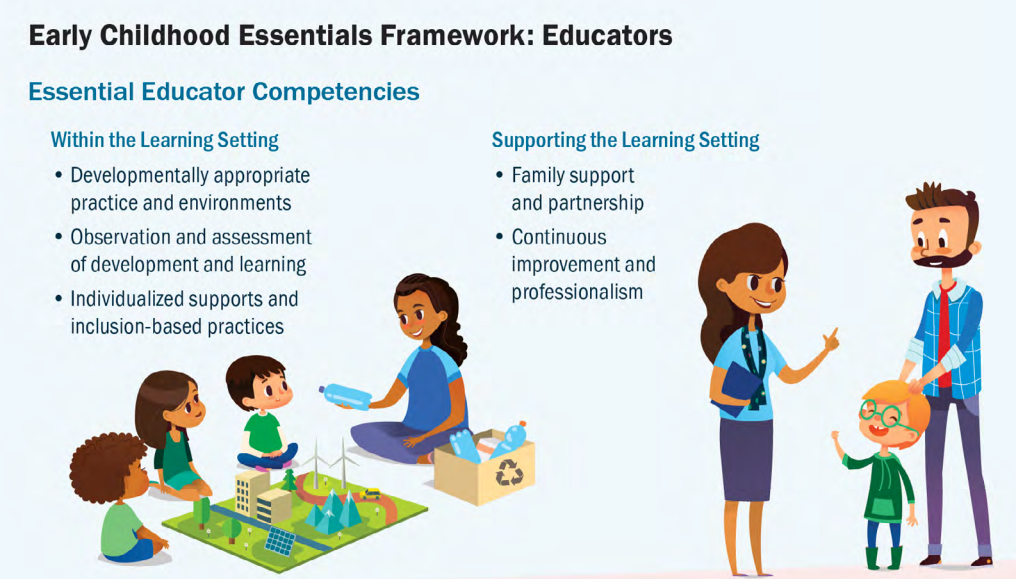
Figure 1
Continuum of Early Childhood Instructional Approaches Highlighting Guided Play



Source: Ondera, P., & Kallenbach, J. (n.d.). *Play-based learning in the early grades* [Presentation slides]. https://education.illinoisstate.edu/downloads/csep/b3/u-46-play-learn-b3.pdf.

High-quality early learning assessments, including KEAs, are one key to providing such developmentally appropriate early learning experiences. A high-quality assessment aligned with developmental goals can help teachers observe and monitor children's needs as they learn and grow, which is an essential educator competency.[22] (See Figure 2.) High-quality assessments can also help community stakeholders form a shared understanding of what developmentally appropriate early learning goals look like and provide a common language for early childhood providers, kindergarten teachers, schools, and families to communicate about children's development.

Figure 2
Observation and Assessment Are Essential Educator Competencies



Source: Meloy, B., & Schachner, A. (2019). *Early Childhood Essentials: A framework for aligning child skills and educator competencies*. Learning Policy Institute. https://learningpolicyinstitute.org/product/early-childhood-essentials-framework-report.

Assessments can send strong messages to teachers and other stakeholders about the expectations that children should meet and, thus, the instructional experiences that teachers are expected to prioritize. High-quality early learning assessments should be compatible with goals and practices that promote child-centered learning environments that foster diversity, active learning, and authentic experiences. Previous studies have linked a narrow definition of readiness with a focus on skills for later achievement testing to practices that shifted away from what is developmentally appropriate.[23]

This chapter describes the features of high-quality early learning assessments and provides a summary of the six assessment instruments most commonly used as KEAs in the United States.

Characteristics of a High-Quality, Equitable Kindergarten Entry Assessment

To best inform and support high-quality early learning environments, researchers and policy analysts agree that KEAs should adhere to appropriate practices in early childhood assessment. Research and policy recommendations on early childhood assessment—including studies and reports from the National Research Council, the Center on Enhancing Early Learning Outcomes,

the National Institute for Early Education Research, the National Association for the Education of Young Children, the Council of Chief State School Officers, the Education Commission of the States, and the Ounce of Prevention Fund[24]—suggest that early assessments should:

- have content that effectively measures essential developmental domains in ways that are developmentally appropriate and culturally relevant and can be connected to a system of ongoing formative assessment across p–3;
- have administration procedures that are practical and fair for all young children; and
- yield results that are accurate for all children being assessed.

Below we describe what the research says about the components of high-quality KEAs, along with considerations for choosing assessments that are appropriate for children from diverse cultures, languages, socioeconomic backgrounds, and abilities. These components are summarized in Table 1.

Table 1
Guiding Considerations for Choosing High-Quality KEAs

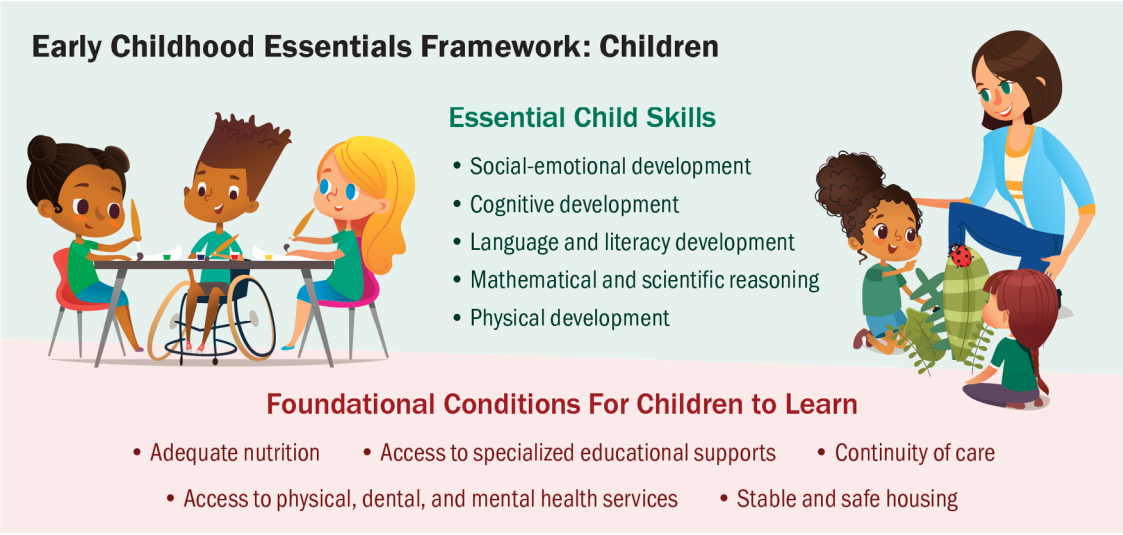
Component	Guiding Considerations
Content	• Measures the essential domains of child development, including social-emotional development, cognitive development, language and literacy development, mathematical and scientific reasoning, and physical development. • Aligns to developmentally appropriate early 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.

Content measures what matters

A high-quality KEA should include appropriate content that validly measures competencies relevant to the skills children need at kindergarten entry. As described below, experts agree that high-quality KEA content covers essential domains of development; aligns with developmentally appropriate kindergarten standards, curriculum, and instruction; is based on a learning progression; provides relevant and sufficient detail to inform instruction; connects to ongoing formative assessment across p–3; and is inclusive of all children regardless of their socioeconomic, cultural, or linguistic backgrounds. The following are important for high-quality assessments:

Measuring essential domains: A comprehensive KEA measures skills and competencies in the essential domains of child development, including social-emotional development, cognitive development, language and literacy development, mathematical and scientific reasoning, and physical development.[25] (See Figure 3.) Across the 38 states that have KEAs, the instruments they use generally measure a wide range of competencies. However, five states—Arkansas, Florida, Idaho, Iowa, and Mississippi—use literacy screeners, which only measure children's competency on the language and literacy domain of child development (and sometimes mathematics). Excluding other essential developmental domains may lead to a narrowing of the curriculum by focusing teachers on the skills that are assessed.[26] Measuring multiple domains provides a breadth of information about what children know and are able to do, as well as how development across domains is interrelated, which may provide more nuanced insights into children's individual strengths and needs. Measuring multiple domains also encourages teachers to broaden their instruction and use a whole child approach.[27]

Figure 3
Early Childhood Essentials Framework



Source: Meloy, B., & Schachner, A. (2019). *Early childhood essentials: A framework for aligning child skills and educator competencies*. Learning Policy Institute. https://learningpolicyinstitute.org/product/early-childhood-essentials-framework-report.

Documenting what children know and can do in real, authentic situations: Experts suggest that ongoing formative assessments should be authentic; that is, they document the skills and competencies children demonstrate in real-world situations.[28] Authentic assessments help ensure

the accuracy of results because they eliminate procedural requirements or contrived, unfamiliar situations that rely on skills unrelated to those being assessed.[29] For example, a pencil-and-paper KEA in which children respond by marking a test booklet or filling in circles confounds assessment scores with children's fine motor skills and their ability to understand how to respond to an artificial approach to measuring knowledge and skills. Because young children have limited formal testing experiences and are just developing their fine motor skills for using writing or technology tools, observation and performance tasks using manipulatives and familiar materials are well suited to authentic assessment that captures accurate approximations of what children know and can do. (See "Two Ways to Authentically Assess Young Children.") Authentic assessments are more likely to measure the skills and competencies of interest.

Two Ways to Authentically Assess Young Children

There are two primary ways to assess young children: direct assessment and observation-based assessment.[30] A KEA may include both item types, and both types can be authentic and developmentally appropriate.

Direct assessment: Direct assessment usually involves an adult, such as a teacher, asking a child to respond to a prompt. Assessment items can be multiple choice, such as identifying one of three pictures that matches the teacher's description, or a performance assessment, such as demonstrating how to turn the pages of a book or how to count to 10. Authentic performance assessments document children engaged in tasks that require them to use their skills and competencies in situ. Direct assessments are often administered one-on-one or to a small group in a child's classroom and should be administered by a familiar adult.[31] For example, 10 of the 20 items on the Georgia Kindergarten Inventory of Developing Skills (GKIDS) Readiness Check are direct assessment items (see Appendix D).

Observation-based assessment: Observation-based assessments require teachers to gather and record data during typical, everyday activities, such as playtime, whole class instruction, or learning center activities. In an observational assessment, teachers document children's interactions and behaviors across a range of contexts and activities and assign scores based on a preponderance of evidence. Observational assessments are less intrusive than direct assessments, and some experts believe they are well suited to classroom use, since teachers can collect evidence during regular instructional activities.[32] However, teachers still need time to document the evidence they collect and often need significant training to make accurate and reliable ratings. There are many types of observational assessments, which can range from simple checklists with binary responses (yes/no) to complex behavioral rubrics. Commonly used observational KEAs include Teaching Strategies GOLD and the Desired Results Developmental Profile (for descriptions, see Appendix C). Observational assessments can also include portfolio-based instruments such as the Work Sampling System or family report measures such as the Ages & Stages Questionnaires.[33]

Aligning with developmentally appropriate standards, curricula, and instruction: How readiness is defined and measured through a KEA should be consistent with early learning standards and include the foundational competencies that will support progression toward kindergarten standards.[34] They should also be aligned with curricula, forming a coherent system to support healthy child development. Connections to instructional standards and curricula help to increase the relevance of KEA data for teachers.

In addition, the content of a KEA and ongoing formative assessment communicates instructional expectations to teachers. For example, an assessment tool that includes social-emotional and physical development measures may promote a focus on peer interactions and physical activity. Similarly, an assessment that measures mathematical and scientific reasoning and cognition may encourage districts and teachers to use a curriculum that gives children more opportunities for problem-solving than with one that focuses on rote skills.

Placing children's skills along a developmental continuum or learning progression: When effectively aligned with a learning progression, a KEA can help teachers plan instruction and monitor children's growth.[35] Learning progressions, according to the National Academies of Science, are "descriptions of successively more sophisticated ways of thinking and behaving that tend to follow one another as children mature and learn."[36] For example, the learning progression for interpersonal skills as measured in the Desired Results Developmental Profile moves from a child interacting with others side by side as they play with similar materials, to the child showing preference for particular children but mostly engaging with a variety of playmates, to the child leading or participating in planning cooperative play with other children.[37] Assessing children's competencies using a learning progression provides information about where children are on the path to developing those competencies, although children do not always progress evenly or automatically. Learning progressions also provide guidance to teachers and families about what they can expect the next milestones to be as they support children's ongoing learning.[38]

When effectively aligned with a learning progression, a KEA can help teachers plan instruction and monitor children's growth.

Providing sufficiently detailed information to inform instruction: When it comes to instruction, assessments should be sufficiently detailed to be useful for teachers in developing deep understanding of each child's strengths and needs and tailoring their instruction based on that understanding.[39] For example, knowing whether a child was able to "recognize and name the letters of the alphabet" is less useful to a teacher for planning instruction than knowing that a child was able to recognize and name 10 of 26 letters. Knowing specifically which 10 letters the child can name and recognize prevents teachers from spending instructional time reteaching content that the child already knows. Scoring systems that provide this detailed information are typically more useful for informing instruction than binary scoring systems (e.g., correct or incorrect; yes or no). However, implementation literature shows that educators also face time pressures to complete assessments quickly, especially KEAs, which tend to be required in the first month of the school year.[40] Therefore, an assessment should be as short as possible while providing sufficient information to meet the assessment's purpose.

Connecting to ongoing formative assessment over time across p–3: Researchers point to the potential benefits of aligned p–3 assessments that provide information about children's progress to support ongoing whole child development across multiple domains and years and that promote continuity and consistency in schooling.[41] As of 2021, 12 states require aligned assessments in preschool and kindergarten, and 9 additional states allow districts to choose from menus that include aligned assessments.[42]

Even within the kindergarten year, KEAs can inform instruction more fully if they can be integrated into a system of ongoing formative assessments that provide linked information on children's progress over the course of the year. (See "Formative Versus Summative Assessment.") KEAs are often point-in-time snapshots at the beginning of the kindergarten year. As such, the information they provide is relevant for only a short period of time because children develop rapidly, especially in response to effective developmentally appropriate instruction. Of states that mandate the use of a KEA, most require that the assessment be given only once,[43] but four states require that the assessment be administered at the beginning and end of the school year (as a pre- and post-test), and Georgia's KEA is linked to a yearlong formative kindergarten assessment process.[44] Following KEAs with ongoing formative assessment across the kindergarten year allows teachers to monitor children's growth and continually adjust instruction based on children's progress or ongoing needs.

Formative Versus Summative Assessment

The purpose of formative assessment is to monitor progress and to determine in which areas students may need further development and support. In a 2018 synthesis, the Council of Chief State School Officers defined formative assessment as "a planned, ongoing process … to elicit and use evidence of student learning to improve student understanding of … learning outcomes and support students to become self-directed learners."[45] Formative assessment is an intentional and ongoing process that follows a child's learning progress and is used to highlight strengths and inform instructional next steps. Formative assessment is fundamental for everyday teaching practice and equitable teaching and learning.[46] KEAs, as part of a larger p–3 assessment system, serve formative purposes.

In contrast, the purpose of summative assessment is to evaluate student learning at a given point in time. Summative assessment focuses on documenting learning as a measure of success.[47] Summative assessment is often a discrete event typically taking place at the end of an instructional unit or school year[48] but can also occur at predetermined checkpoints, such as mid-semester. Summative assessment is not intended to inform instruction but to evaluate student performance as an outcome and can be used for high-stakes purposes. It would be inappropriate to use a KEA for summative purposes.

Containing content that is relevant for a range of socioeconomic, cultural, and language backgrounds: Researchers argue that assessments should be culturally relevant for all children being assessed and avoid exclusionary content—that is, content that would likely be known to children from some socioeconomic or cultural groups and not others.[49] Specific knowledge and competencies that are unique to certain groups can skew data so that one group artificially appears to be "more ready" than others. Cultural differences can influence how children interact with peers and adults, how independent or assertive children are, how children express themselves, and how physically active children are, among other things.[50] Thus, great care must be taken to ensure that KEAs assess the intended target competencies rather than children's cultural norms. For example, when observing children, behaviors such as speaking "out of turn" or avoiding eye contact may be driven by children's normative practices outside of school. In addition, children from different cultural or socioeconomic backgrounds may have varying exposure to certain content. Thus, a direct assessment item that references specific foods or activities can exclude certain groups of children who may not be familiar with them.

Administration is fair and practical

How an assessment is administered can significantly impact the extent to which the scores are true measures of a child's skills. Fair assessments are those that are sensitive to the characteristics of different groups and are designed to be equitable based on that sensitivity.[51] According to experts, and as summarized below, when administering an assessment, educators should consider the appropriateness of procedures for young children; the availability of flexible accommodations for children with a range of abilities, languages, and cultures; the setting in which the assessment is given; the expertise of the teacher administering the assessment and teacher bias; and the availability and timeliness of resources, documentation, and data.

How an assessment is administered can significantly impact the extent to which the scores are true measures of a child's skills.

Has procedures appropriate for young children: The procedural demands of an assessment can significantly impact how children perform on the assessment.[52] Demands that are not aligned to a child's level of social, emotional, cognitive, and physical development are inappropriate. For example, an assessment is not developmentally appropriate if it requires young children to stay seated and engaged for long periods of time.[53] Likewise, a technology-based KEA in which children respond by typing or operating a mouse requires fine motor development and dexterity that could be a significant barrier for many young children, especially if they have not had opportunities to develop digital familiarity.[54]

Is administered flexibly to accommodate a range of abilities, languages, and cultures: Flexible administration procedures can help ensure all children have the opportunity to demonstrate their skills and include universal accommodations as well as those designed for more targeted populations.[55] Including accommodations or accepting a range of responses allows children to use their full repertoires of languages and behaviors to demonstrate their development and learning.

Universal design seeks to maximize access and opportunity for people with diverse abilities and needs, and it can foster an asset-based approach for all children.[56] Allowing flexibility in how children demonstrate their skills can help teachers understand their students more deeply and nurture children's proclivities. For example, when recalling a story, children might be allowed to use a range of activities, such as drawing a picture, retelling the story using their preferred language, acting it out, or using puppets. Allowable accommodations should be clearly delineated in training and administrative manuals.[57]

Children who are learning more than one language may need linguistic accommodations based on what is being assessed and how the assessment is administered. KEAs that are written and administered in English only can fail to reveal the depth of children's knowledge and abilities.[58] For example, assessments may suggest that non-native English speakers need remediation in math despite strong numeracy skills that a child can express in his or her home language. Research on assessing dual language learners suggests the benefit of (1) presenting directions in a child's preferred language; (2) directly translating specific items and prompts for direct assessments; and (3) documenting evidence, including gestures, in multiple languages.[59] Research with older children

demonstrates that these three linguistic supports can improve the validity of data intended for tailoring instruction for children who are dual language learners.[60] Standardized materials that are translated from English, however, must be validated with non-native English speakers, and administrative procedures for teachers must be clearly defined.[61] Ideally, the teacher conducting the assessment would be fluent in the child's preferred or dominant language.[62] In cases for which this is not possible, schools may recruit aides or parents who know the child's language to assist with prompts, child responses, or observations. (See "KEAs for Dual Language Learners.")

KEAs for Dual Language Learners

KEA assessment accommodations for children who are dual language learners varies considerably across states. Only two states—Oregon and Texas—have a Spanish assessment form that provides prompts and accepts responses in Spanish. However, there is no equivalent for children who speak languages other than Spanish or English. Florida introduced 2021 legislation that would require "native language versions" of the KEA "beginning with the two most prevalent languages," which are Spanish and Haitian-Creole.[63]

Other states use an English assessment form but may collect observational data of a child speaking his or her home language. For example, the Desired Results Developmental Profile (DRDP), developed in California and used in five other states, specifically encourages teachers to accept child responses in multiple languages, and the two longer assessment forms include an English Language Development domain for dual language learners as well as an optional Language and Literacy Development in Spanish domain. In addition, DRDP guidance indicates that teachers should be fluent in relevant languages.

Teaching Strategies GOLD (TS GOLD), used by many states, accepts responses in multiple languages and includes a supplemental English Language Acquisition domain for children who are dual language learners. However, state-specific adaptations may limit the extent to which teachers can accept responses in languages other than English or use the items in the supplemental domain. For example, Spanish bilingual classroom teachers in Washington have the option to replace the English literacy items with Spanish literacy development items, but the TS GOLD–based KEA limits the other items for which teachers can accept home language responses.[64]

Finally, some states, such as Mississippi and Utah, do not include any English language development items, allow translated prompts, or accept responses in multiple languages.[65]

KEA administration must also be sufficiently flexible to be appropriate for community-specific cultural and linguistic contexts.[66] Every school community is different and reflects different group norms, values, and preferences that can impact how children respond to certain types of assessment procedures. Culturally mediated behaviors and norms interact with how an assessment is administered and can confound the results.[67] For example, some children may be uncomfortable with direct questioning by an adult; others may have indirect communication patterns. One way to account for children's cultural and linguistic diversity is to allow for local flexibility and appropriate accommodations, which rely on teachers' familiarity and fluency with the various cultures and community norms in their respective schools.[68] Accurately measuring what children from all backgrounds know and can do is crucial for using a KEA to appropriately inform instructional practices and is essential in promoting more equitable school experiences for all children.[69]

Takes place in a natural and familiar setting: Researchers suggest that children should be assessed in their natural settings, such as their regular classrooms, and by familiar adults, such as their classroom teachers.[70] Unfamiliar environments or assessors or a distracting environment can alter a child's typical behaviors or cause psychological stress that impacts their assessed behaviors. (See "Meeting Children's Basic Needs.") The assessment setting is important, as young children are still developing their abilities to ignore distractions or manage anxiety.

Meeting Children's Basic Needs So They Can Bring Their Best Selves to Assessment

To obtain an accurate picture of what children know and can do on assessments, they need to be fed, safe, and getting sleep and have their basic needs met. According to Maslow's Hierarchy of Needs, humans must have basic needs met before they can reach their full potential.[71] In the context of early childhood assessment, children cannot be expected to demonstrate the full range of what they know and are able to do when they do not have food, clothing, shelter, and safety from harm. Assessment scores that are obtained while these basic needs are not met are likely not representative of children's true knowledge and strengths. In order to help ensure that children are bringing their best selves to a KEA, states, districts, and schools can provide meals or snacks and avoid assessing children when they might be experiencing stress or trauma. Because children's development is fundamentally tied to basic resources, such as nutrition, health care, and housing, it is important for states to stay vigilant to prevent misuse of KEA data to shame and blame families or early childhood programs for systemic lack of access to such resources.

Some assessments, such as observational and portfolio-based tools, are minimally intrusive for both children and teachers. Such tools allow teachers to practically integrate assessment into the typical activities of a developmentally appropriate kindergarten classroom. For example, when a KEA is observational, teachers can document evidence for individual children during typical classroom activities, in different settings, throughout the school day. Similarly, if using a portfolio-based KEA, teachers can collect work samples and other evidence as children engage in regular classroom activities.

Is supported by adequate professional development to administer the assessment fairly and reliably, with minimal bias: Experts agree that the adult administering and/or using the results of a KEA should have the necessary expertise to administer the assessment tool appropriately.[72] Teachers' capacities to elicit child behaviors in ways that are consistent with the intent and purpose of a KEA require deep familiarity with the tool itself, the standards and learning progressions linked to the KEA, the appropriate environment and process for administering the assessment, and the purposes and uses of the data collected.[73] A common problem with KEA implementation is a halo effect in which assessors tend to give high or low scores on all of the dimensions assessed.[74] They make a general judgment on where the child is developmentally and notice evidence consistent with that view. Teachers need sufficient expertise to minimize this effect and focus on evidence for each rating. Finally, teachers need an understanding of dual language learning when assessing students learning in more than one language.[75]

Teacher bias can also threaten the validity and reliability of an assessment's results by causing teachers to over- or underrate children's skills.[76] Teacher bias is often unconscious and unintentional and can be rooted in stereotypes, beliefs about development or ability, perceptions

of caregivers or families, or one's own cultural orientation.[77] Research suggests that when teachers and students come from different cultural backgrounds, teacher bias can negatively affect children's assessment results. For example, studies have documented that Black children are more likely to receive lower readiness ratings on measures of social skills and learning behaviors when they are rated by White teachers compared to Black teachers.[78] Assessment of social-emotional development can be particularly sensitive to cultural bias.[79] Teacher bias in interpreting differences in how children engage with the world around them can impact children's apparent kindergarten readiness and perpetuate deficit perspectives of children and families.

Is supported by timely resources, documentation, and data: Clear, specific administrative documentation that outlines assessor flexibilities or accommodations can help administrators, teachers, and families accurately assess children's competencies.[80] Support documentation can include a technical manual as well as guidelines for KEA data interpretation, reporting, and use. Teachers need to have adequate resources to support implementation of and communication about the KEA. Documentation for families can include general KEA information as well as more specific resources that explain scores or ratings.

Research shows that KEA implementation is smoother if teachers have streamlined ways to enter and access the data.[81] Easy-to-read data dashboards or reports and the ability to see individual child, group, or whole-class data can help make the data useful to teachers as they plan instruction and individualization.[82] Some KEAs provide online summaries for individual children and the classroom that can be aggregated to the school or district level.

Assessments are valid and reliable

As described below, researchers point to validity and reliability as critical components of quality in an assessment tool. Validity refers to the extent to which an assessment captures a true measure of what it is intended to measure—in this case, what children know and can do. Reliability refers to the extent to which the assessment produces consistent data across multiple administrations or assessors. High-quality KEAs are backed by rigorous testing and research. Developers also often test whether the KEA predicts later outcomes.[83]

Is valid and reliable for all populations, with allowed accommodations: A high-quality KEA produces valid and reliable results for children with a wide range of characteristics, backgrounds, and experiences, including racially, socioeconomically, culturally, linguistically, and ability-diverse populations of children.[84] However, rigorous large-scale KEA research specific to particular groups, such as children who are learning more than one language, is sparse.[85] The lack of research is particularly problematic since many KEAs are not intentionally designed to be inclusive of such populations.[86] Further research is needed to ensure that a KEA is assessing all children equitably. States and districts might work with assessment developers or university partners to guide and conduct further studies that address specific populations.

Rigorous large-scale KEA research specific to particular groups, such as children who are learning more than one language, is sparse.

Furthermore, while local variation in KEA administration and scoring can help provide more accurate and specific data on children's competencies, data quality may be compromised if accommodations change the nature of what the KEA is measuring.[87] Inter-rater reliability—that is, the amount of agreement between teachers when assessing the same child—is important to increase confidence that results can be interpreted similarly across classrooms. Schools can evaluate inter-rater reliability by having several teachers assess a few of the same children and then compare their results.

Aligns with intended purposes, including informing instruction: The validity of inferences made from KEA results can vary depending on the purpose for which the assessment is used.[88] Given that a primary purpose of the KEA is to inform instruction, evaluation of the tool should include an investigation of how useful the data are for educators who are planning and differentiating instruction. An implementation study might include surveys, observations, and interviews with teachers and administrators about how they utilize the data for instructional planning. Likewise, if an additional purpose of the KEA is to inform resource allocation or evaluate large-scale initiatives, state administrators should continuously reflect on the extent to which data can be and actually are used for these purposes.

Kindergarten Entry Assessments Across the United States

KEAs vary across states, ranging in quality. While none of the KEAs feature all of the characteristics of high-quality assessments, some come closer than others. (See Table 2 on page 19.) Furthermore, the research base supporting each of the assessments varies. Some assessments are backed by a number of studies conducted by independent researchers; other assessments are primarily backed by developer reports. We describe some of the most popular assessments and the research supporting them below.

Teaching Strategies GOLD (TS GOLD) is the most commonly used KEA. TS GOLD is a formative observation-based assessment for infancy through 3rd grade. Many state preschool programs also use TS GOLD, which allows for alignment between preschool and kindergarten assessments, with the potential to extend alignment through 3rd grade. It covers 73 items grouped into 36 objectives across 9 domains, with an additional 2 objectives in an English Language Acquisition domain for children who are dual language learners. TS GOLD has been examined in a number of studies using national samples, including one that examined its use specifically with children who are dual language learners and children who have special needs.[89] Studies suggest that teacher ratings using the original infant–kindergarten edition of the TS GOLD assessment tool aligned well with direct assessments of the same skills, an indication of validity.[90] However, there is also evidence that teachers tend to rate children's skills holistically, so scores across domains are highly related and may not differentiate children's skills within individual domains.[91] Studies have also shown that some domains are highly correlated with direct assessments measuring different skills.[92] More recent studies examining the expanded infant–3rd grade TS GOLD assessment tool suggest the need for further training for teachers observing children who are dual language learners.[93] In addition to a significant research base, TS GOLD has many other characteristics of high-quality KEAs, such as addressing all the essential developmental domains, being based on learning progressions, and assessing children's skills

authentically. (See also "KEAs for Dual Language Learners" on page 12.) Drawbacks include that it is quite lengthy and that there can be substantial inter-rater variability.[94] Adapted state-specific versions may have fewer items but may not have the same qualities as the full version.

The **Desired Results Developmental Profile–Kindergarten (DRDP-K)** assessment is the second most commonly used KEA and is also a formative observation-based assessment. The DRDP suite of assessments was developed by the California Department of Education and the California-based research organization WestEd and includes forms for infancy to age 12, allowing for a fully aligned early learning assessment system. The DRDP is also commonly used in preschool settings. The DRDP-K has three versions: (1) Essential, with 25 measures in 5 domains; (2) Fundamental, with 29 measures in 5 domains; and (3) Comprehensive, with 47 measures in 9 domains. Two supplemental domains for children who are dual language learners or in Spanish–English bilingual settings are also available. The DRDP is also supported with extensive guidance for using the tool with children with special needs.[95] The DRDP was developed based on research on child development and has been the subject of a number of validation studies.[96] Studies suggest that the DRDP has high levels of teacher agreement in ratings, strong connections between measures within a developmental domain, positive correlations between the tool and other well-established direct assessments, and minimal bias against children who are dual language learners.[97] Some studies suggest that the domain structure of the DRDP may benefit from some reorganization to address redundancies across domains[98] as well as high correlations between some DRDP domains and unrelated domains on other validated assessments.[99] The DRDP has many high-quality characteristics, such as authentically measuring all essential developmental domains along developmental continua, including children who are dual language learners or who have special needs, and providing information relevant for guiding instruction.

The **Work Sampling System (WSS)** uses portfolios of student work along with teacher observation of students in everyday activities. This formative assessment is used widely in early childhood, including Head Start, and affords alignment opportunities, as it can be used for children from age 3 through 3rd grade. The WSS portfolio component covers 5 domains, and the observational component includes 73 items across 7 domains. The assessment also includes four supplemental items to measure English language development in children who are dual language learners. The WSS is backed by unique research that associates the use of the tool with greater-than-average growth in reading and mathematics scores on the Iowa Test of Basic Skills from one year to the next for children who have been in WSS classrooms since kindergarten.[100] Research also demonstrates moderate to strong correlations between WSS and other direct assessments of similar skills,[101] strong internal coherence among items, and high inter-rater reliability in teacher ratings.[102] Research has also established that there are no significant differences in WSS ratings for White and Black children.[103] However, there is a lack of research on the use of the WSS to assess children who are dual language learners.[104] Still, the design of the WSS is inclusive, and the tool meets many of the criteria for high-quality KEAs, including measures related to all the essential developmental domains, authentic assessment, and flexibility for children with diverse backgrounds.

What Is a Portfolio-Based Assessment?

Portfolio-based assessments are a form of performance-based assessment. Portfolios are collections of children's work that teachers curate over time. Portfolios may include a variety of artifacts and evidence—including photos, video recordings, and observational notes—that

demonstrate children's skills or competencies and can be used to showcase children's strengths and growth over time.[105] Careful selection of artifacts and evidence can ensure that the portfolio is representative of and accurately reflects children's competencies. A strength of portfolios is that they can be used to share with family members or other stakeholders concrete examples of what children know and can do and how different competencies are developing over time.[106] Another strength is that portfolios can be assembled over time to provide a longitudinal view of children's development, connect p–3, and guide teachers in providing instruction on a developmental continuum.[107]

The **Maryland-Ohio Kindergarten Readiness Assessment (MD-OH KRA)** was developed jointly by Maryland and Ohio, in partnership with WestEd and Johns Hopkins University, and is used in four states. The MD-OH KRA is designed specifically for use at the beginning of kindergarten, although it has a preschool counterpart called the Early Learning Assessment. The MD-OH KRA includes a combination of multiple-choice and performance-based items that teachers administer individually to children, as well as observational items. The original MD-OH KRA included 63 items in 6 domains. However, this original version was met with widespread criticism from teachers who felt that it was not developmentally appropriate and was not useful for informing instruction.[108] In response, Maryland and Ohio conducted surveys and collected feedback and recommendations from a range of stakeholders to improve the instrument.[109] Maryland developed the 50-item KRA 2.0, while Ohio uses the 27-item KRA-R. WestEd conducted comprehensive validity, reliability, and usability studies of the original KRA 1.0, providing evidence that the tool was valid and reliable.[110] The KRA 2.0 was validated through a three-phase test process as well as expert review by kindergarten teachers, stakeholder and expert ad hoc committees, state and local advisory councils, and a national technical advisory committee.[111] Analyses demonstrate high agreement among panels of kindergarten teachers and early learning specialists regarding cutoff scores for the three levels of readiness and strong internal coherence among items.[112] In Ohio, the Early Childhood Comprehensive Assessment Advisory Group worked with WestEd to preserve the reliability and validity of the original KRA in shortening it for the KRA-R,[113] but research also shows that teachers do not find the data useful for informing instruction.[114] The MD-OH KRA has some of the characteristics of high-quality KEAs, such as covering all the essential developmental domains, including some items that are authentic, and being supported with robust professional development that requires teachers to demonstrate their understanding of the assessment by completing a performance task. Although it has an early learning companion assessment for preschool, it does not allow for ongoing formative assessment throughout kindergarten and beyond. Also, it does not allow children to demonstrate competencies in multiple languages.

The **BRIGANCE Early Childhood Screens III** is a suite of norm-referenced developmental screeners for infancy through 1st grade. Two states use the Early Childhood Screen III (K & 1) as a KEA. The Screen III (K & 1) includes 13 items in 3 domains (academic skills and cognitive development, language development, and physical development) and is also available in a Spanish version. Items are performance tasks that require children to demonstrate a small number of simple, discrete skills; are administered in a one-on-one setting; and are scored by the teacher as correct or incorrect. The assessment developer's research base suggests that Screens III suite is valid and reliable as a developmental screener, demonstrating strong internal consistency within domains and overall, moderate correlations with other common assessments, and no significant differences in scores between gender groups or between White and non-White groups, though further research

may be warranted based on changes in U. S. demographics over the last decade.[115] Research shows the tool has high degrees of accuracy in identifying children who may need additional supports or early interventions, including children who may need more challenging learning activities.[116] However, for use as a KEA, it does not provide sufficient data to inform instruction.

What Is a Screener?

Screeners are assessment tools that are typically brief, targeted, and narrow in scope. Common screeners used in kindergarten classrooms typically focus on reading or math.[117] Many preschools also use developmental screeners, which are typically checklists asking about a broad range of behaviors, from language to physical development.[118] Screeners are designed to detect a potential need for intervention or supplemental supports and determine if more detailed assessment is warranted—for example, to assess if a child is eligible for additional educational supports.[119] Although 12 states use a literacy or developmental screener as a KEA, data from screeners are not designed to provide enough detail to be useful for teachers in planning instruction. However, studies show that the use of screeners in early childhood can significantly improve identification rates of developmental delays and mental health needs.[120]

Star Early Literacy is a literacy screener designed for use in kindergarten through 2nd grade. It is a timed, multiple-choice, computer adaptive assessment that children complete independently on a computer or tablet. Test items are scored as correct or incorrect. Three states use Star Early Literacy as a KEA, with at least 29 other states having approved Star as a reading achievement assessment or dyslexia screener. Star Early Literacy includes 27 items in literacy and mathematics and is available in a Spanish version. Studies show moderate evidence that Star Early Literacy is valid and reliable as a literacy screener.[121] However, at least one study suggests that using Star Early Literacy alone led to under-identification of children who later needed literacy support.[122] In addition, it does not meet many of the criteria for a high-quality KEA, as it lacks several essential developmental domains and learning progressions and does not assess children's competencies in natural and authentic settings.

Eleven states use other **state-developed assessments** with a range of characteristics. These state-developed tools vary in content, format, length, and research base. (See Appendix C: Summary of KEA Use Across the United States for more detail on individual states.) Georgia, for example, uses the Georgia Kindergarten Inventory of Developing Skills (GKIDS) Readiness Check, which we highlight later in this report. The Readiness Check meets many of the criteria for high-quality KEAs, measuring development in all five essential domains along learning progressions that are linked to a yearlong kindergarten assessment. However, although the tool underwent evaluation during the development phase, the Readiness Check lacks a robust research base.

Finally, 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 total local district discretion in choosing a KEA.[123]

Table 2
Overview of Six Commonly Used KEAs in the United States

Assessment	States	Number of Essential Domains Covered	Number of Items [a]	Assessment Method	Available Age Range	Linguistic Adaptations
Teaching Strategies GOLD	AL**; AZ**; CO*; DE**; LA*; MA; MN*; NC**; NH*; NJ; VT**; WA**	5/5	73 (+2)	Teacher observation and individual child portfolios; scored along a 9- to 19-point scale	Infancy–3rd grade	2 English Language Acquisition domain items
Desired Results Developmental Profile–Kindergarten (comprehensive version)	CA; CO*; IL**; LA*; MN*; TN**	5/5	47 (+8)	Teacher observation and individual child portfolios; scored along a 5-point or 6-point scale	Infancy–age 12 (different forms)	4 English Language Development domain items; 4 Language and Literacy Development in Spanish domain items
Work Sampling System	MN*; NH*	5/5	73 (+3)	Teacher observation and individual child portfolios; scored along 3-point scale	Age 3–3rd grade (different forms)	3 Language and Literacy for English Language Learners domain items
Maryland-Ohio KRA-R; KRA 2.0	MD; MI; OH; SC [c]	5/5	27	Teacher observation, individual performance tasks, and individual student-selected responses; binary (Y/N) or scored along a 3- or 4-point scale	Kindergarten entry	None
BRIGANCE Screens III (developmental screener)	KY; NV	4/5	13 (+28) [b]	Individual student performance tasks; binary scoring (Y/N)	Infancy–1st grade (different forms)	Directions can be provided in multiple languages
Star Early Literacy (Literacy screener)	AR*; FL; MS	2/5	27	Individual student-selected responses on computer or tablet; binary scoring (correct/incorrect)	Kindergarten–3rd grade	Directions can be provided in multiple languages; Star Early Literacy Spanish available

Notes: For more detail on KEAs used in specific states, see Appendix C: Summary of KEA Use Across the United States.
[a] Optional items are listed in parentheses in this column. [b] The additional 28 items are self-help and social-emotional items. [c] See: Maryland State Department of Education. (2020). *Readiness matters: 2019–2020 Kindergarten Readiness Assessment report*. https://www.readyatfive.org/school-readiness-data/readiness-matters-2020.html (accessed 07/09/21).

* This assessment is one of a menu of state-approved KEA options from which districts can choose.

**Adapted from the original.

Conclusion

A KEA is an assessment that is administered at the beginning of kindergarten, ideally as part of an aligned p–3 formative assessment system. High-quality KEAs must cover relevant content and connect to developmentally appropriate standards and curriculum; be fair for all children and practical for teachers; and be valid and reliable for all children, including children who are dual language learners, who have special needs, and who have diverse cultural backgrounds. KEAs vary in design, with some having more high-quality characteristics than others. In the next chapter, we provide a summary of appropriate and inappropriate KEA use.

Purposes of Kindergarten Entry Assessments

The purpose of any assessment has important implications for its structure and content as well as the way it is administered and scored. Using assessment tools and data in ways for which they were not designed, however, can compromise the inferences that educators and policymakers draw from the assessment findings and the decisions that follow, even with high-quality instruments. Most of the 38 states that have statewide KEAs do not specify in their regulations or codes how KEAs are to be used, with a few exceptions.[124] This chapter describes common uses of KEAs and why some are appropriate or inappropriate, drawing from recent research and policy analyses, including the National Research Council, the Center on Enhancing Early Learning Outcomes, the National Institute for Early Education Research, and the Ounce of Prevention Fund.[125]

Appropriate Uses of Kindergarten Entry Assessments

While the primary use of KEAs is to inform and differentiate instruction in kindergarten, researchers point to other potential uses for KEAs, including engaging with families, understanding the strengths and needs of the early childhood system, and evaluating large-scale initiatives.[126] This section summarizes both the potential of, and the cautions against, these various uses of KEAs

Informing instruction: The most commonly cited purpose for which KEAs are used is informing instruction.[127] Although only eight states specify in statute that KEA data are to be used to inform instruction,[128] a recent study found evidence that at least 34 out of the 38 states that have KEAs identified informing instruction as one of the intended uses of KEA data.[129] Recognizing that children have vastly different early experiences and bring a range of knowledge and skills with them to kindergarten, assessments administered at the beginning of the school year are viewed as critical for teachers as they get to know their students and plan instruction based on students' strengths and needs.[130] KEA data can enable teachers to avoid reteaching content that students already know and to differentiate instruction for small groups of children, students who are dual language learners, or students with special needs, so long as the assessment provides an appropriate level of detail.[131] Experts warn that KEAs should not, however, be used as the sole source of information about children.[132] Because children's development is constantly evolving and is influenced by many factors, data from multiple sources, including families, are important to understand children's strengths and needs.

KEAs are formative, and many are specifically intended to measure children's knowledge, skills, and competencies at kindergarten *entry* to inform initial instructional planning. However, experts point to the benefits of including assessments within a larger formative assessment system starting in preschool and extending throughout the kindergarten year to inform instruction beyond the first months of school.[133]

Engaging with families: Recent research shows that KEAs are increasingly being used to communicate and engage with families.[134] Statutes in seven states require that KEA data be shared with parents or guardians,[135] but there is evidence that KEA data are shared with families in at least 22 of the 38 states that have KEAs—however, states vary widely in how and with whom these data are shared.[136] Some KEAs directly solicit input from families to evaluate children's knowledge and skills, which can be valuable to teachers given that family members observe and interact with children in multiple settings and can offer useful insights. KEA data can also act as a conversation

starter between teachers and families during conferences or home visits. Teachers can use KEA data to encourage parents to provide particular kinds of learning experiences at home and to provide resources and supports to families that are tailored to children's individual needs.

Understanding system-level strengths and needs: Stakeholders at multiple levels—including the state, region, county, city, or district—can aggregate KEA data to understand the strengths and needs of groups of children and to identify system-level patterns, strengths, and gaps.[137] Stakeholders can then use this information to inform equitable resource allocation and investments in early childhood programs and initiatives. For example, stakeholders might identify gaps in developmental indicators across socioeconomic and racial groups and prioritize resources for communities most in need. Addressing early disparities in resources can help communities shrink gaps at kindergarten entry rather than waiting for 3rd-grade data, when gaps can be significantly larger.[138]

Stakeholders at multiple levels can aggregate KEA data to understand the strengths and needs of groups of children and to identify system-level patterns, strengths, and gaps.

Two states, Kentucky and North Carolina, indicate in statute that KEA data can be used to inform efforts to improve early childhood programs and reduce the achievement gap at kindergarten entry.[139] However, a recent study found evidence that at least 10 states use KEA data at the state level to measure progress toward state goals[140] or to identify schools for targeted supports.[141] For example, Washington state has used KEA data to identify district-level inequities in early childhood opportunities and to provide resources to educators and families.[142] Oregon is using KEA data to examine connections between children's access to health care and kindergarten readiness in order to track whether children are receiving the dental, developmental, social-emotional, and preventive care they need.[143] KEA data is also used in Maryland and Illinois to raise awareness of the importance of public investments in equitable early childhood opportunities.[144]

Evaluating large-scale initiatives: Some experts point to the potential benefit of using KEA data to help evaluate large-scale initiatives.[145] If used as a measure of growth, assessment data can be used to track the effectiveness of policy changes or large-scale initiatives, such as state preschool programs.[146] States that use the same assessment for both preschool and kindergarten entry can begin to understand the impact of the preschool program as a whole. A recent study found evidence that at least five states—Alabama, Michigan, Mississippi, Oregon, and Utah—use KEA data as an indicator of the impacts of their state preschool programs.[147] Of these five states, only three use the same or aligned assessment tools in preschool and kindergarten: Alabama uses Teaching Strategies GOLD, Mississippi uses Star Early Literacy, and Utah uses aligned state-developed assessments called the Prekindergarten Entry and Exit Profile and the Kindergarten Entry and Exit Profile.

It is important to note that growth measures only represent the added benefit of an initiative or policy change when they take into account other demographic factors, such as children's home language and socioeconomic status, and states often lack the infrastructure to connect all of the necessary information.[148] Although aggregated child-level data are well suited to inform system-level decisions, experts caution that such data need to be interpreted carefully.[149] Data need to be accurate for all students, including dual language learners, plus there are many other variables affecting children's growth over the course of a year. State-level use for program evaluation also demands rigorous professional development and reliability across assessors.[150]

Misuses of Kindergarten Entry Assessments

Experts point to at least three common misuses of KEAs: evaluating teachers or individual programs, delaying kindergarten entry, or diagnosing learning disabilities.[151] This section provides brief rationales for why such uses of KEAs are inappropriate.

Evaluating teachers or individual programs: Four states—Florida, Kentucky, New Mexico, and Utah—allow, in statute, for KEA data to be used for evaluation of prekindergarten or kindergarten programs.[152] Researchers note that it is inappropriate to use point-in-time data as a measure of teacher effectiveness or program effectiveness because children's scores are affected by a multitude of factors that schools cannot control. Using the data to evaluate individual teachers or schools fails to acknowledge these factors—such as nutrition, health care, and housing—that contribute to children's early development and may disproportionately penalize programs that serve under-resourced communities.[153] In addition, using the data for high-stakes purposes threatens the reliability and validity of the data schools submit by potentially incentivizing schools or programs to rate their students more highly.[154]

Delaying kindergarten entry: A 2016 study by REL-Northwest found that 24% of schools using a KEA reported using assessment results to support a recommendation that a child be held back from kindergarten for an additional year.[155] When used for such purposes, KEA data essentially is used to sort children who are "ready" or "unready" for kindergarten,[156] which conflicts with current understandings of readiness. (See "Defining Kindergarten Readiness" on page 2.) Holding children back from kindergarten is generally discouraged by experts given that kindergarten is a public good from which all children can benefit.[157] In addition, children who have lower scores on KEAs may benefit the most from developmentally appropriate kindergarten instruction that is tailored to their individual needs.[158] Four states—Colorado, Kentucky, Massachusetts, and Ohio—explicitly specify in statute that KEA data may *not* be used for determining or denying entry into kindergarten.[159]

Diagnosing learning disabilities: KEAs can provide one source of data that indicate the need for further testing for a learning disability and can promote early screening, but they should not be the only source.[160] KEAs are diagnostic in so much as they inform instruction but are not intended to diagnose a specific learning disability; they do not provide sufficient detail and were not designed for this purpose.[161] There are specific tools, distinct from KEAs, that are designed to help educators identify children who may benefit from additional comprehensive diagnostic assessments. These tools are designed to detect developmental delays or special needs, such as dyslexia or autism, that require specialized supports. (See "What Is a Screener?" on page 18.)

Conclusion

KEAs can be used to inform instruction, engage families, understand system-level needs, and evaluate large-scale initiatives; however, experts warn that they should not be used to evaluate individual teachers or programs, hold children back from kindergarten, or diagnose a learning disability. Most states with KEAs indicate informing instruction to be an intended use of KEA data, and half report KEA data to families in some form. While effective state-level use has been documented in a few states,[162] at least 11 other states collect and report statewide KEA data but document no evidence of using the data to drive decision-making.[163] In the next chapter, we describe KEA practices in two states and two districts that are implementing KEAs with high-quality characteristics at scale.

State and Local Examples of Implementation

In this chapter, we describe KEA implementation in the context of a broader system of early childhood assessment in two states, Georgia and Illinois, as well as local implementation in the Elgin Area School District U-46 in Illinois and Tulare City School District (TCSD) in California. The purpose of this chapter is to describe examples of comprehensive, scaled-up KEA implementation and data use at the state and local levels to add to the small but growing body of research about state-level KEA implementation.[164]

We selected the two states, Georgia and Illinois, to illustrate comprehensive, statewide KEA implementation. In selecting the states, we examined the quality of their KEAs based on the considerations laid out in "Understanding High-Quality Kindergarten Entry Assessments." While not meeting every criterion, their KEAs exhibit many high-quality characteristics, and both states engage in purposeful evaluation and improvement of their systems. In addition, both Georgia and Illinois emphasize the use of their KEAs for informing and advancing developmentally appropriate instruction and assessment, and they implement state-level strategies to promote appropriate uses of KEA data. Both states also are beyond the pilot and initial implementation of their KEAs and have large, diverse student populations.

Both Georgia and Illinois emphasize the use of their KEAs for informing and advancing developmentally appropriate instruction and assessment.

We chose the districts Elgin U-46 and TCSD based on their high-quality KEAs and repeated references to their work in discussions with state- and national-level experts. These local-level highlights illustrate how aligned preschool-to-elementary assessment systems can be implemented to support developmentally appropriate instruction and how KEA data can inform community initiatives. More details on site selection are in Appendix A: Study Design.

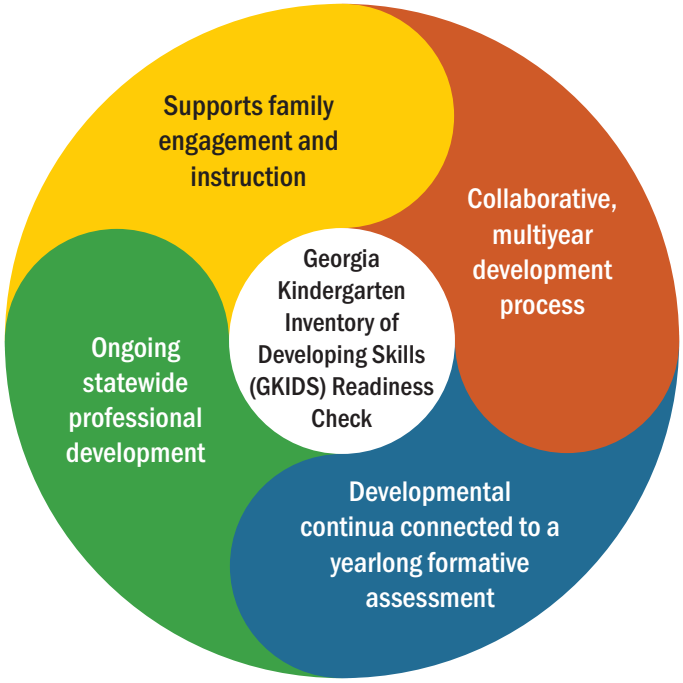
We created these profiles primarily based on public documentation and interviews with administrators, and we intend for them to be purely descriptive. Interviews with teachers and local administrators, who are a critical part of KEA implementation and use, were beyond the scope of this study. However, in "Considerations for Implementation of Early Childhood Assessments," we provide more analysis of the benefits and challenges states have faced during implementation of KEA systems and draw on other research that provides insight into common challenges at the teacher level.

Georgia Kindergarten Inventory of Developing Skills (GKIDS) Readiness Check

Georgia has been assessing kindergarten readiness statewide since 2017 using the Readiness Check. The goal of the Readiness Check, according to the state, is to provide teachers with the information they need to plan individualized instructional supports for children entering kindergarten.[165] The assessment measures skills that Georgia educators deem to be the "most essential" for the beginning of kindergarten. 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.

Georgia's implementation of the Readiness Check has four key features. First, the state developed the assessment and procedures collaboratively with multiple stakeholders and iteratively over a protracted pilot period. Second, the state intentionally integrated the Readiness Check as part of a yearlong formative kindergarten assessment tool that has ongoing funding. Third, the state provides statewide professional development that it continues to improve. Lastly, the state emphasizes using the Readiness Check to inform instruction and engage families. (See Figure 4.)

Figure 4
Key Features of Georgia's Readiness Check Implementation



Developing the Readiness Check collaboratively and iteratively

Georgia is a midsize state with 133,500 children of kindergarten age. It is also diverse: 43% of its children are White, 33% Black, 16% Latino/a, and 4% Asian; more than 1 in 5 children live in immigrant households, and 16% speak a language other than English at home.[166]

Development of the Readiness Check first began in 2014 when the Georgia Department of Early Care and Learning received a federal Race to the Top–Early Learning Challenge grant. Georgia already had a state-mandated suite of kindergarten assessments to assess mastery of kindergarten standards, GKIDS, but it did not yet include an assessment at kindergarten entry. (See "GKIDS: More Than Just a Readiness Assessment.") Georgia also had a high-quality preschool assessment, the Work Sampling System, used throughout its universal state preschool program. However, since not all children are enrolled in the state preschool program (60% participated in 2019[167]), the state did not have comprehensive kindergarten readiness data for all students.

GKIDS: More Than Just a Readiness Assessment

The Readiness Check is just the first part of the GKIDS assessment system, a yearlong suite of kindergarten assessment items intended to measure mastery of state content standards. GKIDS is a formative assessment system intended to provide kindergarten teachers ongoing information needed to guide instruction and offers 1st-grade teachers a snapshot of their students' strengths and needs when students enter 1st grade. Teachers use this assessment throughout the kindergarten year to document children's growth and learning along the developmental progressions across multiple domains. "We really consider it one assessment now," said Assessment Development Director Jan Reyes. "At the beginning, you're doing the [KEA], then you're moving into the learning progressions." The yearlong assessment system covers multiple domains of learning, including English language arts, mathematics, approaches to learning, and personal and social development. Teachers may also administer optional assessments in physical development and motor skills, science, and social studies.

GKIDS is a performance-based assessment system that includes observational items as well as direct assessment. Teachers and schools can choose when to administer assessment items throughout the school year to line up with their curricula and report card schedules. Teachers upload assessment results to a statewide database that provides them class- and student-level reports of student progress.

The Georgia Department of Education's Assessment Department was responsible for the development and implementation of the Readiness Check assessment, but it worked with the Georgia Department of Early Care and Learning closely on its content and administration. The two departments convened a kindergarten assessment working group that included representatives from the University of Georgia; national experts in early childhood education and assessment; a test developer (Pearson); and preschool, kindergarten, and 1st-grade teachers. The working group examined kindergarten entry assessments in other states and ultimately decided to develop Georgia's own assessment that would measure skills that kindergarten teachers determined to be essential for success at the beginning of kindergarten and most useful for planning instruction. "We spoke to other states early in the process," said Jan Reyes, Director of Assessment Development for the Georgia Department of Education. "There are some that are quite lengthy and quite standardized.... We really wanted something that was appropriate for this age of learner—and for our teachers to get the best information to inform their instruction."

Georgia piloted its KEA over 2 years in preschool and kindergarten classrooms (though it was being developed for use in kindergarten only). In 2015 and 2016, the Georgia Department of Education conducted four rounds of pilots, with preschools in the spring semester and kindergartens in the fall. After each round of testing, the test developer received feedback from participants and iteratively revised assessment content, activities, procedures, instructions, and professional development with its committee of educators. Susan Adams, the Deputy Commissioner of Pre-K and Instructional Supports at the Georgia Department of Early Care and Learning, said the feedback from teachers who field-tested the tool was instrumental in selecting standards, designing performance tasks, and balancing observational and direct assessment measures for the KEA. Reyes agreed, saying:

> The involvement of kindergarten teachers in the process is critical.... It goes a long way with other educators in the state to know that their colleagues were involved in the process. It often seems that we're at the state department just making all these decisions and [that] we didn't ask anybody's opinion.

The state also conducted evaluations of the Readiness Check, including an inter-rater reliability study, a survey of kindergarten teachers, and focus groups on usability. However, these studies and their results have not been made public. As noted in "Understanding High-Quality Kindergarten Entry Assessments," documentation of an assessment's validity and reliability is an important component of a high-quality assessment.

Integrating the Readiness Check into a holistic, formative assessment system

The Readiness Check is an assessment given in the first 6 weeks of kindergarten that focuses on skills and concepts that Georgia educators and the research literature consider to be "essential to student success upon entry to kindergarten."[168] It covers three topics in a total of 20 items:

1. Foundations of School Success, which includes items from three domains: approaches to learning, social-emotional development, and physical development and motor skills (7 items)
2. English Language Arts (8 items)
3. Mathematics (5 items)

The Readiness Check, like the GKIDS assessment used throughout the kindergarten year, is based on learning and development progressions that are aligned with the Georgia Early Learning and Development Standards as well as the kindergarten Georgia Standards of Excellence.

Figure 5
Readiness Check Includes 10 Performance Tasks

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

Kindergarten teachers or paraprofessionals score each item using three to five performance levels, ranging from "not yet demonstrating" to "demonstrating" or "exceeding." Ten of the items are direct assessment performance tasks performed with the teacher one-on-one or in a small group (see Figure 5). These items include counting 10 or more classroom objects (e.g., crayons) with one-to-one correspondence and demonstrating understanding of how to read a book from top to bottom and left to right. The remaining 10 items are measured indirectly by observing children. Examples of observational assessment items include evaluating a child's ability to use a writing tool with the correct grip, competence following multistep directions, and drawing pictures and copying letters to communicate. (See Appendix D for sample assessment items.)

The state requires teachers to administer the Readiness Check to all children, regardless of ability. Direct assessment items must be administered as indicated in the assessment manual, although some flexibility is allowed (e.g., the classroom materials used). For observational items, the teacher might observe children in their natural environment, such as during playtime, or conduct an activity designed to elicit a particular skill. "It was really important for us to design the tasks that the teachers were doing to give them flexibility in the administration," said Reyes. "As a formative assessment, they have the ability to reword and present things differently as needed by the student to elicit that knowledge from them." One caveat is that the Readiness Check must be administered in English per state law, although teachers are encouraged to follow up the English assessment with an assessment in the child's home language. Since there are no official language supports provided, children who might be competent at a skill, such as counting, in another language might not be able to fully show their abilities, one of the criteria of a high-quality assessment identified in "Understanding High-Quality Kindergarten Entry Assessments."[169] Providing teachers with task prompts in languages other than English may provide more accurate information about children's skills that teachers could use to scaffold instruction in English.

"It was really important for us to design the tasks that the teachers were doing to give them flexibility in the administration."

Teachers upload student-level Readiness Check data to the GKIDS 2.0 portal. Teachers may access student- or class-level reports at any time by assessment strand, and they may also use data from the yearlong GKIDS assessment for report cards.[170]

Providing statewide assessment training

At the state level, the Georgia Department of Education provides training for educators and administrators on using the GKIDS assessment, materials to support using the assessment to inform instruction, and technical support for the GKIDS data system.

All new kindergarten teachers must complete training on the GKIDS assessment system, including the Readiness Check. There are six online modules that can be accessed through the State Longitudinal Data System website. Modules include an introduction to the KEA and available resources, review of the 20 items, scoring procedures, and how to use data to inform instruction.[171] Five of the modules may be viewed by teachers as a group, an option many schools chose. One

module includes quizzes and practice scoring, so it must be completed individually. Training modules are chunked to allow teachers access to what they need to know, when they need to know it, rather than sitting through hours of training at one time.

To support administration, the Georgia Department of Education publishes an updated Readiness Check Administration Manual each year.[172] It has also developed a resource packet that includes class score sheets and materials that can be used to facilitate assessment activities.[173] As questions arose about administration of the assessment—how to score items and in what setting—the Georgia Department of Education put together a list of frequently asked questions to clarify administration procedures[174] and updated its administration manual. Georgia also developed videos of kindergarten teachers conducting KEA activities and provided targeted trainings to help teachers understand how to use the tool flexibly as part of their normal instructional routines.

In addition, the department created a "Next Steps Guide" based on the kindergarten learning progressions. The guide provides teachers with concrete suggestions for follow-up activities to support students who need extra support or an extension of learning. It also supports instructional planning using assessment results.[175] For example, for children demonstrating difficulty with fine motor skills, the guide recommends activities such as using tongs or tweezers to pick up objects of varying size.

A common concern that administrators heard in the first year of Readiness Check administration was that it was yet "another thing to do" on top of an already busy workload. According to Reyes:

> We had heard comments previously about the yearlong GKIDS [system] of teachers having to stop instruction and "do GKIDS," and we never intended it that way. We really wanted it to be something that teachers could just do as part of their natural instruction and have it not be "just one more thing."

The department therefore provided professional development to help teachers understand their flexibility and how to integrate the Readiness Check more seamlessly into their instruction. For example, teachers can conduct their observations of children's task performance during regular classroom activities, and some performance tasks (such as counting 10 items with one-to-one correspondence) can be measured as children engage in center activities.[176] If teachers have already observed a behavior for another assessment, they do not have to elicit the behavior again specifically for the Readiness Check—they can just record the appropriate score. "We really had to work through that with the training and the additional resources and support that we were providing," said Reyes. She added:

> We also had districts who were already implementing similar things. They had their own district-developed assessments where they were already assessing letter recognition or things of that nature. And we tried to stress to teachers that this is not a case where you need to do things multiple times. If you are assessing letter recognition for some other purpose, use that data to determine where the student is on the Readiness Check. [You don't] have to sit the kid down again and have them go through the letters again. We talked a lot about working smarter, not harder.

The department also used training models and videos on assessment implementation to provide greater clarification about the flexibility afforded to teachers and to reinforce the message that they do not need to repeat activities or assessments done in other parts of their curricula. Reyes added, "I think that helped, but it also just took them a little bit of time to integrate what they were already doing."

In fall 2017, the state conducted a follow-up survey and focus groups with kindergarten teachers regarding the usability of the Readiness Check. Over 92% of survey respondents indicated that they understood how to administer the Readiness Check, and approximately 81% agreed that the Readiness Check was helpful in making instructional decisions. Focus group participants reported that observing children to administer the Readiness Check was useful for instruction.[177] Though the number of survey respondents and focus group participants was not reported, these findings provide initial evidence that the state's ongoing improvements to professional development have helped teachers in using the Readiness Check.

Using the Readiness Check to inform instruction and engage families

The Readiness Check was developed primarily for planning and designing individualized instruction, and all materials associated with the assessment make this explicit. The first page of the assessment manual states, "The primary purpose of the Readiness Check is to highlight knowledge and skills critical for student success in learning, **solely to guide instruction**" (emphasis in original).[178] By keeping the assessment to 20 items, the state balanced the need to provide sufficient information to teachers while minimizing the administrative burden for teachers. Deputy Commissioner Adams explained, "It was really important for us to keep it a formative assessment and to try to keep it, to the extent possible, something that teachers could work into their typical routine[s]."

Georgia has not conducted an evaluation of how teachers are using the Readiness Check, which could inform its development. But Reyes says that at the site level, teachers are using the yearlong GKIDS assessment to inform next steps with their students. She partly attributes its use for instruction to the way the assessment is designed to focus on learning progressions rather than discrete skills or standards. She explained:

> Some of the feedback we heard from teachers was that it had helped them because they can see on the progression where the student needs to go next. There were several examples where teachers told us, "I would not have known that child could go that far the way we used to do this assessment."

Reyes also reported that in addition to informing instruction, some districts use the Readiness Check scores to inform teacher professional learning for skills that are weak schoolwide. Due to varied school start dates, ranging from July to September, some schools have already been instructing for two and a half months by the time state data are available, rendering data less useful for informing professional learning statewide.

The Readiness Check can also be used for family engagement. The state worked with Georgia Public Broadcasting to develop a website devoted to helping parents understand the Readiness Check and its uses. The website features videos, produced by the state broadcasting network, on the benefits of

the tool and stresses that it is used for instruction, not to determine a child's eligibility or to label a child as "unready" for kindergarten.[179] The website also features videos and information that show families how they can support their children at home. As Adams described:

> One of the key things for that website was for parents to really understand what the standards meant. Not "my child can say the ABC letters," but "my child can identify them." Or not "[measuring] if my child can count," but "what it mean[s] to have one-to-one correspondence."

The website has videos of teachers administering tasks such as the counting activity in which teachers explain the purpose and how it can be performed at home with everyday materials.

The Department of Early Care and Learning additionally encourages preschool teachers to talk to families about the Readiness Check to help them understand the transition to kindergarten. The department has developed flyers in English and Spanish for parents to use during conferences.

A key difference between Georgia's KEA and KEAs in other states is that results of the Readiness Check are not published statewide and, thus, are not used for resource allocation. The Department of Education provides state data to districts only for comparison purposes. Statewide results of the end-of-year kindergarten assessment are aggregated in a summary report showing the number of students who demonstrated standards mastery.[180] However, these data are not widely disseminated and are not disaggregated by district, race/ethnicity, or language status, which make them less useful for understanding achievement trends. The choice not to publish the data was to keep a focus on formative assessment and instruction—and to prevent its misuse. It may, however, be a missed opportunity to examine local or regional trends in school readiness.

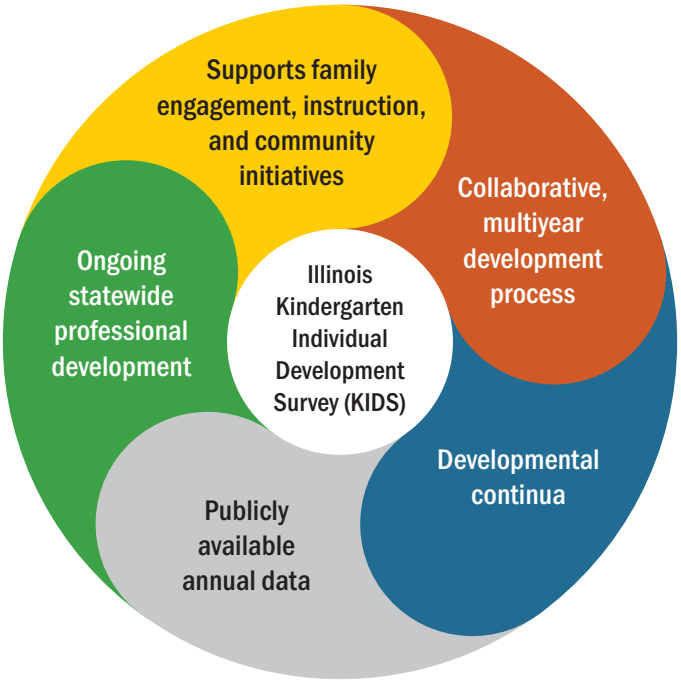
The department still gets requests to use the Readiness Check for other purposes, such as to evaluate preschool programs or to screen children for dyslexia. But staff steer districts back to its use for instruction and informing professional learning for preschool and kindergarten teachers.

Illinois's Kindergarten Individual Development Survey

Illinois uses the Kindergarten Individual Development Survey (KIDS) to assess all kindergarteners within the first 40 days of school. 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.

Illinois's implementation of KIDS has five key features. First, the state developed KIDS through a multiyear process involving multiple stakeholders. Second, KIDS is based on observations of children and placing their behaviors on developmental learning trajectories. Third, the state requires KIDS in all kindergarten classrooms and publishes statewide data annually. Fourth, the state works with philanthropic partners to provide and improve ongoing KIDS professional development. Finally, schools and communities use KIDS to support families, target instruction, and inform community initiatives. (See Figure 6.)

Figure 6
Key Features of Illinois's KIDS Implementation



Developing KIDS through a multiyear stakeholder process

Illinois is the sixth most populous state in the United States, with a population of over 12.6 million. In 2019, Illinois had 152,252 kindergarten-age children. Racially, about 51% of Illinois children are White, 25% are Hispanic or Latino/a, 15% are Black or African American, 5% are Asian or Pacific Islander, and 4% identify with two or more races. Twenty-five percent of children live in immigrant households, and 24% speak a language other than English.[181]

Illinois implemented KIDS statewide in 2017 after 5 years of piloting. Development began in early 2010 when the superintendent of the Illinois State Board of Education convened the Kindergarten Readiness Stakeholder Committee, made up of early childhood teachers and administrators, advocates, university faculty, and experts, to explore the idea of a kindergarten readiness assessment. In a 2011 report, the committee recommended that the state board identify a formative observational assessment that could be administered multiple times throughout the kindergarten year.[182] The committee also identified three overarching goals for a KEA: providing data for planning instruction, connecting with families and early childhood programs, and improving early learning experiences.[183]

The Illinois State Board of Education established a KIDS Advisory Committee in 2011 and began piloting KIDS in 2012 with 65 volunteer districts out of 761 districts that offer kindergarten.[184] In the two following years (2013–15), partial rollout continued while the state board iteratively revised implementation guidelines and professional development based on pilot data and user feedback. With the help of a $1.5 million grant from the Joyce Foundation, the state board hired and trained coaches in 2014–15 to support teachers in conducting observational assessment. The state required

districts to name a "KIDS Contact"[185] who was responsible for ensuring that teachers completed the required professional development in 2016–17, and statewide implementation and district data reporting requirements began in 2017–18.

Observing children and identifying their progress on learning trajectories

The KIDS instrument is based on the Desired Results Developmental Profile–Kindergarten (DRDP-K). Similar to the DRDP-K, KIDS offers three assessment versions of varying length. Of the three versions, only the shortest, the 14 State Readiness Measures, is required for all districts. This version includes 14 measures across four developmental domains:

1. Approaches to learning/self-regulation (3 measures)
2. Social-emotional development (2 measures)
3. Language and literacy (5 measures)
4. Mathematical thinking (4 measures)

However, the state recognizes that this short version represents a narrow set of specific skills and only provides a proxy of readiness at the group level.[186] The state encourages districts and teachers to go beyond the 14 State Readiness Measures and include additional measures and domains. A longer version, called the 5 Domains of Readiness, includes 29 measures and covers the additional domain of physical development. The longest assessment version, the Comprehensive, includes 55 measures in 11 domains, including health, history and social studies, science, visual and performing arts, English language development, and Spanish language development.[187]

Each measure on the KIDS assessment is aligned with state standards for early learning and kindergarten,[188] with items mapped on the Illinois State Board of Education website, although only the 55-item Comprehensive version represents full alignment.[189] KIDS is also aligned with four preschool assessments used across the state: the DRDP, the Work Sampling System, Teaching Strategies GOLD, and the Early Learning Scale.[190]

Each measure in the KIDS assessment represents a child skill or competency and is scored along a 6-point continuum. For every measure, each of the six ratings in the scoring continuum includes a descriptor and concrete examples of child behaviors that demonstrate where children are on the continuum. For example, "Self-Control of Feelings and Behavior" is a core measure in the approaches to learning/self-regulation domain. (See Appendix E.) Children at the earliest stages of development demonstrate the "capacity to regulate emotional or behavioral reactions in some moderately stressful situations, occasionally needing adult support." A concrete example of child behavior would be if a child "frowns, but goes to a different play center when an adult communicates that there are too many children at this play center." At the other end of the continuum, children are able to "use mental strategies to manage emotions, with some success." A behavioral example would be if a child "declines to play with the magnets when they become available in order to continue with another activity started while waiting for the magnets."

Teachers complete KIDS for every incoming kindergarten student during the first 40 days of the kindergarten year. Ratings for each measure are based on teacher documentation of child behaviors and interactions observed over multiple authentic, developmentally appropriate activities in their natural classroom settings.[191] In addition to direct observation, teachers may use child work samples to inform their ratings. The state also encourages teachers to ask for input from family members

who have opportunities to observe child behaviors over time across a wide range of activities and settings, which can help teachers to understand more deeply what each child knows and can do.[192] Teachers assign ratings based on the preponderance of evidence in the data that they've collected throughout the 40-day observation period.

KIDS Aligns With Four Preschool Assessments

Illinois was intentional in aligning KIDS with early learning and kindergarten standards and with the four most commonly used preschool assessments in the state. Because the DRDP is the foundation for KIDS, there is a one-to-one correspondence between measures on KIDS and the DRDP. The state has created an alignment document to show the correspondence between KIDS measures and specific measures on the other three commonly used assessments—the Work Sampling System (WSS), Teaching Strategies GOLD (TS GOLD), and the Early Learning Scale.

The Illinois State Board of Education provides the alignment documents on the KIDS website for both the 14 State Readiness Measures and the 29-measure 5 Domains of Readiness version. By providing these alignment tools for districts and teachers, the state saves time and energy at the local level and facilitates the development of consistent learning goals and experiences for children prior to kindergarten entry, helping to build a more coherent system.

Figure 7 below is an excerpt from the alignment document for the 14 State Readiness Measures that shows the alignment of the KIDS measure "Self-Control of Feelings and Behavior" with the state early learning standards and items from the WSS, TS GOLD, and the Early Learning Scale.

Figure 7
KIDS Alignment With Illinois Standards and Preschool Assessments

Approaches to Learning and Self-Regulation (ATL-REG)				
KIDS Measure	**Illinois Early Learning and Development Standards (IELDS)**	**Works Sampling System, 5th Edition Performance Indicators for Preschool-4**	**Teaching Strategies GOLD Objectives, Dimensions, and Indicators**	**Early Learning Scale Item, Strand, and Indicators 4-5**
TL-REG 2: Self-Control of Feelings and Behavior **Definition:** Child increasingly develops strategies for regulating feelings and behavior, becoming less reliant on adult guidance over time.	**Learning Standard 30.a** Identifies and manages one's emotions and behavior. **Learning Standard 31.c** Demonstrates an ability to prevent, manage, and resolve interpersonal conflicts in constructive ways.	**I.A.2** Shows some self-direction. **I.A.1** Demonstrates self-confidence. **I.B.2** Manages transitions. **I.D.5** Begins to use simple strategies to resolve conflict. **I.D.4** Begins to identify feelings and responds to those of others.	**1.** Regulates own emotions and behaviors. **9.** Uses language to express thoughts and needs. **3.** Participates cooperatively and constructively in group situations. **3a.6.** Initiates the sharing of materials in the classroom and outdoors. **3b.6.** Suggests solutions to social problems.	**Social Emotional 5: Self-Regulation.** Uses self-regulatory strategies flexibly and reliably and spontaneously incorporates them into social interactions. **Social Emotional 6: Working with Others** Collaborates in planning and organizing an activity to accomplish the group's goals and solve problems.

Source: Adapted from Illinois State Board of Education. (2019). *KIDS instrument crosswalk for the 14 State Readiness Measures*. https://www.isbe.net/Documents/KIDS-EL-Instrument-Crosswalk-14-Required-Measures.pdf (accessed 12/18/20).

Figure 8
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.)

Because the KIDS assessment is observational and based on developmental progressions along a continuum, it 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.[193] KIDS guidelines advise teachers who do not speak a child's language to solicit assistance from another familiar adult who does. In addition, the 14 State Readiness Measures version has alternate language development measures for use in bilingual classrooms, and there is an optional 4-measure English language development domain for children who are dual language learners. There is also an alternate Spanish form for children in Spanish-language or bilingual-immersion classes.[194]

For children with special needs, guidelines state that for any of the KIDS domains, any child who functions at a level higher than what is typical for a 24-month-old should be assessed only on those KIDS domains.[195] Because the tool is observation-based, teachers can document and rate competencies regardless of children's skill levels. Teachers can document communication in any mode—including signs and gestures—and can complete partial KIDS assessments for some children based on individual differences in ability. Some accommodations are allowed, including communication devices or adapted writing utensils.[196]

Administering KIDS and reporting data at the state level

In Illinois, the state legislature mandates a KEA, and KIDS is required by the Illinois State Board of Education. The state supports KIDS with a team that provides assessment implementation and data support. The state also supports educators and districts by providing training, professional development, and coaching. State KIDS supports and materials are provided at no cost to school districts.

Administration of KIDS and data collection are required by the state Administrative School Code.[197] However, districts are held to these requirements only when the state provides "funding sufficient for the cost of reporting or access to professional development," which is intended to protect districts from KIDS being an unfunded mandate. The code specifies that districts must appoint a district "KIDS Contact" and that all kindergarten teachers complete initial professional development on how to implement KIDS.

Administratively, KIDS is managed by the Illinois State Board of Education Assessment Department, which has an early childhood–designated position responsible for KIDS oversight. This administrator acts as a liaison between the Assessment Department and other departments, including the Early Childhood, Research, and Communications departments, and is supported by a KIDS training and coaching coordinator who is responsible for KIDS professional development and coaching. This coordinator works closely with the Early Childhood Department, which manages the KIDS coaching contract.

The Illinois State Board of Education provides annually aggregated state-level KEA data on the KIDS website. Public data include downloadable spreadsheets with district- and state-level data for every fall from 2017 to 2019. In addition to data spreadsheets, the state board and the Robert R. McCormick Foundation produce an annual report that provides background on KIDS and state-level summaries of the data.[198] Data are reported in three developmental areas: mathematical thinking; language and literacy; and social-emotional development, which combines the social-emotional domain and the approaches to learning domain. Data are reported for specific subgroups of students—students identified as having special needs, students who are dual language learners, and students eligible for free or reduced-price meals—as well as by ethnicity. The state board also reports district- and state-level KIDS data on the Illinois Report Card website, with visualizations for the 14 State Readiness Measures and data by developmental area and student ethnicity.[199] Supplemental resources, such as recorded webinars about KIDS data, are also publicly available on the website.

State-level data are aggregated from a KEA data system, KIDStech. KIDStech was developed by WestEd based on DRDPtech, which WestEd previously developed for California. After the 40-day observation period, teachers log on to KIDStech to enter data on individual children during a 14-day data entry window.[200] Once ratings for the 14 required measures are entered, they are always available to teachers and reflect real-time data entries, allowing teachers to access individual- and group-level data for instructional planning.[201] District- and state-level aggregate data become available later in the year after processing. In a recent implementation study, teachers reported that data entry requires a considerable time commitment and is a cumbersome process, suggesting that KIDStech could be improved.[202]

Supporting ongoing KIDS professional development with philanthropic support

To support implementation, the Illinois State Board of Education has designed a series of professional development modules on KIDS administration. Kindergarten teachers are required to attend a one-day professional development workshop to learn how to implement KIDS (which previously was a two-day training). Currently, due to the coronavirus pandemic, all professional development sessions are virtual. In fall 2020, the state board offered nine virtual, synchronous implementation workshops in which teachers engaged with KIDS coaches and each other in real time over the course of a full day. Districts provide teachers with a substitute for the day of their

sessions, if necessary. 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. It also covers use of KIDStech. Professional development completion records are maintained at the district level by each district's KIDS Contact.

The Illinois State Board of Education has hosted a KIDS Summit since 2017, an annual statewide event that brings together teachers, school leaders, and district administrators to learn about KIDS.

In addition to the initial professional development modules, the Illinois State Board of Education, in partnership with the Robert R. McCormick Foundation and with some support from the Steans Family Foundation, has hosted a KIDS Summit since 2017, an annual statewide event that brings together teachers, school leaders, and district administrators to learn about KIDS.[203] Session topics include play-based instruction, supporting transitions into kindergarten, and KIDS data use.[204] As part of this event, the state board recognizes teachers and administrators across the state for their successful use of KIDS to improve their teaching practice by highlighting them as models and presenters. In December 2019, the state selected an inaugural cohort of "KIDS MVPs" through a statewide nomination process.[205] The state board communicates MVP stories, and how MVPs are using KIDS to inform practice, to a wide audience.

Tailored coaching is another core component of state-level KIDS support. Illinois has been able to provide KIDS coaches, who were initially recruited and trained in 2014–15, through its partnership with the Joyce Foundation. There are currently six dedicated KIDS coaches, each assigned to a region of the state. Coaches are available to districts, free of charge, to provide or facilitate a range of professional development activities, including book studies, networking events, workshops, classroom observations, one-on-one teacher side-by-side coaching, and data analysis sessions.[206] These activities are coordinated and tailored with district KIDS Contacts and administrative personnel and are open to district staff or partners interested in KIDS, including noncertified staff (e.g., cafeteria staff), certified staff (e.g., music, art teachers), prekindergarten and 1st-grade teachers, early childhood providers, and others.[207] Coaching topics can include conducting observation and evidence collection, implementing play and developmentally appropriate practice, connecting KIDS to standards, engaging families, and increasing inter-rater reliability—the amount of agreement between teachers when assessing the same child.

For the first few years, coaching support was optional, and interview respondents indicated that districts were slow to take up the support. As a result, coaches engaged in more proactive outreach to districts after examining regional KEA data. As educators became more comfortable with implementation, coaches began shifting from generalized implementation support to a more individualized one-on-one approach with teachers, focused on using KIDS data to inform instruction. Regular systemic data collection from teachers, such as surveys or focus groups, may further help inform the state's investments in KIDS professional development and coaching and the extent to which they are having positive effects on KIDS implementation.

Using KIDS to support families, target instruction, and inform community investments

One of the primary goals of KIDS is to facilitate ongoing communication with families. KIDS documentation encourages teachers to use KIDS measures, data, and resources to communicate and engage with families. Teachers can use the KIDS summary report to connect with families by having families verify accuracy and generate ideas for supporting children both in and out of school.[208] If districts choose to use the 29-measure 5 Domains of Readiness version of KIDS, they can access an automatically generated parent report, developed by WestEd, that includes customized suggestions for how families can promote learning and development at home.

A second primary goal of KIDS is improving early learning experiences in kindergarten and prior to school entry. At the state level, an intended primary use of KIDS is to inform kindergarten instruction. Using KIDS at kindergarten entry can help teachers identify what children know and can do in order to inform instructional planning, and using KIDS at multiple points throughout the year can continue to provide formative data to guide instruction. Although KIDS is only required at the beginning of the kindergarten year, the state encourages ongoing formative use of the tool throughout the school year. To this end, the state and its partners invest significant resources to provide the supports described in the previous section, such as the annual summit and regional coaches. A recent implementation study reported that some teachers, particularly those who are implementing a play-based approach, find KIDS to be beneficial for teaching and instructional planning. However, the same study reported that implementation and the extent to which KIDS data were used for informing instruction varied greatly across the state.[209] Periodic statewide implementation studies may help inform the state on the extent to which teachers are using KIDS data to inform and improve instruction.

Another way KIDS data can help improve early learning prior to kindergarten entry is by informing state investments in the early care and education system. The state's KIDS data, disaggregated by student characteristics, are intended to help "raise awareness, generate conversation, and direct state and local investment."[210] The most recent report, from 2019–20, shows that just 29% of children had skills and abilities rated as "kindergarten ready" on all three domains, and 37% were deemed ready in zero domains. Readiness levels were particularly low for early math skills. Data also reflect large reported gaps by race and ethnicity.[211] The data, which indicate "systemic inequity in both funding and opportunity," emphasize the importance of providing quality supports to children and families before kindergarten, according to the report.

Although interviewees for our study did not identify state-level policy changes that have been made as a direct result of KIDS data, the Illinois State Board of Education and early childhood advocates have used KIDS data to illustrate the importance of state investments in early childhood programs. Governor JB Pritzker's fiscal year 2020 budget added an additional $50 million to increase the quality of and expand access to early childhood programming. Pritzker's fiscal year 2021 budget funded early childhood programs at the highest level in state history. As a result, nearly 10,000 more students attended early childhood programs before kindergarten, and 655 programs increased the quality of their services.[212]

Additionally, there were several examples of local- and district-level shifts and initiatives that have come about through KIDS. These include using KIDS data to make the case for offering full-day kindergarten, moving toward play-based instruction, and aligning prekindergarten and kindergarten instruction or assessments. For example, the Carole Robertson Center for Early Learning, which

provides early childhood and after-school services in the communities of North Lawndale and Little Village in southwest Chicago, used KIDS data to inform its collaborative community approach to supporting children and families through the kindergarten transition. The center creates opportunities for principals, families, kindergarten teachers, early childhood teachers, after-school teachers, and site directors to discuss KIDS data in conjunction with data from other assessment tools used in preschool, such as the Classroom Assessment Scoring System (CLASS), which measures student–teacher interactions. These conversations help all stakeholders understand children's development more deeply and reflect on how to improve instructional and out-of-school supports for children without "drilling down on children with ditto sheets or flashcards," said Sonja Knight, Vice President of Programs and Impact at the Carole Robertson Center. Bela Moté, Chief Executive Officer of the center, said KIDS data sparked the impetus for the change in the center's approach:

> We keep talking about kindergarten readiness, and now we have another tool that tells us that Black and Brown children are not showing up ready for kindergarten.... It almost felt like we were watching the same movie again and again, and as much as conversation was taking place around equity [in] access and equity [in] high quality, where we [were] falling short as a sector was the equitable outcome.

In another example, the Niles Township Early Childhood Alliance is using KIDS data to examine systemic early childhood opportunity inequities for children from low-income families. Through coaching provided by Illinois Action for Children, the Alliance is engaging in a community action research project to try to address these inequities. Having identified the systemic inequities in KIDS data, the Alliance is currently engaged in collecting additional data from families through focus groups and surveys in order to design and launch a community initiative focused on providing access to early childhood opportunities that meet families' needs.

Though nascent, these types of community-level action steps demonstrate the potential for KIDS to inform system-level changes and provide examples of how KIDS data might be used at the state level. The next section focuses on a local school district west of Chicago, Elgin U-46, that has been able to leverage KIDS to provide more developmentally appropriate and aligned early childhood learning experiences.

Elgin Area School District U-46 in Illinois: Local Use of the KIDS Assessment

Elgin Area School District U-46 in Illinois uses KIDS data to inform changes in classroom and district practices. It uses a district-customized, 21-measure version of KIDS as an anchor assessment in its report card and its communications with families. The developmental trajectories build teachers' understanding of child development that forms the foundation of its play-based kindergarten program. Finally, to align prekindergarten and kindergarten, the district shifted to using the DRDP in preschool.

Aligning observational assessment with expansion of full-day, play-based kindergarten

Elgin U-46 covers 90 square miles in Chicago's northwest suburbs and includes 11 communities across three counties.[213] The district serves over 38,000 students in preschool through 12th grade. There are over 100 languages spoken in Elgin U-46, and more than 30% of students are dual language learners, with the most commonly spoken languages being Spanish and English. Overall, the student population is 55% Hispanic, 26% White, 8% Asian, 6% Black, 3% multiracial, and 1% American Indian.[214]

Elgin U-46 was a volunteer pilot district for KIDS starting in 2012. Kindergarten teachers in the district could voluntarily participate in the pilot, which used the Comprehensive (55-item) version for every student. Initial piloting was challenging, according to Peggy Ondera, Director of Early Learner Initiatives at Elgin U-46. At the time, kindergarten teachers taught two part-day sessions each and also completed a report card that was not linked to KIDS. This meant that teachers were completing two assessments for 50 to 60 children, three times a year (the pilot required three administrations of KIDS). Between 2012 and 2016 the number of teachers using KIDS decreased due to the demands of completing so many assessments. In 2016–17, a year before the Illinois State Board of Education required KIDS statewide, Elgin U-46 embraced KIDS and required the 14 State Readiness Measures. The district chose to continue to administer it three times per year even though the state only required it once at the beginning of the year. Ondera explained:

> In order to make it 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 that integral part of teaching and assessing. So I teach, I assess, [and] then I reevaluate and reteach if necessary.

The decision to require KIDS coincided with two other related district activities that would make the assessment manageable. First, Elgin U-46 launched a full-day kindergarten program that shifted from a teacher-centered direct instruction approach to a play-based approach. This shift was a good fit, according to Ondera, because teachers have observed that "if you're not doing a play-based model, it's really hard to collect the KIDS evidence because the two fit so well together. If you're doing a more traditional sit-and-get model, you really have a hard time collecting that evidence in order to rate [KIDS measures]." Ondera described KIDS as instrumental in helping to "ground teachers in what is developmentally appropriate and what are reasonable expectations and milestones" as the district shifted to play-based learning. The district's play-based approach is aligned with the developmental continua in KIDS; is guided by a framework that was developed by a committee of preschool, kindergarten, and 1st-grade teachers; and targets instructional practices that prioritize structured play activities guided by teachers. (See "What Is Play-Based Learning?" on page 4.)

Second, the district replaced its kindergarten report card indicators with KIDS measures. This shift helped create buy-in among teachers, since it reduced time spent on other assessments. In order to fully align the new report card with the play-based approach as well as with district content-based curricula, the district added 7 measures to the required 14 State Readiness Measures, including addressing development of socio-dramatic play, sharing behaviors, writing, and scientific thinking. Teachers also tracked progress over multiple data collections throughout the year. These changes made KIDS manageable but also meaningful for Elgin teachers. Ondera shared that tying data from three administrations of the district's enhanced KIDS assessment to the report card contributed to teachers feeling much more invested in KIDS as part of a coherent assessment system. As she said, "Kindergarten teachers really saw that connection between what they were teaching and what they were assessing." Several other districts in Illinois, including West Chicago, Valley View, and North Chicago, have taken a similar approach.

Providing professional development on KIDS from preschool through 1st grade

One of Elgin U-46's top priorities for KIDS was to support teachers in making the shift to using the observational assessment to inform instruction in a play-based approach. To accomplish these goals, the district launched 8 days of professional development for kindergarten teachers.

The topics covered during these professional development experiences included implementation of the KIDS assessment; principles of developmentally appropriate practice; and a session on play-based learning that included setting up environments, schedules, and learning centers. In ongoing professional development, teachers practice examining KIDS data, using the continuum to determine a child's next developmental step, and then using that information to inform lesson planning for groups or individual children. Teachers also bring evidence to meetings to discuss what children know and can do. According to Ondera, a solid understanding of child development, professional development on how to use the tool, and ongoing support for teachers implementing KIDS are critical components to successful implementation of the KEA.

Using KIDS for family engagement is another topic of professional learning in Elgin U-46, consistent with the state's focus on family engagement. Teachers invite families to provide evidence of children's abilities to gain a more comprehensive sense of what children know and can do. The district also asks teachers to discuss KIDS data on the report cards with families and help support families in fostering children's development outside of school.

Elgin U-46 extended KIDS training to 1st-grade teachers to encourage them to use KIDS kindergarten data to inform their instruction.

After its professional development series for kindergarten teachers, the district extended KIDS training to 1st-grade teachers to encourage them to use KIDS kindergarten data to inform their instruction. "We've now got this full-day kindergarten model, [and] our teachers are saying that kids are much further along at the end of the year in both reading and math. I don't want to lose those gains in 1st grade by teaching the same way that we've always taught," explained Ondera. First-grade teachers became interested in professional development because they were "talking to kindergarten teachers and understanding that children were going to look different" when they got to 1st grade, she said. The training, which took place over the summer with kindergarten teachers, introduced teachers to KIDS, taught them to read the summary reports, and allowed teachers to identify how they would modify beginning-of-year instruction based on the knowledge and skills of their incoming classes. For example, teachers decided to spend less time on adding and subtracting numbers up to 10 because KIDS data showed that many children appeared to have already mastered this skill by the end of kindergarten.

To align district practices even further, Elgin U-46 transitioned to using the DRDP in prekindergarten so that there would be continuity in assessing what children know and can do as they transition to kindergarten. Ondera shared that the district "wanted to see that alignment and be able to look at children's growth and development over time." The district does not yet systematically connect prekindergarten and kindergarten teachers using DRDP and KIDS data, which could be an opportunity for further system alignment. Similarly, working more closely with child care providers by sharing DRDP and KIDS data could present opportunities to improve children's early experiences.

Using KIDS to inform strategic community initiatives

The Elgin community, in partnership with the school district, has used KIDS to coalesce around supporting children's holistic development. The Elgin Partnership for Early Learning is a group of stakeholders from businesses, hospitals, preschools, libraries, social services, city and state agencies, advocacy organizations, and parent groups that work together to enact a shared vision of a coordinated

high-quality early learning system. The group uses KIDS data to leverage and respond to community "strengths, needs, and gaps" through multiple initiatives and coordinating activities.[215] For example, data showed that, overall, children were demonstrating less developmental progress in mathematics than other domains. In a collaborative effort, the district helped place baskets of mathematics-focused books and activities in laundromats, doctors' offices, and restaurants. In addition, the district helped develop signage in neighborhood parks that encourages families to engage in activities that promote mathematics competencies, such as counting. The district also assigns liaisons who work with child care centers and providers to share KIDS data and help them promote development along KIDS measures.

Elgin U-46's example shows how KIDS can be used productively as a kindergarten assessment that both informs instruction and supports an understanding of community strengths and needs. Not all districts are as far along as Elgin U-46 in their use of KIDS, and not all see it as useful, Ondera noted. However, Elgin U-46 is part of a collaborative of districts committed to using KIDS productively, a community she hopes will grow.

Tulare City School District in California: Local Use of the DRDP-K

Tulare City School District (TCSD) in California chose an observational assessment—the DRDP—as a kindergarten assessment to help educators move toward more developmentally appropriate practice. It has used the assessment as a tool for building teachers' understanding of child development and for strengthening alignment between its preschool, kindergarten, and 1st-grade classes.

Support developmentally appropriate teaching and learning through use of child assessment

TCSD is located in Tulare, CA, in the heart of the San Joaquin Valley, and serves over 10,000 children in preschool through 8th grade.[216] About 24% of students are dual language learners, with the most commonly spoken languages being Spanish and English.[217] Overall, about 79% of students participate in the free and reduced-price meals program,[218] and the student population is 79% Hispanic or Latino/a; 15% White; 3% Black; 2% Asian, Filipino, or Pacific Islander; 1% multiracial; and less than 1% American Indian.[219]

TCSD started implementing the DRDP-K districtwide in 2015 in transitional kindergarten (preschool for older 4-year-olds) and kindergarten. California does not require a KEA, although it does require the use of the DRDP assessment in its state preschool program three times a year. The state provides the DRDP-K to kindergarten classrooms free of charge along with a suite of training materials to districts that want to implement it.

TCSD decided to use the DRDP primarily as an authentic tool for teaching children in a more developmentally appropriate way than was previously the case in kindergarten. District leadership aimed to make kindergarten look more like rigorous preschool, with a play-based instructional approach, and less like upper-grade instruction, which is often dominated by extended seat time and teacher-driven instruction. Jennifer Marroquin, Director of Learning Loss Mitigation/Early Childhood in Tulare City School District, 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. And that's kind of where that shift happened.

Using child assessment systems to support p–3 alignment

TCSD uses the DRDP to align standards and curriculum from prekindergarten through 2nd grade. As the head of early childhood education, Marroquin has oversight over the district's state-funded preschool, transitional kindergarten, and kindergarten. Marroquin explained that the district was aware of the disconnect between preschool and kindergarten and wanted to figure out how they could "use the data from one program to the next to be able to help children instead of saying, 'This was a great year—now let's just completely restart in kindergarten,' which is typically what people do." Using a single assessment system would help bridge this disconnect.

The rollout of the DRDP in TCSD was couched in a larger professional learning series about shifting to a more developmentally appropriate practice. Marroquin worked with kindergarten teachers to help them understand the rationale for the shift. As she described:

> I really wanted to make sure we let teachers know … what we're currently doing is not working. We can't keep drilling and killing. Our kids can't sit at desks for long periods of time working on worksheets when they can barely hold a pencil.

The district conducted in-depth professional development related to the DRDP, presented in the framework of developmentally appropriate practices and child development. Professional development is concrete and connected to teachers' practice. For example, teachers use actual evidence from a DRDP assessment to calibrate their ratings and identify next steps for instruction. Professional development also includes topics like how to organize a schedule for collecting DRDP evidence and how to effectively engage instructional aides. Marroquin explained that once past the initial implementation training, whole group professional development is less effective and that she aims to differentiate sessions based on teachers' questions and needs.

Marroquin additionally worked with grades 1 and 2 to identify the anchor standards for those grades, based on DRDP measures and California State Standards, and created customized DRDP reports focused on these standards. Each year, teachers receive the reports from the previous grade for their incoming students.

Marroquin described the DRDP as giving teachers an understanding of how skills and competencies develop incrementally over time, providing teachers a road map for instructional planning. She also stressed that because DRDP measures require teachers to observe children's skills and competencies in the context of peer interactions and authentic activities, it is easier to administer when classrooms incorporate play-based learning activities. The district reinforced its support for play-based learning by investing financial resources in this approach, such as by purchasing dramatic play materials for every kindergarten classroom.

Enabling smoother implementation of assessments with district-level support

TCSD also invested in an online platform, Learning Genie,[220] to make DRDP data collection and reporting less burdensome for teachers. Previously, teachers collected evidence in binders and recorded data by hand. Providing a more manageable way for teachers to document evidence and record data supported teachers and reinforced the importance the district placed on the shifts to more developmentally appropriate instruction and assessment.

Marroquin attributes the shift to the DRDP to a superintendent and a district team that values early childhood education. "I was nervous in the beginning to roll [DRDP] out to kindergarten," she said. "I've heard of other districts trying to roll it out, and it bombs before it ever gets out of the water because teachers will see there are 50 measures—that's a lot to do for 25 kids three times a year."

Marroquin also stressed that a change in practice must be headed by a leader who understands developmentally appropriate practice, believes in the work, and, critically, has teachers' trust. She also believes the district's hands-on approach has contributed to teachers' buy-in:

> You can't just have anybody walk in there going, "We're going to [developmentally appropriate practice], and this is how we're going to do it." You have to have someone who believes in it, understands it, and can clearly articulate it and answer questions with the staff.... I think they've appreciated the fact, too, that [the district early childhood team and I are] there to work alongside them.

Marroquin finds value in the DRDP as a tool for teaching because it "gives you key teaching points and teaching levels to know how to move kids along [each] domain," acting as a "tool for the teachers because it gave them an outline of how to teach standards and concepts in a developmentally appropriate manner."

Shifting to the DRDP accompanied by strong professional development 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. According to Marroquin, the district has also used the DRDP as a model in creating standards-based report cards for all grades.

Overall, the DRDP is a part of how TCSD is enacting its vision of how it wants to educate children. According to administrators, once teachers understood the need to make a shift to a more developmentally appropriate approach, they were receptive to using the DRDP to make their classrooms more developmentally appropriate.

Conclusion

In this chapter, we provided descriptions, from the administrator perspective, of how KEAs are being implemented and used, both at the state and local levels. In all four examples, the respective KEAs are intended to inform kindergarten curriculum and instruction and align it with developmentally appropriate early learning principles. Georgia provides an example of how a KEA can be integrated seamlessly into an existing developmentally appropriate assessment system based on learning progressions. Illinois provides an example of a statewide tool based on learning progressions that has a small set of mandatory measures but includes a more comprehensive set of additional measures. Elgin U-46 provides an example of how KEA data can inform a community-wide collaboration for more cohesive and high-quality early learning opportunities. Finally, Tulare City provides an example of how a KEA can be used to drive shifts to more developmentally appropriate instruction along the early childhood continuum. In "Considerations for Implementation of Early Childhood Assessments," we analyze KEA practices and supports across multiple states and districts and identify common features that administrators report are supportive of KEA implementation. Although collecting teacher-level data was beyond the scope of our study, in the next chapter, we also interweave administrator viewpoints with teacher-level perspectives from other studies.

Considerations for Implementation of Early Childhood Assessments

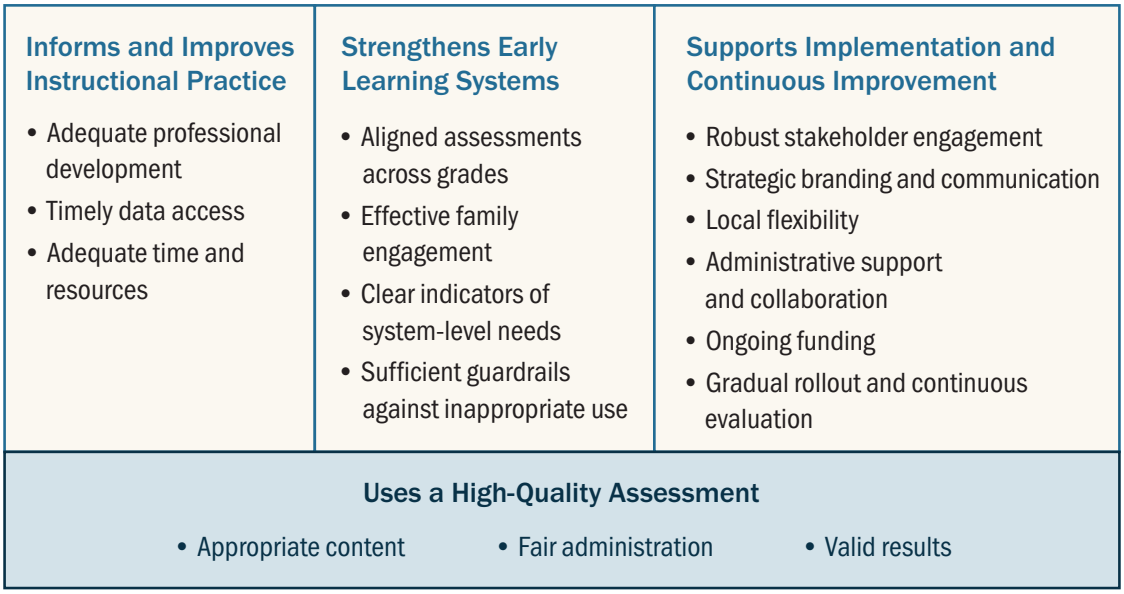
This chapter offers insights about large-scale implementation of KEAs and other early childhood assessments from the perspectives of system leaders in the states we studied. It looks across the four sites described in the previous chapter—the states of Georgia and Illinois and the districts of Elgin U-46 and Tulare City—to explore these cross-cutting themes from the state or district administrator perspective. When appropriate, we also include practices identified from interviews and publicly available documents from six additional states: Colorado, Kansas, Maryland, Michigan, North Carolina, and Washington. We selected these states because of their promising practices related to certain aspects of implementation and to represent a range of contexts, approaches, and stages of KEA implementation. (For more details on state selection, see Appendix A: Study Design.)

There is no single approach to adopting a KEA, but the different models we explored share some common features. These included efforts to:

- inform and improve instructional practice;
- strengthen early learning systems; and
- support implementation and continuous improvement.

These efforts are predicated on the selection of a high-quality assessment as the foundation. (See Figure 9.) For each theme, we provide examples and identify ongoing challenges.

Figure 9
Elements of High-Quality Implementation of Early Childhood Assessments



Informing and Improving Instruction

The primary purpose of a KEA should be to inform developmentally appropriate instruction and support all children's development, including dual language learners and those with special needs.[221] Every state and district in our study identified informing and differentiating instruction as a key purpose of its KEA and selected a holistic and inclusive assessment based on learning trajectories for this purpose.

Yet the implementation literature suggests that there are still many challenges when it comes to using KEA data for instruction. Studies from North Carolina[222] and Ohio,[223] as well as Maryland, Oregon, Pennsylvania, and Washington,[224] show that at least in the early years of KEA implementation, teachers often lacked understanding of their KEA's purpose and did not see it as related to instruction. These studies identify a few key challenges: a lack of professional development that clearly identifies the purpose of the KEA and how it is used, challenges with technology and lack of access to timely data, and not having the time and resources for high-quality KEA administration. In this section we discuss steps that states are taking to improve in these areas.

Providing adequate and differentiated professional development

Effective KEA systems include adequate, ongoing, and differentiated professional development for teachers and administrators.[225] Teachers need high-quality professional development to understand the purpose of the KEA, effectively administer assessments, and use the resulting data to inform instruction. Administrators and leaders also need to understand the purpose and instructional value of KEAs to be able to support teachers. The states and districts we studied have started to build comprehensive and differentiated professional development systems to meet these needs of teachers and administrators, but these efforts are still a work in progress.

To support new teachers on the use of the KEA, Georgia has a comprehensive system of training and resources. It has chunked its KEA training sessions into six virtual modules, allowing teachers to complete the professional development in parts and at their own pace and to easily review material. Modules cover direct assessment activities, observational assessment, student performance ratings, and KEA use to inform instruction.[226] These include several videos of teachers administering tasks and talking about how they used the data. Georgia also offers supplemental support resources, such as a guide on next steps that provides concrete instructional activities for children who are not yet meeting developmental benchmarks, and also for children who are exceeding them.[227]

States may partner with other agencies to leverage expertise and resources. For example, Maryland partners with Johns Hopkins to provide online mandatory implementation training for kindergarten teachers. All teachers in any state using the consortium's KEA are required to participate in this training. Professional development components include online modules, interactive scoring scenarios and videos, a simulation exercise, and other resources.[228] One notable aspect of the training is that it includes a video-based certification process. Certification requires teachers to pass a performance assessment that involves watching videos of children engaged in classroom activities and rating the videos using the assessment instrument. This certification process can provide some confidence that the professional development teachers are receiving is sufficient in helping teachers gain a basic understanding of the KEA. The online system provides additional supports and modules until teachers achieve certification. In a state survey, most teachers reported that they understood how to administer the KEA and use data to inform their instruction.[229]

States and districts also provided more advanced professional development after initial implementation to help teachers understand how to use the data for instructional planning. In Illinois, Principal Consultant Terri Lamb with the Illinois State Board of Education shared that during the first few years of implementation, the focus of professional development was on the mechanics of administering the KEA and complying with the data-reporting requirements. As described in the chapter titled "State and Local Examples of Implementation," state trainings were initially 2 days in person but have since been consolidated to a single day, which is currently offered online. However, once "everybody was pretty well trained" on how to administer the KEA, said Lamb, "it became pretty obvious that what our districts were looking for was a lot more support on how to really turn the data into something useful on the local level." She continued:

> There were a lot of districts that weren't asking those implementation questions anymore. And so, as we move through this third year, we decided it was time to really provide some different supports and to really give them what they've been asking for, which is not just [to answer], How do I enter the data? But also, What do I do with the data now that I have it? And what does this mean for my community? And how do I take this information and tailor my classroom to fit the needs of my students?

Illinois uses its statewide KEA conference, described in the previous chapter, to provide differentiated supports. Session topics include play-based instruction, supporting transitions into kindergarten, and KEA data use, and sessions are designed for educators with varying degrees of experience with the KEA.[230] Recognizing that expert coaching can support teachers' effective implementation and use of KEAs,[231] the state also funds a cadre of six KEA coaches who are available to provide individualized support for teachers, sites, and districts.[232] As educators have become more comfortable with implementation, coaches began shifting from generalized implementation support to a more individualized one-on-one approach, with teachers and administrators focused on using KEA data to inform instruction. Coaches conduct proactive outreach to districts after examining regional KEA data.

Illinois funds a cadre of six KEA coaches who are available to provide individualized support for teachers, sites, and districts.

Coaches also have begun to provide supports for administrators in response to a 2019 report,[233] which found that Illinois teachers expressed frustration at the lack of support, and even pushback, from their site leaders and district administrators. Participants indicated that low administrator support and misaligned district-level policies were significant barriers to KEA implementation and use,[234] and they identified the need for professional development targeted toward leaders and administrators. Coaches, therefore, have begun to focus on supporting administrators in understanding the KEA and its purpose, and they are using the assessment as an opportunity to teach educators and principals about developmentally appropriate instruction. However, with just six coaches at the state level, much of the coaching and professional development will need to be taken up at the district level.

In Elgin U-46, teachers engaged in concrete professional development that helped them make connections between KEA ratings and how to plan instruction that would foster children's development based on the progressions laid out in the tool. Similarly, in Tulare City School District,

teachers engaged in data-driven professional development sessions that made the connection between KEA data and instruction concrete and explicit. Teachers spent time together analyzing children's behaviors and evidence for scoring the KEA as well as discussing how to provide support to children to help them progress along the developmental continuum.

Washington has also recognized the need for differentiating professional development as educators become more comfortable with KEA implementation. As Karma Hugo, Director of Early Learning at the Washington Office of the Superintendent of Public Instruction, stated, "We really believe and understand that the [initial implementation] training is just the floor level" and that teachers need a deeper level of professional development to make the KEA meaningful for their practice. She added, "Even though perhaps we built some muscle around how to actually implement and do some of the technical aspects of the assessment, … we've needed more resources, not less" to ensure that educators have adequate professional development regarding how to use data for improving instruction.

One finding of note related to professional development is that stakeholders rarely mentioned content regarding teacher bias. Although teacher bias is a critical consideration of assessment, particularly for children who are dual language learners, are from diverse cultural backgrounds, or have special needs, it does not seem to be commonly included in KEA-related professional development. Recent studies report that states commonly encounter challenges around KEA administration when teachers are working with students who are dual language learners or students who have special needs[235] and recommend explicit professional development tailored to each state's context.

Teacher and Leader Preparation Programs' Role in Supporting Assessment Use

Educator preparation programs can play an important role in supporting the use of developmentally appropriate practices and assessments, including KEAs. Several interviewees mentioned that teachers and leaders often are underprepared in their knowledge of child development, how to conduct observational assessments, and how to use data to inform developmentally appropriate instruction. Some noted that teacher preparation programs did not adequately prepare educators, including principals, to conduct observational assessments. Educator preparation programs can help address these challenges by working with states to include content related to commonly used tools such as KEAs. They can also update their offerings related to developmentally appropriate practices and observational assessment, data use and inquiry, and family engagement in their teacher and principal preparation programs.

Ensuring timely data access

The states we studied also support the use of KEAs for instructional improvement by providing teachers and site administrators immediate access to class- and child-level data, which they have tried to provide in easy-to-decipher formats. Implementation studies show that KEA platforms are consistently a challenge for educators, who often have difficulty navigating assessment websites or entering data or who struggle with malfunctioning tablets when entering data.[236] In some cases, lack of access to timely reports has made educators less likely to use or share their data, although many

states are moving toward making reports available online in real time.[237] Data infrastructure was also noted by interviewees as a source of frustration. They noted that teachers can find learning to navigate a complex data system a challenge, reducing buy-in and morale and potentially impacting data entry. Terri Lamb, Principal Consultant from the Illinois State Board of Education, said that "a streamlined data collection system that makes it really simple for the teachers" is key.

In Georgia, teachers can access their class KEA data immediately through the state's online platform, which includes information on where children are scoring along the learning progressions in the yearlong kindergarten assessment system. Teachers can continue to revisit data as needed to inform instructional planning. Teachers have access to a live chat feature that is integrated into the online platform, staffed by the state's department of education assessment office, for technical assistance. Monthly assessment newsletters provide refreshers for how to access and enter data, information about the different reports that are available, dates for professional development workshops, KEA updates, and links to data-related resources.[238]

Maryland also offers an online platform that affords teachers direct and immediate access to KEA data for instructional planning and has recently invested in building a user-friendly dashboard system so that teachers can access and interpret the data more easily. It appears to be working: According to a 2018 survey of all KEA implementers, 92% of teachers agreed or strongly agreed that they felt comfortable using the online system.[239] Judy Walker, Early Learning Branch Chief at the Maryland State Department of Education, said that "teachers were really working with the live data—they weren't waiting until the end of the window—and [were] do[ing] what we were hoping they would do, which [was] to start using the data for instructional planning as soon as they complete[d] an assessment on any one child."

TCSD chose a third-party platform called Learning Genie to manage its assessment data. As a general portfolio documentation data platform, Learning Genie met the needs of the district well and allowed teachers to eliminate the paper-based binders of evidence that they were keeping for each child. For Jennifer Marroquin, Director of Learning Loss Mitigation/Early Childhood in the district, implementing Learning Genie was an easy, high-leverage district strategy to make data collection and organization more manageable for teachers. Preschool, transitional kindergarten, and kindergarten assessment data are linked together within the Learning Genie system, which connects to the district data system.

Providing adequate time and resources for high-quality implementation

In addition to intentional and ongoing professional development and coaching, teachers need time to administer the KEA, document evidence, and record data, on top of the time they need to use the data to inform instruction. Multiple studies have documented that teachers find it challenging to complete the KEA in a timely fashion and believe it consumes valuable teacher time at the start of the year.[240] The time pressures were particularly acute for assessments that required teachers to assess students one-on-one, but teachers also reported that KEA administration is burdensome for observational assessments that can be implemented during regular instructional activities, since teachers still need time to organize evidence, record and enter data, and interpret data reports. Studies show that teachers often struggle with having enough time to complete their assessments and upload data.[241]

States and districts implemented a number of strategies to reduce the burden related to implementing a KEA. One strategy many states have used is shortening or streamlining their assessments. According to a study of seven states' KEAs, most states dramatically shortened the length of their assessments in response to teacher feedback.[242] For example, in 2015, Maryland cut 13 items from its assessment after a teacher survey that indicated the assessment took 1–2 hours per student. These changes, however, must be balanced against the assessment's ability to provide sufficient information to inform instruction.

Streamlining the number of assessments that teachers are required to administer is another way that states and districts have freed up teachers' time. In the West Chicago Elementary School District in Illinois, using an observational assessment led to changes in the district's overall assessment approach for kindergartners. In 2015, the district conducted approximately 20 different assessments with each kindergartener, several of which were administered one-on-one and required teachers to interrupt instruction. Now the KEA is the only tool used in kindergarten, and teachers complete it while observing children during play and naturally occurring interactions.[243] Districts may naturally eliminate other assessments after becoming familiar with the KEA.

Release time and support from aides or paraprofessionals are also ways that states and districts support teachers in implementing KEAs. In an implementation study in Illinois, teachers identified various supports that would help them implement the KEA, including release time, classroom aides, professional development for support staff, and access to communities of practice.[244] In Maryland and Washington, the state supported KEA implementation by providing resources to districts for release time and substitutes for teachers as well as for instructional aides or paraprofessionals who could assist in documentation or entering data.[245] These supports were provided with one-time state and philanthropic grants, however, and have since been discontinued, indicating the need for ongoing state investment.

Teachers identified various supports that would help them implement the KEA, including release time, classroom aides, professional development for support staff, and access to communities of practice.

Strengthening Early Learning Systems

In addition to using their KEAs to inform instruction, some states and districts are moving toward stronger early learning systems by using their KEAs to align preschool, kindergarten, and 1st grade; promote family engagement; and inform strategic initiatives. The states and districts we studied are also guarding against misuses of KEA data.

Aligning with preschool and 1st grade

Many of the states we studied are trying to strengthen their early learning systems by creating alignment throughout the early years. KEAs can serve as a cornerstone of this alignment as they are integrated into a system of developmentally appropriate standards and assessments that connect learning and development across preschool and the early elementary grades. This alignment seems

to be taking place in select districts, such as Elgin U-46 and TCSD, as described in the previous chapter, and there were some promising practices among states, although use of the KEA in a way that supports alignment from preschool through 1st grade is still largely aspirational.

One way KEAs have supported p–1 alignment is through standards alignment. All of the states and districts in the study had alignment between the state's KEA and its early learning standards, connecting instructional goals between preschool and kindergarten. Some states and districts go further by not only aligning standards but also using aligned assessment tools in preschool and kindergarten. Some districts, such as Elgin U-46 and TCSD, have also extended KEA alignment through 1st grade.

In Georgia, the KEA is aligned with the Georgia Early Learning and Development Standards, which are based on developmental continua and span birth to age 5.[246] In Illinois, the KEA is aligned with the Illinois Early Learning and Development Standards, which outline developmentally appropriate expectations for learning and development for 3-, 4-, and 5-year-olds in prekindergarten.[247]

KEAs also present opportunities for aligning preschool and kindergarten assessment systems, although Washington is one of only four states that use the same assessment in early childhood and kindergarten.[248] The assessments are both based on Teaching Strategies GOLD (TS GOLD), with some modifications to the kindergarten assessment. Other states create the opportunity for aligned preschool and kindergarten assessments, but choices are left up to districts. In Illinois, for example, preschools may choose the DRDP (which is aligned with the state's required KEA) from a menu of four options. In North Carolina, the KEA is based on TS GOLD, which is approved for use in early childhood settings as well. Colorado allows districts to choose their KEA and preschool assessment from a menu of options, and TS GOLD and HighScope's Child Observation Record are state-approved instruments in both grades. Similarly, Kansas uses the Ages & Stages Questionnaires (ASQ) in kindergarten, and its use is encouraged in preschool as well (though it is a screener, not a full assessment). Amanda Petersen, Director of Early Childhood at the Kansas State Department of Education, said that one of the advantages is that many families are already familiar with the ASQ, which helps ease the transition process.

At the local level, both Elgin U-46 and TCSD have adopted the same assessment tool in prekindergarten and kindergarten. In Elgin U-46, Early Learning Director Peggy Ondera "wanted to see that alignment and be able to look at children's growth and development over time" from prekindergarten through kindergarten. Ondera convened a committee of preschool educators to investigate several options for switching their prekindergarten assessment. The committee unanimously chose the DRDP, on which Illinois's KEA is based. TCSD uses the DRDP in preschool, transitional kindergarten, and kindergarten.

States that do not have aligned KEAs and preschool assessments have, in some cases, provided alignment documents that show how their two assessments compare. In Georgia, universal preschool programs use the Work Sampling System (WSS), while kindergarten teachers use the KEA. Georgia's Department of Early Care and Learning provides an alignment document that demonstrates the correspondence between WSS measures and Georgia Early Learning and Development Standards, which act as the bridge between the WSS and the KEA.[249] In Illinois, the three most common early childhood assessments are the WSS, TS GOLD, and the Early Learning

Scale.[250] The Illinois State Board of Education provides an alignment document that identifies the correspondence between these assessments, its KEA, and the Illinois Early Learning and Development Standards.

Even with aligned assessments, the extent to which data connects children's actual preschool and kindergarten experiences is unclear. In most cases, preschool assessment results are not systematically shared with kindergarten teachers.[251] In a rare example, Washington state regulations require districts to connect with early learning providers around the KEA.[252] What districts do to meet this requirement varies, but common practices include participating in shared professional development, sharing preschool transition reports, reviewing data together with early learning providers, coordinating classroom visits, and cohosting events for families.[253] Other states and districts could similarly connect educators by leveraging their already aligned infrastructures to bridge preschool and kindergarten using data.

KEAs, in some cases, contribute to alignment between kindergarten and 1st grade, primarily in instances when the kindergarten assessment is used at various points throughout the kindergarten year. For example, the Georgia KEA and associated yearlong learning progressions are connected to standards in 1st grade and beyond.[254] In Morrison Community Unit School District 6 in Illinois, kindergarten teachers share children's KEA profiles with 1st-grade teachers to help them plan their instruction.[255] Elgin U-46 and TCSD provide 1st-grade teachers with an end-of-kindergarten report that documents their incoming students' progress toward the 1st-grade standards.

Engaging families

States and districts identified KEAs as a tool to assist educators in engaging with families. When used intentionally, KEAs can provide families with information and resources to help them support their children and to ease the transition into kindergarten.[256] Family insights can also help educators understand their students better, enhancing their ability to tailor instruction and support.[257] However, a 2016 study of four states in their first years of KEA implementation found that the majority of local district administrators and teachers had not shared KEA results with families because they did not receive data quickly enough, had concerns about communicating results to families, or did not see the results as useful.[258] These are challenges that states are still working to address through improved communication materials for districts, more timely and relevant data reports, and increased time for teachers to meet with families.

In Georgia, the state has worked with its public broadcasting system to develop materials to help families understand the purpose of the KEA and support children's development at home. The state has also developed a KEA website for families to use on their own or with a teacher that includes various resources in English and Spanish.[259] Resources include explanations of each competency assessed with the KEA and why it is important for development. Each competency is demonstrated in a video and is accompanied by activities that children can do at home to foster development of the skill. Teachers are expected to share student reports with families and to collaborate with families to promote children's development. Susan Adams, Deputy Commissioner of Pre-K and Instructional Supports in the Department of Early Care and Learning, said that preschool teachers are also encouraged to use materials available on the KEA website to promote smooth transitions to kindergarten, "for things like family conferences, the resources that they send home, and [talking] to families about transitioning to kindergarten."

In Illinois, the state provides districts with supports such as an online family tool kit and outreach materials in several languages for educators to send or use in conferences. Teachers are expected to share KEA data with families and to use the KEA to engage in ongoing dialogue with families, although how that is done is left up to districts. The Robert R. McCormick Foundation is currently funding a video project that will develop short videos for families explaining each of the KEA measures and activities that can help support children's development. In Elgin U-46, the Alliance for Kindergarten Readiness initiative uses KEA data to engage preschool and kindergarten teachers in conversations about practices that support families in the transition to kindergarten. The KEA also guides teachers to collect evidence and observations from family members to inform item ratings.

Family engagement is one of Kansas's primary reasons for using the ASQ, a developmental screener that Kansas uses in place of a KEA. Districts ask families to respond to a survey about their children's development, and their responses are intended to foster a conversation between schools and families. The decision to engage families with the ASQ was motivated by a community engagement process, explained Amanda Petersen, Director of Early Childhood at the Kansas State Department of Education. "We heard that when we're thinking about early childhood, it's not just schools. They play a really important role, but they're not the only actor. It's critically important that we engage with families." She noted that this process has developed a level of family engagement she hopes to see replicated in other grade levels as well.

"When we're thinking about early childhood, it's not just schools. They play a really important role, but they're not the only actor. It's critically important that we engage with families."

Washington uses a version of the Teaching Strategies GOLD as its KEA but added a customized family engagement component.[260] Schools are allowed to use up to three school days in kindergarten for family connection, during which teachers meet individually with each child's family, and each family shares relevant information with the teacher. Teachers in the early years of KEA implementation reported that this engagement was useful to learn about children's strengths and ways families support learning at home.[261] Karma Hugo, Director of Early Learning at the Washington Office of the Superintendent of Public Instruction, explained that the state's KEA "was really meant to be a system shift to thinking about the early continuum in our public schools and how we're really not so much about school readiness but [about] our process for getting to know children and families and understanding how to best meet their needs."

Informing system-level needs

At the state policy level, while a majority of states that have a KEA indicated that they want or 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, a potential missed opportunity. This finding is consistent with a recent report that found that many states are collecting but not necessarily using KEA data.[262] We did, however, find examples of how KEA data are beginning to inform statewide conversations about system-level needs and to spur community initiatives at the local level.

At the state level in Illinois, KEA data are helping to grow awareness of inequity in children's early childhood experiences. In addition to making the data publicly available and publishing an annual statewide report, the state partners with philanthropic organizations, which provides opportunities for data-driven discussion at the state level. Cornelia Grumman, Education Director at the Robert R. McCormick Foundation, asserted:

> KIDS data is now increasingly grounding so many conversations across the state about readiness. I hear everybody referring to our latest data as a starting point for conversations about how much work we have to do to improve our early learning system. It also comes up regularly in the governor's Early Childhood Funding Commission.

In order to inform data-driven conversation, the foundation hosts a data retreat every year that convenes data analysts from the Illinois State Board of Education together with external data experts to identify themes in the data and to interpret data patterns. The Illinois governor's pre-COVID-19 2020 budget had appropriated $540 million for early childhood, the largest in state history, after the 2018 KIDS report showed varying levels of readiness between groups along racial, language, and socioeconomic lines, with lower ratings across all four KEA domains for children who were Black, Hispanic, or Native American; children who were dual language learners; or children who were from low-income families.[263] Jackie Matthews, Executive Director of Communications at the Illinois State Board of Education, explained that the KEA is intended to be used to gain "a better understanding of where children have access to high-quality early learning experiences and [where] the state may need to invest in more access and higher quality." The state's KIDS coaches monitor KEA data at the state level to target tailored support such as coaching to schools and teachers who may need implementation or domain-specific instructional supports.

Washington, too, is trying to use KEA data to inform systemwide decisions. According to Hugo:

> We've had some success … thinking about early learning as a strategy for closing the achievement gap.… We've done some work to analyze … where they're coming in at kindergarten and what their performance is on the state test in 3rd grade. And, you know, it's really eye-opening.… We can tell a lot at kindergarten; we shouldn't be waiting until 3rd grade to understand where children are and [should] really try to, if necessary, fill gaps or … pivot—because children are coming in with more skills than we might be assuming.

At the local level, districts in Illinois have used KEA data to make the case for increased investments in publicly subsidized preschool and access to early learning. For example, in Niles Township in Illinois, an advocacy and community action group called the Early Childhood Alliance is using KEA data to inform inquiry cycles in which it identifies a community goal and sets action plans to improve outcomes for children. The current issue the group is addressing is the systemic differences in KEA ratings for children from low-income backgrounds. It is currently planning to conduct caregiver focus groups and a survey to investigate what families need and want regarding access to early learning opportunities. Chicago Public Schools is incorporating the KEA into a 5-year vision to increase readiness ratings by 50% by the year 2025.

Georgia is also using KEA data to support informed decision-making at the local level. It has supported regional "birth-to-8 teams" that use the KEA data to inform how they support access to early childhood education and connect early learning programs to elementary schools. Susan Adams, Deputy Commissioner of the Department of Early Care and Learning, said they try to help districts at the local level in thinking about how they support children and families as they transition into kindergarten because the alignment between the early childhood birth-to-5 programs and school-age programs looks different in each community.

Avoiding unintended, inappropriate uses

In the chapter "Understanding High-Quality Kindergarten Entry Assessments," we discussed three inappropriate uses of KEAs that can impact children or families negatively: using KEA data to (1) diagnose learning disabilities, (2) delay kindergarten entrance, or (3) evaluate individual teachers or programs. These uses can especially impact children who are dual language learners whose skills and competencies may not be accurately reflected in KEA data or whose data can be easily misinterpreted. While none of the states we studied were using data statewide for these purposes, 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, such as dyslexia. According to a 2016 report,[264] 65% of schools with a KEA reported using KEA data for screening for students who may need additional evaluation. Some states use tools as KEAs that are specifically designed as screeners (e.g., the Ages & Stages Questionnaires or BRIGANCE Early Childhood Screens III), which focus on measures that are indicative of an underlying developmental or learning challenge but are not nuanced enough to inform instruction. While developmental screening is important for early identification of children's special needs, use of a KEA that is not designed to identify special needs is inappropriate, as it measures skills and competencies that are more likely associated with varied early childhood experiences versus a developmental delay or disability. Interviewees frequently acknowledged that KEA data can be used to triangulate with data from other sources but recognized that it should not be used as the only source of data. Jan Reyes, Director of Assessment Development at the Georgia Department of Education, guards against such misuses and shared:

> We still tend to have requests for data for purposes that are not the intent of the assessment, so we tried to define early on what we intended it to be used for.… We've had requests about using the Readiness Check as a screener for different things, like as a dyslexia screener, or as a screener for [the] early intervention program, and we've really pushed back and said no—it was not designed for that purpose. That is not appropriate use of this data.… It is a formative assessment to provide information to teachers.

Some study participants also expressed concerns that locally, the KEA was being used to determine children's kindergarten eligibility. According to Richard Lower, Director of Preschool and Out-of-School Time Learning at the Michigan Department of Education, "kindergarten readiness assessments were becoming, de facto, a literacy test for placement" rather than being used for their intended purpose of informing instruction. Research suggests that holding children back from kindergarten based on KEA scores has decreased significantly over time, although it still happens and can disproportionately affect children of color and children from low-income backgrounds.[265]

Finally, participants mentioned interest in using the KEA to determine whether some preschools were performing better than others. It is important to note that the KEAs in question were not designed to produce reliable or valid results for these purposes, as scores can be confounded with effects from other factors and experiences in early childhood, such as access to health care, degree of transiency, and parent stress, to name a few (see "Understanding High-Quality Kindergarten Entry Assessments"). The use of KEA data to identify preschool program 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

Bringing a KEA to scale statewide and ensuring its success takes measured steps. The states and districts we studied support KEA implementation and continuous improvement by involving multiple stakeholders, engaging in strategic branding and communications activities, allowing for local flexibility, providing administrative support and collaborating across departments, securing ongoing funding, and building in gradual rollout and continued KEA improvement.

Involving multiple stakeholders to build buy-in and leverage resources

To develop buy-in and leverage existing resources, states involved multiple stakeholders in the KEA adoption and implementation process, including district leaders, families, philanthropies, community advocates, universities, and teachers. States engaged with stakeholders for a range of purposes across various stages of KEA implementation. Table 3 provides a summary of these stakeholders and their major contributions.

Finally, several stakeholders mentioned the importance of public endorsement of their state's KEA from state and district leaders, such as governors, superintendents, and district-level administrators, in order to promote buy-in and facilitate KEA implementation. One Georgia administrator stressed that kindergarten readiness is a "nonpartisan issue" at the state level and that the "conservative leadership" has "been very supportive of birth to 5 … so that's been key." This demonstrated a unified message that high-quality early childhood experiences for all children is a state-level priority that transcends party lines. An interviewee from a different state also mentioned the challenge of a change in administration that shifts priorities or the focus of the KEA. Administration changes resulted in new constraints regarding the KEA's scope, requiring a pivot from a comprehensive tool to a briefer one.

The unified message is that high-quality early childhood experiences for all children is a state-level priority that transcends party lines.

Table 3
Key Stakeholders Contributing to State KEAs

State	Type of Partnership/Group	Stakeholders	Contribution
Georgia	KEA Advisory Groups	Content experts Researchers University faculty Educators	KEA development Pilot feedback and revisions
	University Partnership	University of Georgia	KEA development
	Community Partnership	Georgia Public Television / Public Broadcasting System	KEA video resources
Illinois	Kindergarten Readiness Stakeholder Committee [a]	Educators Community advocates University faculty Content experts	Initial KEA recommendations
	KEA Advisory Group [b]	State Board of Education administrators Educators Assessment and data experts Philanthropic partners	KEA implementation guidance
	Philanthropy Partnership	Advance Illinois Ounce of Prevention Fund Robert R. McCormick Foundation Steans Family Foundation The Joyce Foundation	Resources and support for website development, communications materials, expert consultants, crosswalk documents, data analysis and interpretation, coaching program, and annual state summit
	Community Partnership	Public library system	Staff support Meeting spaces Community outreach
Kansas	Kansas CAN Focus Groups [c]	Participants from around the state	Visioning for state educational priorities
	Community Partnership	American Academy of Pediatrics (state chapter) [d]	Input on developmental screener
Maryland	University Partnership	Johns Hopkins University	Professional development Data management
North Carolina	University Partnership	University of North Carolina at Chapel Hill [e]	Data collection and analysis
Washington	University Partnership	University of Washington [e]	Data collection and analysis
	Philanthropy Partnership	Bill and Melinda Gates Foundation [f]	Substitute teachers Paraeducators

Note: These stakeholders were mentioned in interviews and in documents reviewed and do not represent an exhaustive list of participants who have supported states' KEAs.

Sources: [a] Kindergarten Readiness Assessment Stakeholder Committee. (2011). *A new beginning: The Illinois Kindergarten Individual Development Survey*. https://www.isbe.net/Documents/kindergarten_survey.pdf. (accessed 12/17/20). [b] Illinois State Board of Education. (2016). *Illinois School Readiness Initiative*. https://www.isbe.net/Documents/KIDS-IL-School-Readiness-Initiative.pdf (accessed 12/17/20). [c] Kansas State Department of Education. (2020). *Kansas vision for education*. https://www.ksde.org/Agency/Fiscal-and-Administrative-Services/Communications-and-Recognition-Programs/Vision-Kansans-Can (accessed 07/09/21). [d] Kansas State Department of Education. (2019). *Kansas Kindergarten Readiness Snapshot Fact Sheet*. https://www.ksde.org/Portals/0/ECSETS/FactSheets/FactSheet-KindergartenReadiness.pdf (accessed 12/17/20). [e] Joseph, G., Soderberg, J. S., Stull, S., Cummings, K., McCutchen, D., & Han, R. J. (2020). Inter-rater reliability of Washington state's kindergarten entry assessment. *Early Education and Development*, *31*(5), 764–777. https://doi.org/10.1080/10409289.2019.1674589; Little, M., Cohen-Vogel, L., Sadler, J., & Merrill, B. (2020). Moving kindergarten entry assessments from policy to practice: Evidence from North Carolina. *Early Education and Development*, *31*(5), 796–815. [f] 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.

Strategically branding and communicating about the KEA

Across the states, strategic communication about the tool's purpose and use helped create collective understanding, increase perceived buy-in to the KEA, engage policymakers, and guard against the inappropriate use of the KEA.[266] However, Cornelia Grumman of the Robert R. McCormick Foundation identified "basic branding"—including websites; informational videos; and one-pagers for administrators, teachers, and families—as an important task that states may not necessarily have the resources to accomplish.

Several states centered KEA communication on readiness and child development as a way to focus on improving educational opportunities for children. These states acknowledge that an important component of readiness is for schools to be prepared to meet the needs of the children coming in. In their messaging around their KEAs, these states recognize the multiple inputs and factors that influence children's development. This messaging explicitly counters the traditional views of readiness as an inherent child characteristic or solely the responsibility of the family, which can lead to deficit thinking about children, their families, and their out-of-school experiences.

In Georgia, all assessment materials and websites prominently state that the KEA is a formative tool and that data should be used to guide instruction and inform differentiation.[267] Teacher guides explain that the KEA can be used to communicate with families and to demonstrate student growth but that it should not be used as a summative or single "readiness" score or for kindergarten placement, accountability, or evaluation.[268] These guidelines appear across multiple documents and web pages and include materials for administrators, teachers, and families.

Illinois interviewees discussed the importance of clear messaging about the KEA and its use as a developmental tool, especially since the state results are publicly released. The Illinois State Board of Education reaches out proactively to reporters to discuss the KEA's purpose, including before statewide results are published, to avoid media reports that may use the KEA to shame and blame communities for poor results. State board staff also reach out to community partners. Matthews at the Illinois State Board of Education, explained:

> There's a very robust early childhood advocacy community in Illinois.... They're also the people that reporters go to [to ask], "What do you think about the tool?" And so having strong partnerships with these stakeholders and advocacy organizations to align on messaging so that they are saying the same thing we're saying and not jumping to different conclusions than we are ... that cautious approach has been important.

Illinois also strategically brands the KEA with educators as a formative assessment that can support developmentally appropriate instruction. For example, the Illinois State Board of Education has used its KEA-related communications to highlight the benefits of play-based learning, including on its website, with the majority of resources that are focused on using the KEA for instruction being related to play.[269] At the annual statewide KEA conference, support from the Robert R. McCormick Foundation enables the state to promote stories of what the KEA coaches and district administrators perceive to be the successful use of the KEA, including case studies of pilot sites and KEA "MVPs" whose practices exemplify the kinds of shifts to developmentally appropriate practices that the KEA is intended to promote.[270]

Michigan demonstrates the importance of planning for strategic branding and communications to build buy-in across stakeholders. In 2012, Michigan launched a statewide pilot of Teaching Strategies GOLD, but after 2 years, few teachers had chosen to participate in the voluntary pilot. Richard Lower, Director of Preschool and Out-of-School Time Learning at the Michigan Department of Education, shared that with the pilot, "we weren't making progress. We weren't getting more districts buying in. Even the grassroots champions were not getting their colleagues on board. So given that … we felt it was in the best interest to pause for that year." During the pause, the state regrouped and involved multiple stakeholders, including educators, to select the Maryland-Ohio Kindergarten Readiness Assessment and to work on a rebranding and communications strategy, renaming it the Michigan Kindergarten Entry Observation. According to Lower, part of the rebranding process was to:

> Get the term *assessment* out of it so that when you talk to individuals who were absolutely against assessment of young children, you can reference [the KEA], and you didn't have [to] even say the word assessment. You can say it's the Michigan Kindergarten Entry Observation process. It's observing children. You can frame it in that way.… And so it was a rebranding of the concept of a kindergarten readiness assessment.

Michigan's rebranding and KEA reboot is still a work in progress, and time will tell if it is more successful than the first attempt.

Allowing for district flexibility

Another way to support statewide implementation is to allow for local flexibility at the district, school, or teacher level. Different states use different approaches to local flexibility, including allowing districts to choose from a list of state-approved assessments or offering different forms of the same assessment tool. These different approaches are accompanied by different affordances and constraints that states need to consider as they think about how they will use the data. For example, allowing districts to choose from a menu of different options limits the ability to have comparable statewide data. Local differences can also have implications for availability of professional development; required resources, such as manipulatives; staff capacity; and data reporting.

Some states, including Arkansas, Colorado, Iowa, Louisiana, Minnesota, and Texas, offer districts a menu of assessments from which to choose to allow for greater curricular alignment at the district level. Megan Prior Rogers, Kindergarten School Readiness Consultant with the Colorado Department of Education, explained that the statewide purpose of the KEA is "really about the schools and the teachers in the classrooms and supporting students—formatively assessing throughout the year—so that we're intentional in our instruction." In keeping with this purpose, the state allows districts to choose from a list of KEAs in order to foster school and district control. Rogers explained:

> We know that this is just one aspect of an assessment framework, so they're also going to be doing specific literacy assessments in conjunction with, or in lieu of, some of the components of the kindergarten school readiness assessment. It's a matter of what's the best fit based on what you have for assessments within your school, within your district.

In order to allow for local flexibility but also preserve alignment with state standards, Colorado legislation requires the state to review KEA options every 6 years.[271] The state vets assessment tools for alignment with state standards and recommendations from the field.

Allowing local choice based on a menu of state-vetted assessments can constrain a state's ability to draw conclusions about readiness in the state as a whole, however. For example, in Colorado, the state does not attempt to combine the data across the multiple tools that districts use and, thus, does not have statewide school readiness data at the child level. The state has, however, created crosswalks to demonstrate the alignment of measures across assessments. All state-approved KEA options align across six domains, and the state does collect aggregate domain-level data from schools.

States may also provide local flexibility for districts and communities to supplement a short set of required measures, which can allow greater alignment with local curricula and teachers' instructional needs. Some states, including Illinois, have a single statewide KEA but provide districts with the option to use a longer, more in-depth assessment version beyond the short one required by the state. In Illinois, all teachers are required to administer the 14 State Readiness Measures version of the KEA, but districts and individual teachers can elect to administer additional individual measures or full domains, collect data multiple times throughout the year, or use the 29-item or the 55-item assessment versions to assist in instructional planning. "It's a very flexible tool, and I love that about it," said Terri Lamb, Principal Consultant with the Illinois State Board of Education. For example, Elgin U-46 took advantage of the tool's flexibility by adding 7 measures to the required 14 items to reflect the district's curriculum and have more comprehensive information on each child's competencies and skills.

States may provide local flexibility for districts and communities to supplement a short set of required measures, which can allow greater alignment with local curricula and teachers' instructional needs.

Maryland uses a different approach by allowing districts to choose to administer the KEA to all kindergarten children or to a representative sample of children. In 2019–20, 18 out of 24 districts chose to administer the KEA to all children, compared to 14 in 2018–19,[272] 12 in 2017–18, and 8 districts in 2016–17,[273] which was the first year the sample administration option was available to districts.[274] The steady increase in the number of districts choosing census administration suggests that, over time, if districts see value in the KEA, they will buy in and go beyond what is required.

Providing administrative support and collaborating across departments

Who develops and administers the KEA at the state level has important consequences for the tool's development and implementation. The states and districts we studied often worked collaboratively across departments to implement and continuously support the KEA.

Most of the states and districts we studied have at least one state-level position responsible for KEA oversight of professional development, data reporting, KEA resources, and other aspects of KEA implementation. The lead KEA administrator typically reports to an office director within the department of education and is often connected to an office of early learning. For example, in Illinois, the lead KEA administrator is a principal consultant within the Assessment Department.

Similarly, in Colorado, the lead Kindergarten School Readiness Consultant reports to the director of the Preschool Through 3rd Grade Office, and in Kansas, the Coordinator of Kindergarten Readiness reports to the director of the Early Childhood Team. In Maryland and Michigan, KEA oversight is assigned to the director of an early childhood office within their respective departments of education. The frequent assignment of KEA administrative responsibilities to an office of early learning within state departments of education suggests that state-level policymakers recognize the need for specific expertise in early childhood and developmentally appropriate practices.

Some states have established an additional layer of regional KEA leadership to support KEA implementation. For example, Colorado and Illinois have KEA coordinators who work at the regional and district levels to coordinate KEA activities. These leaders have expertise in early childhood and developmentally appropriate practices and have been instrumental in facilitating and supporting KEA implementation and professional development. They also coordinate and oversee ongoing improvements to the KEA.

KEA design and implementation often involve multiple state departments, such as the department of early learning and the department of education, which allows KEA-related work to leverage resources of multiple departments. In Georgia, for example, the Director of Assessment Development at the Department of Education oversees the KEA but works in close partnership with the Department of Early Care and Learning. While the initial funding for KEA development came from a federal grant won by the Department of Care and Early Learning, the Department of Education provided subsequent, ongoing funds. Likewise, the Department of Early Care and Learning provided content expertise to guide the development of the assessment and regional coordinators to assist with implementation, and the Department of Education provided resources through its divisions that focus on research and assessment design as well as curriculum and standards. Susan Adams, the Deputy Commissioner of Pre-K and Instructional Supports at the Georgia Department of Early Care and Learning, explained that this collaborative work is intentionally fostered at the state level and has led to alignment of standards and alignment of curriculum.

In Michigan, a state statute required that KEA implementation be done through a partnership between the k–12 assessment office and the early childhood office at the department. "The field felt [collaboration with the early childhood office] was necessary because they felt we were much more aligned with understanding observational assessment implementation," said Richard Lower of the Michigan Department of Education.

Illinois also leverages resources across departments through close collaborations within the Illinois State Board of Education across the Early Childhood, Assessment, Research, and External Communications departments. For example, the early childhood team, which understands the tool and its purpose well, brings research questions to the research team, which has the analytical expertise to explore those questions. Matthews at the Illinois State Board of Education, explained:

> The Early Childhood Department really understands the goals of the tool.… Terri [Lamb] and her team look at the data and [ask], What does this mean? Here's some research that we would like to explore.… We can look at the data, but it takes that research and evaluation staff who [have] the real psychometric and data knowledge so that we're not just going on a gut check but really making data-driven conclusions.[275]

Cross-department collaboration has also been important to connect administrators with content expertise in early childhood subject matter to those who have expertise in research and assessment development. Jan Reyes, Director of Assessment Development at the Georgia Department of Education, explained that collaboration between the assessment development and administration teams has particularly been a strength when implementing an observational assessment:

> [The KEA] has been a little different [from other assessments] because it's formative, and my team tends to have more of the content knowledge.... [The assessment administration team's] expertise is [in addressing issues such as] how do teachers enter this data into the platform? How do they print the reports? How are they administering this? And some of those kinds of logistical things.... Then on my team, I have an early learning assessment specialist, as well as a specialist for English language arts and a specialist for math.

Illinois has also relied heavily on its internal Research Department, which has assisted with analyzing KEA data since 2017. Although the state already had a partnership with WestEd, the California-based research organization that developed its KEA, Lamb said it was challenging to have "an outside data system [with] an external partner who is processing the data and who is applying the psychometrics." The internal research and evaluation expertise has allowed Lamb and her team to ask more specific research questions and have access to in-house colleagues with psychometric expertise.

Two state consortia, funded under the Race to the Top–Early Learning Challenge grant and headed by Maryland and North Carolina, have taken cross-agency collaborations to an even higher level by working across state lines. For example, Maryland partners extensively with Johns Hopkins, WestEd, and the state of Ohio, leading a consortium of multiple states implementing the KEA. Judy Walker, Early Learning Branch Chief at the Maryland Department of Education, pointed to the sharing and leveraging of each other's resources and getting feedback from other states as the biggest advantages to a multistate consortium. For example, Maryland has used feedback from consortium states to make adjustments and improvements to the KEA items, logistics, associated professional development, and data platforms. Walker explained, "Other states are seeing [the KEA] with new eyes, new opportunities, [and] sometimes different populations. They have a lot to share with us that we can leverage." One of the latest improvements that Maryland has made based on feedback was to add interactive data displays to the KEA data system, with support from Johns Hopkins University. At the same time, Maryland exercises oversight in the use of the tool by other states. For example, it requires that other states that use its state-developed KEA use the full assessment to ensure they focus on all of the domains. Walker explained:

> The idea is not to prohibit [use of the assessment] or put any roadblocks [in the way of] any states to use the assessment. We don't want people to use only part of the assessment.... We don't want them to think that it's OK not to have social-emotional learning or [not] to measure physical health and well-being [to focus on] only measuring literacy and math. We have really grown to have this [whole] child composite view of children's learning and development when they enter kindergarten, and we want to uphold that so that we're looking holistically at the kindergarten readiness score.

Through the infrastructure provided through the consortium, Maryland can closely monitor the integrity and quality of the tool.

Securing ongoing funding

In addition to administrative support, states need sufficient and ongoing resources to implement a KEA successfully. There are significant costs associated with KEA implementation, including resources to provide professional development and support continuous improvement of the KEA system.[276]

In addition to administrative support, states need sufficient and ongoing resources to implement a KEA successfully.

In Illinois, costs associated with professional development, licensing, materials, and data access for the KEA are covered by the state. Philanthropic funding has played a large role in getting the KEA off the ground and provides ongoing support that enables the state to build and expand its KEA infrastructure and capacity. For example, the Illinois State Board of Education's partnership with philanthropic and advocacy organizations has expanded the state's communications capacity. The state's research department works with philanthropic partners who assist with data analysis and reporting. The state also provides centralized professional development and KEA coaching for all teachers and administrators across the state. Some districts supplement state professional development with local investments. For example, Elgin U-46 provided a multiday professional development series in addition to the state session.

Some study participants pointed to legislatively mandated or state department–required KEAs to make the case for continued resources, especially when costs are higher than expected. In Michigan, state legislation requires that all state mandates be accompanied by the necessary resources because the costs of a mandate "shouldn't be on the backs of the local districts," said Lower. This was especially important because KEA implementation costs were much higher than the state expected, according to Lower:

> The original estimate for implementation was $900,000. That was what this was sold on to the legislature.... And here we are 2 years later: $2.5 million [a year]. So whatever you think it's going to be, you might as well triple it.... You need adequate resources to train [teachers], not just to pay for the assessment.

States also need to secure funding for ongoing supports and stakeholder resources related to their KEAs. Both Georgia and Illinois provide extensive resources for teachers and administrators, including recorded webinars, guidance documents, and family-facing resources. Georgia's KEA, initially funded by a federal grant, was intentionally integrated with an existing yearlong, fully funded kindergarten assessment that was already required by law to ensure that continued resources will be available for KEA-related work.

States and districts also foster effective use of the KEA for instruction and planning by providing funding for structural supports, such as time, resources, and opportunities to participate in learning networks, as described earlier in this chapter.

Costs extend beyond initial assessment acquisition, licensing, or rollout of a KEA. At least one participant expressed that, over time, KEA resources have waned at the state level, but continuous improvement and KEA-related research require resources. Lower described the need for ongoing

funding and resources: "It's not a one and done." States must build public will to leverage funding and resources by involving multiple stakeholders, agencies, and departments in implementation and ongoing improvement.

Rolling out the KEA gradually and continuously improving

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. We found that states used pilot phases to slowly roll out KEA implementation and work out kinks.[277] Gradual rollouts allowed states to foster state buy-in by gauging stakeholder reactions to the KEA and identifying and addressing barriers before scaling statewide. Georgia, for example, piloted its KEA over 2 years in preschool and kindergarten classrooms. In Illinois, statewide implementation of the KEA was rolled out over 5 years. During these pilot years, the two states iteratively revised assessment content and implementation guidelines based on teacher feedback. Piloting also allowed states to adjust professional development and resources for teachers and leaders.

North Carolina recently revised its KEA to be more clearly linked to learning progressions. Even though the state's former KEA included multiple domains and was aligned to state standards, a study showed that teachers still struggled with how to connect KEA data to instruction.[278] The new KEA (North Carolina Early Learning Inventory), which was implemented in fall 2020, is based on Teaching Strategies GOLD and was designed for teachers to use in tailoring their instruction. Teacher observations and documentation help identify where children are along the learning progressions; this information provides teachers with concrete goals for advancing children's development.[279]

As described previously, Michigan started piloting a KEA in 2012. During the voluntary pilot, however, administrators noticed negative feedback and a lack of interest regarding the KEA among educators. Rather than rushing into another KEA, the state put KEA implementation on hold, at which point it conducted two formal surveys of educators who were trained on the KEA but chose not to implement it. Teachers reported three major reasons for not implementing the initial KEA: It was too long and time consuming, they did not feel adequately prepared to administer an observational assessment, and they felt it was duplicative of other required assessments. Given this feedback, Lower explained, "We couldn't just shift to another assessment tool—we had to address some of those fundamental underlying issues.… [We had to] completely start from scratch and rebuild something that was usable in the field by kindergarten teachers."

Michigan began developing and piloting a new KEA, this time with more educator input. The state selected a different KEA that included fewer measures and a mix of direct and observational measures. After regrouping for a year, the state introduced its new assessment in 2017 on a 3-year phase-in process targeting a different region each year. This gradual rollout allowed the state to continuously improve the KEA process and supports before going statewide.

The Michigan education department was intentional about the timing of phase-in for different regions across the state, based on local politics and context. For example, the state made sure certain regions were phased in together if they shared charter school boundaries. The state department also brought in additional partners, including districts, which helped provide more

intentional professional development, and the state early childhood office, which contributed content expertise. Over the pilot, administrators refined KEA procedures, professional development, and data reporting, leading up to statewide implementation of the new KEA in fall 2020.

Some states have also gone back to the drawing board to evaluate whether their current KEAs are working overall. The Colorado State Board of Education is required to review the state-approved menu of KEAs every 6 years. As Rogers of the Colorado Department of Education said, it is important for states to "come back to why [the KEA] is here and how [it] is supportive of our families and our children" to ensure that the KEA and the way the data are used are consistent with the intended purposes of improving instruction and early childhood systems. While states may not have all the answers, their continued engagement in KEA improvement efforts demonstrates commitment to their investments and making KEA use and data meaningful for educators, children, and communities.

One potential area for improvement is ensuring ongoing research and evaluation. While some states—such as Maryland, Washington, North Carolina, Ohio, and Illinois—have partnered with researchers to study the implementation of their KEAs, these efforts are rare. In interviews, stakeholders rarely mentioned evidence or data documenting educator KEA implementation and perspectives, effectiveness of professional development, or resource use and needs. One notable exception is Maryland, whose state department commissioned a report with detailed teacher survey data in 2018 regarding the teacher experience with KEA implementation, including the amount of time teachers spent on the KEA, implementation supports, technology tools teachers used, and how teachers used the reports and results.[280] Filling in these informational gaps may present opportunities for states and districts to further improve upon their KEA systems.

Conclusion

This study's findings point to the ways in which states use KEAs to inform and improve instruction and strengthen early learning systems. To support KEA implementation, states provided differentiated professional development to support teachers in gaining and growing their expertise with the KEA as well as data systems that allowed teachers to access data in a timely way. States also provided resources, infrastructure, cross-agency supports, and continuous improvement activities to help educators implement and use the KEA in meaningful ways. States have also found ways to secure ongoing funding and resources for KEAs for costs beyond initial implementation. In the final chapter, we provide policy recommendations for states that are looking to implement or continue to improve their KEAs and data use to support equitable opportunities for all children.

Policy Recommendations

Early childhood assessments, including KEAs, can provide valuable information for both practice and policy. High-quality assessments, when well designed and well implemented, can provide important documentation on children's competencies from preschool through the early elementary grades and can inform developmentally appropriate instruction and supports. When a KEA fits into an early childhood assessment system, aggregated data can inform more equitable investment by showing how groups of children are progressing over time. Yet as is evident in this report, states are still learning how to choose high-quality assessments and implement them in a way that usefully informs practice and policy.

Below, we lay out recommendations to inform states that want to develop early childhood assessment policies and KEA implementation in ways that can support teaching and learning across the domains crucial to children's learning and development. These recommendations are especially important as educators assess student needs in the wake of the COVID-19 crisis.

Choose High-Quality, Developmentally Appropriate Assessments

A state's choice of assessment is critical—what is measured and how it is measured can drive the way children are taught and how their needs are understood.[281] States should therefore choose an assessment that will do the following.

Assess the key domains of child development. If early childhood assessments are to allow teachers to fully understand children's development and avoid narrowing the curriculum, they should assess the domains of child development that are essential for school success, including social-emotional development, cognitive development, language and literacy development, mathematical and scientific reasoning, and physical development.[282] To provide timely information that informs instruction, the assessment should align with developmentally appropriate kindergarten standards and curriculum and be sufficiently detailed to allow teachers to use results to adjust their instruction.

Measure learning in ways that are authentic as well as culturally and linguistically appropriate. States should choose assessments that are authentic measures of what children can do by incorporating observations of children in their natural environments, as well as performance tasks, such as writing their names or applying math to real-world situations. Computer-based or multiple-choice assessments, on the other hand, are less likely to capture authentic skills in multiple domains and may be problematic for children with less experience with formal testing or technology. Assessments also should be administered purposefully in ways that are appropriate for all children. For example, assessments should allow accommodations for children who are dual language learners and those with special needs to allow them to fully demonstrate their skills and knowledge.

States should choose assessments that are authentic measures of what children can do by incorporating observations of children in their natural environments, as well as performance tasks.

Assess children's progress over time. States should additionally consider adopting a continuum of assessments, from preschool through the early grades. Assessments that track children's progress along a developmental continuum and are administered at multiple points, from preschool and into the primary grades, can provide educators with a clear road map for the skills children will need to acquire next. Elgin Area School District U-46 in Illinois and Tulare City School District (TCSD) in California, for example, administer a version of the same assessment in preschool and kindergarten, and 1st-grade teachers are provided their incoming students' assessment results. These districts have used the adoption of their observation-based assessment as an opportunity to shift toward more well-rounded, developmentally appropriate curriculum. Georgia's KEA is part of a suite of assessments that helps teachers understand children's learning trajectories throughout the kindergarten year.

Yield results that are valid and reliable for all students and for the purposes for which they will be used. Assessments should also be technically sound—yielding valid results from all students tested—and meet their intended purpose. States and research organizations may need to pursue additional research to ensure that assessments have been validated for all subgroups of students, including children who are dual language learners, those with learning disabilities, and those with different kinds of prior cultural and familial experiences than children tested in previous validation studies.

Build Assessment Systems That Inform Instruction and Support Family Engagement

States must also support educators and administrators to understand the purpose of early childhood assessment, how to effectively administer state tools, and how to use the data to inform instruction and work with families. With adequate support, assessments can foster teachers' and families' understanding of child development and developmentally appropriate practice. States and districts can do the following to support effective assessment use.

Offer ongoing professional development both for conducting the assessments and for using results to inform teaching. States should take the lead in offering quality professional development on the purpose of an assessment tool and how to administer it, free of cost to districts. To support reliable use of observational assessments, Maryland has developed an online certification process for teachers as part of its initial training, requiring teachers to conduct observational assessments as part of a video simulation. Observational assessments, in particular, require significant practice, and proper scoring is key to ensuring valid results and reducing teacher bias, especially for children who are dual language learners.[283] TCSD provides professional development in which educators practice using children's work samples to score together in small groups. In Georgia, the state provides online modules, which some schools and districts have teachers complete together so they can have discussions and shared learning.

States should also support districts with funding and technical assistance to help teachers and administrators use their KEAs for instruction—a missing piece in most KEA systems. Teachers need support in connecting assessment data with developmentally appropriate instructional practice. Illinois has invested in state-level professional development for kindergarten teachers and coaching for classroom teachers and administrators on how to interpret and act on KEA data. At

the local level, both Elgin U-46 and TCSD use their kindergarten assessment data to help educators understand children's developmental milestones and guide teachers to use data to identify next steps for teaching.

Give educators the time and resources they need to assess and to reflect on the results. States must provide educators sufficient time and resources for conducting assessments and analyzing data so that they are able to use assessments as part of their regular instruction. Instructional aides or substitute teachers can free up teachers' time and were used in Delaware and Washington to allow teachers the opportunity to input and reflect on data. Time is also needed to share data among educators who are designing strategies for students and to share data with families so that they can become supportive partners in the teaching and learning process. Washington state provides districts with the option to use up to 3 days early in the school year to meet with families.

Districts can also help reduce the burden by eliminating duplicative assessments. When states shorten assessments due to time constraints, as many have done, they might provide additional assessment forms for districts or teachers who want to go deeper, as Illinois does with the Kindergarten Individual Development Survey (KIDS).

Make data systems accessible and easy to use. States and districts should ensure that when they aggregate assessment data, the information is shared promptly with teachers and administrators so they can act on the data. Data systems should allow teachers and administrators to see trends and print report cards for families that can serve as the basis for family–teacher partnerships. Maryland, for example, partnered with a local university to develop a data dashboard that teachers and administrators can access for data visualizations to help them detect trends and patterns. States should also support easy data entry, as technology issues can severely undermine teacher support for an assessment. In Washington, Illinois, and Georgia, teachers are expected to share KEA data reports with families and can use them as one source of data in family–teacher conferences.

Engage families in assessments. States and districts can encourage family engagement by soliciting assessment data from families, as is done in Washington's KEA and in Kansas's early learning screener. They can also provide family-friendly data report templates and offer information on how data can be used at home to support children's development. Illinois has supported an array of materials for families on its state website and resources distributed by local districts. Georgia has partnered with its local broadcasting network and made communications materials available to districts.

Use Assessment Data to Strengthen Early Learning Systems—And Be Wary of Misuse

KEA data can be used to inform policy as well as instruction. However, policymakers should be careful to guard against unintended uses of the data that can actually cause harm.

Share assessment results across grade levels and with key stakeholders. States and districts should ensure that educators from preschool through elementary school share assessment data with each other, within and across grade levels, and analyze the results to support instructional improvement in preschool and the early grades. For example, states and districts may regularly share data with state-funded and federally funded early learning providers or community stakeholder groups. Washington has built the communication of KEA results and collaboration

with preschool teachers into its KEA process. Districts participate in shared professional development, share preschool transition reports, review KEA data together, coordinate classroom observations across programs, and collaborate on readiness events for families.[284] One year, for instance, the data led to a focus on early math in the state's preschool program given that incoming kindergarteners had the weakest skills in this area.[285] Kentucky partners with Community Early Childhood Councils (regional stakeholder groups), which share data locally with early learning providers and community stakeholders.

Districts in Washington participate in shared professional development, share preschool transition reports, review KEA data together, coordinate classroom observations across programs, and collaborate on readiness events for families.

Use data to identify systemic needs. Early childhood assessment data should be part of a data system that begins in preschool and runs through the elementary years. This data system could connect KEA data to other outcomes of interest, such as the amount and kind of preschool that students have experienced, other assessment scores, special education status, grade retention, and suspension and expulsion records. As part of this system, KEA data can be used to identify community needs and student populations that could benefit from extra services, including high-quality early learning. In Illinois, state policymakers have developed maps of kindergarten readiness level by county and legislative district, which some locales have used to build the case for investments in full-day kindergarten or universal preschool. Data that reveal children's progress over time—for example, showing growth from preschool to kindergarten—can also be used to understand the success of state initiatives. These data should be disaggregated by students' demographic characteristics, including home language and preschool enrollment. Oregon, for instance, is using its KEA data to understand the benefits of its state preschool program.[286]

Avoid using KEAs to evaluate individual preschool providers or restrict children's access to kindergarten. States should not use KEA data to evaluate the impact of individual preschools or teachers, however, or—worse—sanction them for underperformance, as is the case in at least one state. KEA data at a point in time are not sufficient for understanding the effectiveness of individual programs because many factors affect children's school readiness and might unfairly penalize programs serving children facing the greatest disadvantages. Policymakers should be particularly wary of sanctioning preschool providers based on these scores, as these policies might incentivize programs to inflate their results or exclude children who are expected to score poorly.

States should furthermore be explicit that data should *not* be used to determine whether a child is ready for kindergarten or to diagnose a child with a learning disability. All children can benefit from access to kindergarten, and holding children back can disproportionately deny access to children who have systemically less access to high-quality early learning opportunities, including children of color, children who are dual language learners, and children from low-income backgrounds. Although a KEA can be an effective tool for identifying students who need further testing, it is not specific enough to diagnose a learning disability.

Support State-Level Implementation and Continuous Improvement

States can take the following actions to support a strong KEA launch and to continuously improve how the tool is used.

Include educators in developing or selecting the KEA and multiple stakeholders in communicating results. Having multiple stakeholders involved in the selection or development and implementation of a KEA is important for developing buy-in. Stakeholders in Georgia and Illinois noted the importance of having teacher leaders involved in the assessment pilot for communicating the benefits of their KEAs,[287] and in Washington, the state and teachers unions worked together to change instructional minute regulations to allow more time for meeting with families. Key stakeholders for communicating results include families, teachers, early learning providers, philanthropies, community advocates, and state and local policymakers. States might also consider working strategically with philanthropies to help fund start-up costs for KEA work, although states will need to shoulder ongoing costs.

Partners will be key when it comes to building public understanding of kindergarten readiness and its importance. State communications strategies might include user-friendly materials that clearly communicate what the tool is for—and not for. Public communications to teachers and families were key to buy-in in Georgia, which made it very clear that the assessment was designed to support individualized instruction and was not evaluative. State board officials in Illinois reach out to the press annually before KEA data are released to ensure that reporting on readiness scores is interpreted appropriately and does not throw blame for low scores on children or communities.

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. States should fund a team of staff with expertise in assessment, instruction, and child development who have the time to be in frequent touch with district KEA coordinators and educators in the field who need assistance. Dedicated staff can support implementation by providing administrative services, coordinating resources, overseeing data management, and tracking progress. These staff should routinely update guidelines and support responsive professional development based on continuous monitoring of educator needs to make the assessment and its results useful to educators. KEA coordinators should be connected to the state departments that oversee teaching and learning as well as assessment.

Continuously assess and improve KEA implementation. States should continuously assess the effectiveness of their KEAs. It is important to devote resources from the start to ongoing research of the tool's validity and use for its intended purpose and the extent to which a state's chosen tool meets educators' needs. Maryland, North Carolina, Ohio, and Washington have partnered with researchers to continuously evaluate the extent to which their KEAs are used for instruction and the extent to which they accurately capture the abilities of children from diverse cultural and linguistic backgrounds.

When a new or improved tool is needed, states should prepare to roll out a new or revised assessment over several years. Michigan is currently completing a 3-year rollout in different regions to slowly build state capacity after an unsuccessful first attempt at its KEA. Similarly, Georgia did iteratively larger pilots for 3 years before going statewide. Research shows that it takes years for teachers to buy in to a tool—so states should subsequently commit and stay the course.[288]

Conclusion

KEAs have the potential to support children's learning and promote equitable learning opportunities, especially when they are part of continuous assessment systems that support instruction throughout the early years. They can help educators identify what children know and can do and tailor instruction; support communication with families about children's needs and abilities; and identify opportunities to target or improve resources. However, when misused, KEAs can also exacerbate inequity by excluding children from kindergarten or by blaming families or preschool programs for factors beyond their control.

This report has examined prior research on assessing young children, scanned practices across states, and highlighted promising state examples to illuminate how KEAs can support equitable learning. To deliver on their promises, states need to develop thoughtful systems of assessment that measure children's abilities in a holistic, developmentally appropriate way. They must also support effective systems of professional development to ensure that teachers—who are responsible for both assessing children and using data to tailor instruction—have the time and knowledge they need to implement the KEA well. Finally, states must carefully and proactively communicate what the KEA is intended to accomplish and guard against its misuse. 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.

Appendix A: Study Design

The purpose of this study is to describe how KEAs are being implemented in states across the United States and to highlight successful KEA implementation in two states and two local districts. We complement data from these highlighted locales with examples from other states and districts that are implementing practices that align with recommendations from the field.

National Scan of KEAs

We synthesized and built on prior comprehensive scans of KEAs and kindergarten policies across the United States, including research by the Center on Enhancing Early Learning Outcomes, Regional Education Laboratory Midwest, Education Commission of the States, WestEd, and the National Institute for Early Education Research.[289] We synthesized the information provided across these previous scans into a single document and updated information as necessary. We used publicly available information to populate the scan data. When publicly information was unclear or unavailable, we contacted state officials by phone or email to obtain the missing information. Our scan, which included all 50 states and the District of Columbia, began with two initial questions:

1. Does the state have an adopted definition of kindergarten readiness?
2. Does the state have one or more identified KEAs?

If so, we proceeded to ask the following questions:

1. What is the name and type of KEA?
2. How does the state define the purpose of the KEA?
3. Is the KEA required? If so, is the KEA in statute?
4. When was the KEA first implemented?
5. Is the KEA administered to all kindergarten students or to a sample of students?
6. When is the KEA administered?
7. Is the KEA administered more than once during kindergarten?
8. What domains does the KEA include?
9. Is the KEA administered in a language other than English?
10. Is the KEA aligned with the assessment(s) used in prekindergarten?

Selection of Highlighted States and Districts

To select states and districts for the study, we drew on the updated national scan and background research. Additionally, we consulted experts familiar with state KEA practices to obtain their input on states and districts with promising KEA implementation and the information that would be most useful for practitioners and policymakers. We consulted state and local officials to confirm background information on the status of their state or local KEAs, gain a high-level understanding of their state or local KEA systems and practices, and elicit their perspectives on critical topics that should be addressed in the research.

We used the following criteria to identify the two states to highlight (Georgia and Illinois):

- The state has adopted a definition of readiness (may or may not be written into state statute).
- The KEA is implemented at the state level.
- The KEA is beyond the pilot year of implementation.
- The KEA includes multiple domains of development.
- Data and KEA information are publicly available.
- KEA data are used to inform decisions at the state or district level.
- The state's population is midsize to large so that the scale of implementation will be relevant to a range of other states.
- The state has an ethnically, culturally, and linguistically diverse student population.

We also aimed to select states that have not been highlighted extensively in other reports in order to add diversity to the field's body of knowledge.

We identified the highlighted districts—Elgin Area School District U-46 in Illinois and Tulare City School District in California—based on repeated references to their KEA work in conversations with state- and national-level experts.

In addition to the highlighted states and districts, we selected state and district examples that were identified through expert consultation or background research as implementing promising KEA practices reflecting current recommendations from the field. An additional six states and four districts were included based on specific practices related to their KEAs.

Data Sources

We relied on two main sources of data:

1. **Interviews.** We interviewed 28 participants across nine states in spring 2020. Interviewees are listed in Appendix B: Study Participants. We identified key stakeholders through web searches and recommendations from experts, state-level officials, or other interviewees. In addition to confirming information from our background research, interviews focused on challenges and bright spots related to KEA implementation; how interviewees and other stakeholders use the KEA and KEA data; resources that support effective KEA systems; KEA oversight; professional development; and recommendations for implementation.

2. **Documents.** We collected publicly available information from state websites between October 2019 and December 2020. We searched state and assessment websites for information related to KEA history and implementation, legislation, administration procedures, partner stakeholders, and data reporting and use. We also mined research, policy, and public media reports that contained information regarding KEAs across states and districts. We regularly checked for status updates and iteratively revised KEA information as necessary.

Study Limitations

Due to the scope and timing, our study has several limitations. First, our study is limited to state and district administrator perspectives. While this focus is consistent with the original intent and goal of the study, we recognize that other stakeholder perspectives are missing from our primary data, namely those of teachers who are implementing the KEAs. While our main interest in the present was the administrative perspective, we acknowledge that triangulating administrator reports with teacher-level perspectives may be an important next step. Second, although we were able to explore KEA implementation across multiple states, we collected limited district-level data. For example, we were not able to connect with any district-level administrators in Georgia to obtain more local-level perspectives on KEA implementation and use. Additional district-level perspectives may have provided more insight into how responsibility for KEA implementation was distributed between states and districts. Third, the timing of the study coincided with the beginning of the COVID-19 pandemic, which impacted administrator capacity for study participation and, in many cases, interrupted KEA implementation as schools and teachers adapted to the challenges of distance learning in the context of a global crisis.

Appendix B: Study Participants

Participants included 28 individuals at the state and local levels. Study participants are listed alphabetically by state.

California

- Priya Jagannathan, Oakland Starting Smart and Strong, Director
- Jennifer Marroquin, Tulare City School District, Director of Learning Loss Mitigation/ Early Childhood
- Maria Sujo, Oakland Unified School District, Kindergarten Readiness Manager
- Keith Welch, Oakland Unified School District, Early Childhood Research Associate for Research, Assessment and Data

Colorado

- Anji Gallanos, Colorado Department of Education, Director of Preschool Through 3rd Grade
- Megan Prior Rogers, Colorado Department of Education, Kindergarten School Readiness Consultant

Georgia

- Susan Adams, Georgia Department of Early Care and Learning, Deputy Commissioner of Pre-K and Instructional Supports
- Bobbie Bable, Georgia Department of Education, NAEP and GKIDS Assessment Specialist
- Jan Reyes, Georgia Department of Education, Director of Assessment Development

Illinois

- Cornelia Grumman, Robert R. McCormick Foundation, Education Director
- Holly Jin, Skokie Public Library Community Engagement Supervisor; Niles Township Early Child Alliance, Steering Committee Member
- Sonja Knight, Carol Robertson Center for Early Learning, Vice President of Programs and Impact
- Terri Lamb, Illinois State Board of Education, Principal Consultant: Assessment Coordinator, Kindergarten Individual Development Survey
- Jackie Matthews, Illinois State Board of Education, Executive Director of Communications
- Bela Moté, Carol Robertson Center for Early Learning, CEO
- Peggy Ondera, Elgin Area School District U-46, Director of Early Learning Initiatives
- Wendy Uptain, Robert R. McCormick Foundation, Program Officer

Kansas

- Amanda Petersen, Kansas State Department of Education, Director of Early Childhood

Kentucky

- Andrea Bartholomew, Kentucky Department of Education, Office of Special Education and Early Learning, Manager of School Readiness
- Bill Buchanan, Kentucky Department of Education, Program Consultant for the Office of Special Education and Early Learning
- Amanda Flanary, Kentucky Governor's Office of Early Childhood, Deputy Director
- John Roden, Kentucky Governor's Office of Early Childhood, Chair of Early Childhood Advisory Council
- Sally Shepherd, SRI International, Preschool Development Grant B-5 Technical Assistance Specialist
- Veronica Sullivan, Kentucky Department of Education, Office of Special Education and Early Learning, Division Director of IDEA Implementation and Preschool
- Amanda Waldroup, Kentucky Department of Education, Office of Special Education and Early Learning, IDEA Implementation and Preschool, Assistant Division Director

Maryland

- Judith Walker, Maryland State Department of Education, Early Learning Branch Chief

Michigan

- Richard Lower, Michigan Department of Education, Director of Preschool and Out-of-School Time Learning

Washington

- Kelli Bohanon, Washington Department of Children, Youth, and Families, Director of Early Learning
- Karma Hugo, Office of Superintendent of Public Instruction, Washington State, Director of Early Learning

Appendix C: Summary of KEA Use Across the United States

State	State-Approved KEA
	Require a State-Approved KEA
Alabama	Alabama Inventory of Developing Skills (TS GOLD)
Alaska	Alaska Developmental Profile (state developed)
Connecticut	Connecticut Kindergarten Entrance Inventory (state developed)
Delaware	Delaware Early Learner Survey (TS GOLD)
Florida	Florida Kindergarten Readiness Screener (Star Early Literacy; literacy screener)
Georgia	Georgia Kindergarten Inventory of Developing Skills Readiness Check (state developed)
Idaho	Idaho Reading Indicator (literacy screener)
Illinois	Kindergarten Individual Development Survey (DRDP-K)
Kansas	Ages & Stages Questionnaires (developmental screener)
Kentucky	BRIGANCE Early Childhood Screens III (developmental screener)
Maryland	MD-OH KRA 2.0 (state developed)
Michigan	Michigan Kindergarten Entry Observation (MD-OH KRA)
Mississippi	Star Early Literacy (literacy screener)
Nevada	BRIGANCE Early Childhood Screens III (developmental screener)
New Mexico	New Mexico Kindergarten Observation Tool (state developed)
North Carolina	North Carolina Early Learning Inventory (TS GOLD)
Ohio	MD-OH KRA-Revised (state developed)
Oregon	Oregon Kindergarten Assessment (state developed)
South Carolina	South Carolina Kindergarten Readiness Assessment (MD-OH KRA)
Tennessee	Kindergarten Entry Inventory (DRDP-K)
Utah	Utah Kindergarten Entry and Exit Profile (state developed)
Vermont	Ready for Kindergarten! Survey (TS GOLD)
Virginia	Virginia Kindergarten Readiness Program: Child Behavior Rating Scale (self-regulation and social skills), Early Mathematics Assessment System, and PALS (literacy screener)
Washington	Washington Kindergarten Inventory of Developing Skills (TS GOLD)
West Virginia	Early Learning Reporting System (state developed)

State	State-Approved KEA
Require a KEA From Menu of Approved KEAs	
Arkansas	Istation Indicators of Progress (ISIP); NWEA MAP Growth; Star Early Literacy (literacy screener)
Colorado	TS GOLD; DRDP-K; HighScope Child Observation Record; North Carolina KEA
Iowa	FastBridge (district's discretion; literacy screener)
Louisiana	DRDP-K; TS GOLD
Texas	mCLASS Texas Edition (literacy screener); TX-Kindergarten Entry Assessment (state developed; require literacy domains only)[a]
NO Approved KEA but Require Districts to Assess in Kindergarten	
Maine	None (district's discretion; developmental screener)
Nebraska	None (district's discretion)
Wisconsin	None (district's discretion; literacy screener)
Wyoming	None (district's discretion; literacy screener)
Approved KEA(s) but DO NOT Require Its Use	
Arizona	Arizona Kindergarten Developmental Inventory (TS GOLD)
California	DRDP-K (state developed)
Massachusetts	TS GOLD
Minnesota	HighScope Child Observation Record; DRDP-K; TS GOLD; WSS
New Hampshire	TS GOLD; WSS
New Jersey	TS GOLD
North Dakota	Department of Public Instruction Kindergarten Formative Assessment (state developed)
Pennsylvania	Pennsylvania Kindergarten Entry Inventory (state developed)
Piloting KEAs	
Rhode Island[b]	Rhode Island Kindergarten Entry Profile (state developed)
No KEA and No Requirement to Assess in Kindergarten	
District of Columbia	None
Hawaii[c]	None (previous KEA no longer in use)
Indiana	None (previous KEA no longer in use)
Missouri[d]	None
Montana	None
New York	None
Oklahoma	None
South Dakota	None

Notes: The table includes all 50 states plus Washington, DC. DRDP-K = Desired Results Developmental Profile-Kindergarten; MD-OH KRA = Maryland–Ohio Kindergarten Readiness Assessment; TS GOLD = Teaching Strategies GOLD; WSS = Work Sampling System.

[a] Texas mandates vocabulary, letter names, and spelling measures from the Literacy and Language domains of the TX-KEA as a literacy screener but allows districts to choose KEAs for other domains. Texas Education Agency. (n.d.). The commissioner's list of approved kindergarten assessment instruments. https://tea.texas.gov/sites/default/files/Appendix-I_Final_List_K_Recommendations.pdf (accessed 12/18/20); Texas School Ready. (2020). *Texas Kindergarten Entry Assessment user guide*. Children's Learning Institute at UTHealth. https://cliengage.org/public/wp-content/uploads/sites/10/2020/07/2020-07_User-Guide_TX-KEA.pdf (accessed 12/14/20).

[b] Rhode Island began piloting in 2017, with a recommendation to begin implementation by 2020, but we could not confirm if it began that year. Rhode Island Early Learning Council. (2016). *Rhode Island Early Learning Council comprehensive advisory plan and recommendations 2016–2020*. https://www.earlylearningri.org/sites/default/files/site-content/docs/RI%20Early%20Learning%20Council%20Comprehensive%20Advisory%20Plan%20-%20Final.pdf (accessed 02/05/21); Rhode Island Department of Elementary and Secondary Education. (2015). *Preschool Development Grant 2015 annual performance report: Rhode Island*. U.S. Department of Education. https://www2.ed.gov/programs/preschooldevelopmentgrants/2015apr/riaprpdg.pdf (accessed 02/05/21).

[c] Hawaii passed legislation in 2020 requiring KEA implementation by July 1, 2022. Hawaii State Legislature. (2020). Relating to access to learning HB2543 HD1 SD2. https://www.capitol.hawaii.gov/Archives/measure_indiv_Archives.aspx?billtype=HB&billnumber=2543&year=2020; *HI HB2543 | 2020 | Regular Session*. (2020, July 10). *LegiScan*. https://legiscan.com/HI/bill/HB2543/2020 (accessed 12/14/20).

[d] Missouri uses the DRDP (2015) as a measure of readiness in preschool. Missouri Department of Elementary and Secondary Education. (2016). *Missouri guidance: Desired Results Developmental Profile (2015)*. https://dese.mo.gov/sites/default/files/eel-el-2016-DRDP-Missouri-Guidance.pdf (accessed 02/05/21).

Appendix D: Sample Readiness Check Items

<table>
<tr><th colspan="3">English Language Arts Activity 4</th></tr>
<tr><th colspan="3">Tracks words from left to right, top to bottom, and page to page.</th></tr>
<tr><th>Activity</th><th colspan="2">Performance Levels</th></tr>
<tr><td rowspan="4">The teacher will sit with the student and read an engaging early level text, asking the student to help with the reading.

Say, “I am going to read you this story and I want you to help me. It is called_____.”

• Top to bottom: Open the book to page 1. Say, “Show me the top of the page. Show me the bottom.” Say, “Show me where I should start reading.”

• Left to right: Point to the first word and read it. Say, “Can you point to the words as I read? Show me how my finger should move on the page as I read.”

• Page to page: Point to the last word on the page. Say, “Where do I read next?”

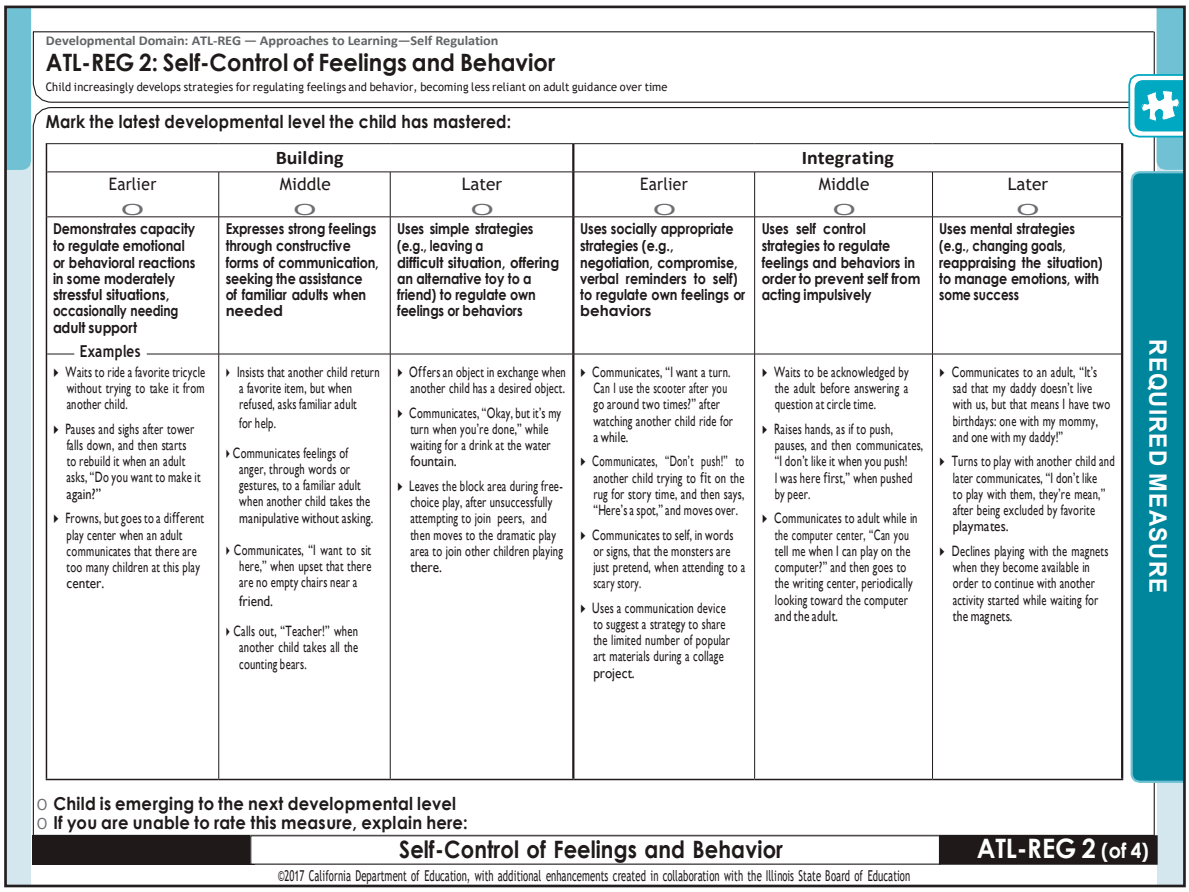
<u>Materials:</u> An emergent level text (e.g., beginning reader) with distinct layout of print and illustrations, good spacing of words and multiple lines of text. The text should provide opportunities for students to demonstrate each of the learning targets. It may also be helpful to reference correlation charts for leveled readers used in your classroom to determine titles that are most appropriate for students at the beginning of kindergarten.

NOTE: Links to Correlation Charts are provided in the Optional Resources Guide to aid selection of appropriate emergent level texts for this activity.</td><td>Not Yet Demonstrated</td><td>The student does not track words from left to right, top to bottom nor page to page.</td></tr>
<tr><td>Emerging</td><td>The student tracks words appropriately in one of the three ways (left to right, top to bottom, page to page).</td></tr>
<tr><td>Developing</td><td>The student tracks words appropriately in two of the three ways (left to right, top to bottom, page to page).</td></tr>
<tr><td>Demonstrating</td><td>The student tracks words appropriately in all three ways (left to right, top to bottom, page to page).</td></tr>
</table>

English Language Arts Activity 6		
Listens to and follows multi-step directions.		
	Performance Levels	
	Not Yet Demonstrated	Not Yet Demonstrated would be noted if a child makes no attempt to follow the directions or is unsuccessful in completing any of the three steps. Observations can be made during typical daily activities or an activity created by the teacher. Examples include typical classroom activities, following a series of steps to complete a task, or playing a game with multiple steps.
	Emerging	A child would be rated as Emerging if he or she completes the first step of directions without prompting but needs repeated prompting to complete the remaining steps. Prompting means the child needs the intervention of the teacher to complete the directions. Observations can be made during typical daily activities or an activity created by the teacher. Examples include typical classroom activities, following a series of steps to complete a task, or playing a game with multiple steps.
	Developing	A child would be rated as Developing if he or she completes the first and second step of directions without prompting but needs prompting to complete the remaining step. Prompting means the child needs the intervention of the teacher to complete the directions. Observations can be made during typical daily activities or an activity created by the teacher. Examples include typical classroom activities, following a series of steps to complete a task, or playing a game with multiple steps.
	Demonstrating	A child would be rated as Demonstrating if he or she completes three or more steps of directions without additional prompting. Without additional prompting means the child can complete the directions independently. Observations can be made during typical daily activities, or an activity created by the teacher. Examples include typical classroom activities, following a series of steps to complete a task, or playing a game with multiple steps.

Source: Georgia Department of Education. (2021). *Georgia Kindergarten Inventory of Developing Skills (GKIDS) 2.0-Readiness Check: 2021–22 administration manual*. (pp. 26, 28). https://www.gadoe.org/Curriculum-Instruction-and-Assessment/Assessment/Documents/GKIDS/Readiness_Resources/gkids_2.0_readiness-check_administration_manual_2021-22.pdf (accessed 05/06/21).

Appendix E: Sample Illinois KIDS Items



Developmental Domain: ATL-REG — Approaches to Learning—Self Regulation

ATL-REG 2: Self-Control of Feelings and Behavior

Child increasingly develops strategies for regulating feelings and behavior, becoming less reliant on adult guidance over time

REQUIRED MEASURE

Mark the latest developmental level the child has mastered:

Building			Integrating		
Earlier	Middle	Later	Earlier	Middle	Later
○	○	○	○	○	○
Demonstrates capacity to regulate emotional or behavioral reactions in some moderately stressful situations, occasionally needing adult support	**Expresses strong feelings through constructive forms of communication, seeking the assistance of familiar adults when needed**	**Uses simple strategies (e.g., leaving a difficult situation, offering an alternative toy to a friend) to regulate own feelings or behaviors**	**Uses socially appropriate strategies (e.g., negotiation, compromise, verbal reminders to self) to regulate own feelings or behaviors**	**Uses self control strategies to regulate feelings and behaviors in order to prevent self from acting impulsively**	**Uses mental strategies (e.g., changing goals, reappraising the situation) to manage emotions, with some success**
Examples					
▸ Waits to ride a favorite tricycle without trying to take it from another child. ▸ Pauses and sighs after tower falls down, and then starts to rebuild it when an adult asks, "Do you want to make it again?" ▸ Frowns, but goes to a different play center when an adult communicates that there are too many children at this play center.	▸ Insists that another child return a favorite item, but when refused, asks familiar adult for help. ▸ Communicates feelings of anger, through words or gestures, to a familiar adult when another child takes the manipulative without asking. ▸ Communicates, "I want to sit here," when upset that there are no empty chairs near a friend. ▸ Calls out, "Teacher!" when another child takes all the counting bears.	▸ Offers an object in exchange when another child has a desired object. ▸ Communicates, "Okay, but it's my turn when you're done," while waiting for a drink at the water fountain. ▸ Leaves the block area during free-choice play, after unsuccessfully attempting to join peers, and then moves to the dramatic play area to join other children playing there.	▸ Communicates, "I want a turn. Can I use the scooter after you go around two times!" after watching another child ride for a while. ▸ Communicates, "Don't push!" to another child trying to fit on the rug for story time, and then says, "Here's a spot," and moves over. ▸ Communicates to self, in words or signs, that the monsters are just pretend, when attending to a scary story. ▸ Uses a communication device to suggest a strategy to share the limited number of popular art materials during a collage project.	▸ Waits to be acknowledged by the adult before answering a question at circle time. ▸ Raises hands, as if to push, pauses, and then communicates, "I don't like it when you push! I was here first," when pushed by peer. ▸ Communicates to adult while in the computer center, "Can you tell me when I can play on the computer?" and then goes to the writing center, periodically looking toward the computer and the adult.	▸ Communicates to an adult, "It's sad that my daddy doesn't live with us, but that means I have two birthdays: one with my mommy, and one with my daddy!" ▸ Turns to play with another child and later communicates, "I don't like to play with them, they're mean," after being excluded by favorite playmates. ▸ Declines playing with the magnets when they become available in order to continue with another activity started while waiting for the magnets.

○ **Child is emerging to the next developmental level**
○ **If you are unable to rate this measure, explain here:**

Self-Control of Feelings and Behavior **ATL-REG 2 (of 4)**

Source: Illinois State Board of Education. (2017). *Kindergarten Individual Development Survey user's guide & instrument*. https://www.isbe.net/Documents/KIDS-User-GuideInstrument.pdf (accessed 06/21/21).

Endnotes

1. Weisenfeld, G. G. (2017, January). Assessment tools used in kindergarten entry assessments (KEAs): State scan. *CEELO Fast Fact.* Center on Enhancing Early Learning Outcomes. http://ceelo.org/wp-content/uploads/2017/01/ceelo_fast_fact_kea_state_scan_2017_01_for_web.pdf (accessed 12/17/20); Regenstein, E., Connors, M., Romero-Jurado, R., & Weiner, J. (2017). Uses and misuses of kindergarten readiness assessment results—Executive Summary. *The Ounce of Prevention Policy Conversations*, *6*, 1–48. https://startearly.org/app/uploads/pdf/PolicyConversationKRAExecSummary.pdf.

2. Office of Planning, Evaluation, and Policy Development. (2016). *Results in brief: Case studies of the early implementation of kindergarten entry assessments*. U.S. Department of Education. https://www2.ed.gov/rschstat/eval/disadv/kindergarten-entry-assessments/brief.pdf (accessed 12/19/20); U.S. Department of Education, & U.S. Department of Health and Human Services. (2011). *Race to the Top–Early Learning Challenge*. https://www.ed.gov/sites/default/files/rtt-elc-draft-execsumm-070111.pdf (accessed 12/18/20).

3. In 2013, the Enhanced Assessment Grant program provided an additional $15.1 million in funding for KEA development support to Texas and two consortia of states, one led by North Carolina and the other by Maryland. Caron, B., Kendall, R., Wilson, G., & Hash, M. (2017). *Taking on the challenge: Building a strong foundation for early learning* [Early Learning Challenge summary report]. AEM Corp. https://www2.ed.gov/programs/racetothetop-earlylearningchallenge/elcsummary2017/elcsummary2017.pdf (accessed 12/19/20); Tepe, L. (2013, September 24). New grants focus on inter-state collaboration for kindergarten entry assessments [Blog post]. https://www.newamerica.org/education-policy/edcentral/new-grants-focus-on-inter-state-collaboration-for-kindergarten-entry-assessments/ (accessed 12/18/20); U.S. Department of Education. (2013). U.S. Department of Education awards more than $15.1 million in Enhanced Assessment Grants to develop or improve kindergarten entry assessments [Press release]. https://www.ed.gov/news/press-releases/us-department-education-awards-more-151-million-enhanced-assessment-grants-devel (accessed 01/11/21); U.S. Department of Education. (2017). *Race to the Top–Early Learning Challenge: Awarded states*. https://www2.ed.gov/programs/racetothetop-earlylearningchallenge/awards.html (accessed 01/11/21); U.S. Department of Education & U.S. Department of Health of Human Services. (2013). *Race to the Top–Early Learning Challenge fact sheet*. https://www2.ed.gov/programs/racetothetop-earlylearningchallenge/2013-early-learning-challenge-flyer.pdf (accessed 12/19/20); U.S. Department of Education, & U.S. Department of Health of Human Services. (2016). *Race to the Top–Early Learning Challenge 2015 progress update*. https://www.acf.hhs.gov/sites/default/files/ecd/2015_progress_update_final_2016_07_27_accessible.pdf (accessed 12/19/20).

4. Olson, L., & LePage, B. (2021). *Tough test: The nation's troubled early learning assessment landscape*. FutureEd. https://www.future-ed.org/wp-content/uploads/2021/03/FutureEd_Report_Tough_Test.pdf (accessed 03/10/21); U.S. Department of Education, & U.S. Department of Health of Human Services. (2016). *Race to the Top–Early Learning Challenge 2015 progress update*. https://www.acf.hhs.gov/sites/default/files/ecd/2015_progress_update_final_2016_07_27_accessible.pdf (accessed 12/19/20); Weisenfeld, G. G., Garver, K., & Hodges, K. (2020). Federal and state efforts in the implementation of kindergarten entry assessments (2011–2018). *Early Education and Development*, *31*(5), 632–652. https://doi.org/10.1080/10409289.2020.1720481.

5. 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.

6. 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; Weisenfeld, G. G. (2017, January). Assessment tools used in kindergarten entry assessments (KEAs): State scan. *CEELO Fast Fact.* Center on Enhancing Early Learning Outcomes. http://ceelo.org/wp-content/uploads/2017/01/ceelo_fast_fact_kea_state_scan_2017_01_for_web.pdf (accessed 12/17/20).

7. Darling-Hammond, L., Schachner, A., Edgerton, A., Badrinarayan, A., Cardichon, J., Cookson, P. W., Jr., Griffith, M., Klevan, S., Maier, A., Martinez, M., Melnick, H., Truong, N., & Wojcikiewicz, S. (2020). *Restarting and reinventing school: Learning in the time of COVID and beyond*. Learning Policy Institute.

8. Olson, L., & LePage, B. (2021). *Tough test: The nation's troubled early learning assessment landscape*. Future Ed. https://www.future-ed.org/wp-content/uploads/2021/03/FutureEd_Report_Tough_Test.pdf (accessed 03/10/21).

9. Korbey, H. (2014). Is kindergarten too young to test? *KQED*. https://www.kqed.org/mindshift/32786/is-kindergarten-too-young-to-test (accessed 03/10/21); 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.

10. 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; Little, M., Cohen-Vogel, L., Sadler, J., & Merrill, B. (2020). Moving kindergarten entry assessments from policy to practice: Evidence from North Carolina. *Early Education and Development*, *31*(5), 796–815. https://doi.org/10.1080/10409289.2020.1724600; Schachter, R. E., Strang, T. M., & Piasta, S. B. (2019). Teachers' experiences with a state-mandated kindergarten readiness assessment. *Early Years*, *39*(1), 80–96.

11. Bassok, D., & Rorem, A. (2016). Is kindergarten the new first grade? *AERA Open*, *1*(4), 1–31. https://doi.org/10.1177/2332858415616358; Carlsson-Paige, N., McLaughlin, G. B., & Almon, J. W. (2015). *Reading instruction in kindergarten: Little to gain and much to lose*. Defending the Early Years. https://dey.org/publication/our-new-report-reading-instruction-in-kindergarten-little-to-gain-and-much-to-lose/ (accessed 03/10/21).

12. Bassok, D., & Rorem, A. (2016). Is kindergarten the new first grade? *AERA Open*, *1*(4), 1–31. https://doi.org/10.1177/2332858415616358; Carlsson-Paige, N., McLaughlin, G. B., & Almon, J. W. (2015). *Reading instruction in kindergarten: Little to gain and much to lose*. Defending the Early Years. https://dey.org/publication/our-new-report-reading-instruction-in-kindergarten-little-to-gain-and-much-to-lose/ (accessed 03/10/21); Slutzky, C., & DeBruin-Parecki, A. (2019). *State-level perspectives on kindergarten readiness* [Research Report No. RR-19-07]. Educational Testing Service. https://doi.org/10.1002/ets2.12242.

13. Espinosa, L. M., & García, E. (2012). *Developmental assessment of young dual language learners with a focus on kindergarten entry assessment: Implications for state policies* [Working paper #1]. CECER–DLL, Frank Porter Graham Child Development Institute, University of North Carolina at Chapel Hill.

14. Espinosa, L. M., & García, E. (2012). *Developmental assessment of young dual language learners with a focus on Kindergarten Entry Assessment: Implications for state policies* [Working paper #1]. CECER–DLL, Frank Porter Graham Child Development Institute, University of North Carolina at Chapel Hill; Gewertz, C. (2015). The drumbeat of kindergarten assessment results. *EducationWeek*. https://www.edweek.org/teaching-learning/the-drumbeat-of-kindergarten-assessment-results/2015/01?s_kwcid=AL!6416!3!156092717269!b!!g!!&cmp=cpc-goog-ew-dynamic+ads&ccid=dynamic+ads&ccag=assessment+testing+dynamic&cckw=&cccv=dynamic+ad&gclid=Cj0KCQiA4feBBhC9ARIsABp_nbUWcdZ62-qoch60E4j_a08hF0cOzg4KP9OB-UnxGnhUGhY0AT1K9EcaAopqEALw_wcB (accessed 03/10/21); 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; Strauss, V. (2015, June 6). The kindergarten testing mess. *Washington Post*. https://www.washingtonpost.com/news/answer-sheet/wp/2015/06/06/the-kindergarten-testing-mess/ (accessed 03/10/21).

15. Meloy, B., & Schachner, A. (2019). *Early childhood essentials: A framework for aligning child skills and educator competencies*. Learning Policy Institute. https://learningpolicyinstitute.org/product/early-childhood-essentials-framework-report (accessed 12/17/20); Schultz, T. (2013). If kg. entry assessments are the answer, what is the question? [Slide presentation]. Council of Chief State School Officers. http://ceelo.org/wp-content/uploads/2013/08/CEELO_CCSSO_Kg-Entry-Assessments.pdf.

16. Meloy, B., & Schachner, A. (2019). *Early childhood essentials: A framework for aligning child skills and educator competencies*. Learning Policy Institute. https://learningpolicyinstitute.org/product/early-childhood-essentials-framework-report (accessed 12/17/20).

17. Meloy, B., & Schachner, A. (2019). *Early childhood essentials: A framework for aligning child skills and educator competencies*. Learning Policy Institute. https://learningpolicyinstitute.org/product/early-childhood-essentials-framework-report (accessed 12/17/20); National Association for the Education of Young Children. (2020). *Developmentally appropriate practice (DAP) position statement*. https://www.naeyc.org/resources/position-statements/dap/contents (accessed 05/24/21).

18. Ashiabi, G. S. (2007). Play in the preschool classroom: Its socioemotional significance and the teacher's role in play. *Early Childhood Education Journal*, *35*, 199–207. https://doi.org/10.1007/s10643-007-0165-8; Bergen, D. (2002). The role of pretend play in children's cognitive development. *Early Childhood Research & Practice*, *4*(1). http://ecrp.uiuc.edu/v4n1/bergen.html; Bredekamp, S. (2004). "Play and School Readiness" in Zigler, E. F., Singer, D. G., & Bishop-Josef, S. J. (Eds.). *Children's Play: The Roots of Reading* (pp. 159–174). ZERO TO THREE; Burdette, H. L., & Whitaker, R. C. (2005). Resurrecting free play in young children: Looking beyond fitness and fatness to attention, affiliation, and affect. *Archives of Pediatrics and Adolescent Medicine*, *159*(1), 46–50. https://doi.org/10.1001/archpedi.159.1.46; Hanline, M. F. (1999). Developing a preschool play-based curriculum. *International Journal of Disability, Development and Education*, *46*, 289–305. https://doi.org/10.1080/103491299100515; Hanline, M. F., Milton, S., & Phelps, P. C. (2008). A longitudinal study exploring the relationship of representational levels of three aspects of preschool sociodramatic play and early academic skills. *Journal of Research in Childhood Education*, *23*, 19–28. https://doi.org/10.1080/02568540809594643.

19. Many proponents of play as a developmental activity contend that to optimally foster children's learning, play must have the following: a stimulating, nonthreatening environment; extended opportunities for exploration; child initiation and choice; hands-on experiences connected to real life; teacher modeling; literacy resources and activities; open dialogue and conversation; and integrated content and opportunities for problem-solving. Rushton, S., Juola-Rushton, A., & Larkin, E. (2010). Neuroscience, play and early childhood education: Connections, implications and assessment. *Early Childhood Education Journal*, *37*, 351–361. https://doi.org/10.1007/s10643-009-0359-3.

20. Pellegrini, A. D., & Perlmutter, J. C. (1989). Classroom contextual effects on children's play. *Developmental Psychology*, *25*(2), 289–296. https://doi.org/10.1037/0012-1649.25.2.289.

21. Ashiabi, G. S. (2007). Play in the preschool classroom: Its socioemotional significance and the teacher's role in play. *Early Childhood Education Journal*, *35*, 199–207; Bredekamp, S. (2004). "Play and School Readiness" in Zigler, E. F., Singer, D. G., & Bishop-Josef, S. J. (Eds.). *Children's Play: The Roots of Reading* (pp. 159–174). ZERO TO THREE; Hanline, M. F. (1999). Developing a preschool play-based curriculum. *International Journal of Disability, Development and Education*, *46*, 289–305; Kagan, S. L. (1990). "Children's Play: The Journey From Theory to Practice" in Klugman, E., & Smilansky, S. (Eds.). *Children's Play and Learning: Perspectives and Policy Implications* (pp. 173–187). Teachers College Press; Pellegrini, A. D., & Perlmutter, J. C. (1989). Classroom contextual effects on children's play. *Developmental Psychology*, *25*(2), 289–296. https://doi.org/10.1037/0012-1649.25.2.289; Wood, L., & Bennett, N. (1997). The rhetoric and reality of play: Teachers' thinking and classroom practice. *Early Years*, *17*(2), 22–27.

22. Meloy, B., & Schachner, A. (2019). *Early childhood essentials: A framework for aligning child skills and educator competencies*. Learning Policy Institute. https://learningpolicyinstitute.org/product/early-childhood-essentials-framework-report (accessed 12/17/20).

23. Slutzky, C., & DeBruin-Parecki, A. (2019). *State-level perspectives on kindergarten readiness* [Research Report Series No. RR-19-07]. Educational Testing Service. https://doi.org/10.1002/ets2.12242.

24. The Ounce of Prevention Fund is now called Start Early. 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; National Association for the Education of Young Children. (2020). *Developmentally appropriate practice (DAP) position statement*. https://www.naeyc.org/resources/position-statements/dap/contents (accessed 05/24/21); 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*. http://ceelo.org/wp-content/uploads/2017/03/ceelo_fast_fact_kea_implementation_2017_03_final_web.pdf (accessed 05/06/21).

25. Ackerman, D. J., & Barnett, W. S. (2005). *Prepared for kindergarten: What does "readiness" mean?* National Institute for Early Education Research. https://nieer.org/policy-issue/policy-report-prepared-for-kindergarten-what-does-readiness-mean (accessed 12/19/20); Meloy, B., & Schachner, A. (2019). *Early childhood essentials: A framework for aligning child skills and educator competencies*. Learning Policy Institute. https://learningpolicyinstitute.org/product/early-childhood-essentials-framework-report (accessed 12/17/20); National Association for the Education of Young Children. (2009). *Where we stand on school readiness*. https://www.naeyc.org/sites/default/files/globally-shared/downloads/PDFs/resources/position-statements/Readiness.pdf (accessed 12/19/20).

26. Carlsson-Paige, N., McLaughlin, G. B., & Almon, J. W. (2015). *Reading instruction in kindergarten: Little to gain and much to lose*. Defending the Early Years. https://dey.org/publication/our-new-report-reading-instruction-in-kindergarten-little-to-gain-and-much-to-lose/ (accessed 03/10/21).

27. Meisels, S. J. (1989). High-stakes testing in kindergarten. *Educational Leadership*, *46*(7), 16–22.

28. Neisworth, J. T., & Bagnato, S. J. (2004). The mismeasure of young children: The authentic assessment alternative. *Infants and Young Children*, *17*(3), 198–212. https://doi.org/10.1097/00001163-200407000-00002.

29. Meisels, S. J. (1993). Remaking classroom assessment with the Work Sampling System. *Young Children*, *48*(5), 34–40; National Association for the Education of Young Children. (2020). *Developmentally appropriate practice (DAP) position statement*. https://www.naeyc.org/resources/position-statements/dap/contents (accessed 05/24/21); Shepard, L., Kagan, S. L., & Wurtz, E. (1998). *Principles and recommendations for early childhood assessments*. National Education Goals Panel. https://eric.ed.gov/?id=ED416033 (accessed 05/27/21).

30. 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.

31. 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.

32. Blessing, A. D. (2019). Assessment in kindergarten: Meeting children where they are. *Young Children*, *74*(3), 6–13. https://www.naeyc.org/resources/pubs/yc/jul2019/assessment-in-kindergarten (accessed 05/27/21); National Association for the Education of Young Children. (2020). *Developmentally appropriate practice (DAP) position statement*. https://www.naeyc.org/resources/position-statements/dap/contents (accessed 05/24/21); Shepard, L., Kagan, S. L., & Wurtz, E. (1998). *Principles and recommendations for early childhood assessments*. National Education Goals Panel. https://eric.ed.gov/?id=ED416033 (accessed 05/27/21).

33. The Ages & Stages Questionnaires (ASQ) is a common early childhood family report tool that includes a series of questions for caregivers about children's competencies across multiple domains. The ASQ takes 10–15 minutes and can be used to identify and refer children at risk for developmental delays for further evaluation. Family-completed measures tap into the depth of knowledge that caregivers and other family members have about a child's behaviors, strengths, and needs. Family report tools can help engage and empower families to share children's strengths, ask questions, express concerns, and seek resources. For a description of the Ages & Stages Questionnaires, see https://agesandstages.com/; Banerjee, R., & Luckner, J. (2014). Training needs of early childhood professionals who work with children and families who are culturally and linguistically diverse. *Infants & Young Children*, *27*(1), 43–59. https://doi.org/10.1097/IYC.0000000000000000; Paul H. Brookes Publishing Co. (2021). ASQ-3. https://agesandstages.com/products-pricing/asq3/ (accessed 01/15/21); Dunlap, G., Newton, J. S., Fox, L., Benito, N., & Vaughn, B. (2001). Family involvement and functional assessment and positive behavior support. *Focus on Autism and Other Developmental Disabilities*, *16*(4), 215–220. https://doi.org/10.1177/108835760101600403; Early Childhood Technical Assistance Center. (2017). *Engaging families as assessment partners*. Frank Porter Graham Child Development Institute. https://ectacenter.org/~pdfs/decrp/PG_Asm_EngagingFamiliesasAssessmentPartners_prac_print_2017.pdf (accessed 12/20/20); Hanson, M. J., Lynch, E. W., & Wayman, K. I. (1990). Honoring the cultural diversity of families when gathering data. *Topics in Early Childhood Special Education*, *10*(1), 112–131. https://doi.org/10.1177/027112149001000109; Meisels, S., & Atkins-Burnett, S. (2000). "The Elements of Early Childhood Assessment" in Shonkoff, J., & Meisels, S. (Eds.). *Handbook of Early Childhood Intervention* (pp. 231–257). Cambridge University Press. https://doi.org/10.1017/CBO9780511529320; Squires, J., Twombly, E., Bricker, D., & Potter, L. (2009). *ASQ-3 technical report*. Paul H. Brookes Publishing Co. https://agesandstages.com/wp-content/uploads/2017/05/ASQ-3-Technical-Appendix_web.pdf (accessed 01/15/21).

34. Early Childhood Education State Collaborative on Assessment and Student Standards. (2011). *Moving forward with kindergarten readiness assessment efforts: A position paper of the Early Childhood Education State Collaborative on assessment and student standards*. Council of Chief State School Officers. https://files.eric.ed.gov/fulltext/ED543310.pdf (accessed 12/17/20).

35. Heritage, M. (2008). *Learning progressions: Supporting instruction and formative assessment*. Formative Assessment for Teachers and Students (FAST) State Collaborative on Assessment and Student Standards (SCASS) of the Council of Chief State School Officers (CCSSO). http://www.renlearn.co.uk/wp-content/uploads/2014/03/learning-progressions-supporting-instruction-and-formative-assessment.pdf (accessed 05/24/21).

36. 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.

37. DRDP-R as described in 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.

38. Mangione, P. L., Osborne, T., & Mendenhall., H. (2019). What's next? How learning progressions help teachers support children's development and learning. *Young Children*, *74*(3), 20–25.

39. 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; Pyle, R. P. (2002). Best practices in assessing kindergarten readiness. *The California School Psychologist*, *7*, 63–73. https://www.casponline.org/pdfs/pdfs/journal02.pdf (accessed 05/28/21); 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.

40. 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.

41. Stipek, D., Franke, M., Clements, D., Farran, D., & Coburn, C. (2017). PK–3: What does it mean for instruction? *Social Policy Report*, *30*(2), 1–23. https://doi.org/10.1002/j.2379-3988.2017.tb00087.x.

42. Alabama (TS GOLD); Arizona (TS GOLD); Delaware (TS GOLD); Maryland (Early Learning Assessment/MD-OH KRA); Nevada (BRIGANCE Screens III); New Mexico (Early Childhood Observation Tool/Kindergarten Observation Tool); Ohio (Early Learning Assessment/MD-OH KRA); Utah (Prekindergarten Entry and Exit Profile/Kindergarten Entry and Exit Profile); Vermont (TS GOLD); Virginia (PALS); Washington (TS GOLD); West Virginia (Early Learning Scale/Early Learning Reporting System). States where districts have the option to use the same assessment tool in preschool and kindergarten include California, Colorado, Illinois, Kansas, Louisiana, Minnesota, Nevada, New Jersey, and North Carolina.

43. Some states that initially required multiple administrations of the assessment changed their policies due to feedback that teachers did not have adequate time or support. 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.

44. These states are noted in the scan as having multiple assessment windows. States with a required KEA with required multiple administrations: North Carolina (2x), Utah (2x), Virginia (2x), West Virginia (2x); Required KEA linked to yearlong formative assessment: Georgia; Required KEA with optional multiple administrations: Alabama, Nebraska; Required reading assessment with required multiple administrations: Arkansas, Idaho, Iowa, Mississippi, Texas; Optional KEA with multiple administrations: Arizona, California, Massachusetts, New Jersey.

45. The Formative Assessment for Students and Teachers State Collaborative on Assessment and Student Standards. (2018). *Revising the definition of formative assessment*. Council of Chief State School Officers. https://ccsso.org/sites/default/files/2018-06/Revising%20the%20Definition%20of%20Formative%20Assessment.pdf (accessed 01/15/21).

46. The Formative Assessment for Students and Teachers State Collaborative on Assessment and Student Standards. (2018). *Fundamental insights about formative assessment* [Brief]. Council of Chief State School Officers. https://ccsso.org/sites/default/files/2018-10/FAST%20SCASS%20Fundamental%20Insights%20about%20Formative%20Assessment.pdf (accessed 01/15/21).

47. 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.

48. Council of Chief State School Officers. (2019). *K–2 assessments: An update on state adoption and implementation*. https://ccsso.org/sites/default/files/2019-06/K-2%20Assessments%20Paper%20FINAL.pdf (accessed 01/15/21).

49. 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; Espinosa, L. M., & López, M. L. (2007). *Assessment considerations for young English language learners across different levels of accountability*. National Early Childhood Accountability Task Force and First 5 LA. https://www.researchgate.net/publication/253312187_Assessment_Considerations_for_Young_English_Language_Learners_Across_Different_Levels_of_Accountability (accessed 12/18/20); National Association for the Education of Young Children. (2020). *Developmentally appropriate practice (DAP) position statement*. https://www.naeyc.org/resources/position-statements/dap/contents (accessed 05/24/21); 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; Shepard, L., Kagan, S. L., & Wurtz, E. (1998). *Principles and recommendations for early childhood assessments*. National Education Goals Panel. https://eric.ed.gov/?id=ED416033 (accessed 05/27/21); 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.

50. Espinosa, L. M., & García, E. (2012). *Developmental assessment of young dual language learners with a focus on kindergarten entry assessment: Implications for state policies* [Working paper #1]. CECER–DLL, Frank Porter Graham Child Development Institute, University of North Carolina at Chapel Hill. https://legacy.earlysuccess.org/sites/default/files/KEA%20Policy%20brief.CECER-DLL.12-12.pdf (accessed 12/19/20); Kirova, A., & Hennig, K. (2013). Culturally responsive assessment practices: Examples from an intercultural multilingual early learning program for newcomer children. *Power and Education*, *5*(2), 106–119. https://doi.org/10.2304/power.2013.5.2.106; Montenegro, E., & Jankowski, N. A. (2017). *Equity and assessment: Moving towards culturally responsive assessment* [Occasional Paper No. 29]. University of Illinois and Indiana University, National Institute for Learning Outcomes Assessment. https://learningoutcomesassessment.org/documents/OccasionalPaper29.pdf (accessed 12/19/20); National Association for the Education of Young Children. (2020). *Developmentally appropriate practice (DAP) position statement*. https://www.naeyc.org/resources/position-statements/dap/contents (accessed 05/24/21); Rollins, P. R., McCabe, A., & Bliss, L. (2000). Culturally sensitive assessment of narrative skills in children. *Seminars in Speech and Language*, *21*(3), 223–233. https://doi.org/10.1055/s-2000-13196; 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.

51. Kirby, A. (2021, March 4). Assessments should be next in line for a long-needed overhaul [Blog post]. http://blog.csba.org/assessments-overhaul/ (accessed 03/17/21); National Academy of Education. (2021). *Educational assessments in the COVID-19 era and beyond*. https://naeducation.org/wp-content/uploads/2021/02/Educational-Assessments-in-the-COVID-19-Era-and-Beyond.pdf (accessed 03/17/21).

52. Meisels, S. J. (2006). *Accountability in early childhood: No easy answers* [Occasional Paper No. 6]. Herr Research Center for Children and Social Policy at Erikson Institute. https://www.erikson.edu/wp-content/uploads/2017/10/opmeisels2006.pdf (accessed 05/28/21); Shepard, L., Kagan, S. L., & Wurtz, E. (1998). *Principles and recommendations for early childhood assessments*. National Education Goals Panel. https://eric.ed.gov/?id=ED416033 (accessed 05/27/21); 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.

53. 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.

54. Ackerman, D. J. (2020). *The state kindergarten entry assessment digital technology landscape* [Research Report Series No. RR-20-26]. Educational Testing Service. https://doi.org/10.1002/ets2.12296; Barnes, S. K. (2010). *Using computer-based testing with young children*. Northeastern Educational Research Association Annual Conference Proceedings. https://opencommons.uconn.edu/cgi/viewcontent.cgi?article=1010&context=nera_2010 (accessed 12/20/20); Barnes, S. K. (2015). "Computer-Based Testing and Young Children" in Saracho, O. (Ed.). *Contemporary Perspectives on Research in Assessment and Evaluation in Early Childhood Education* (pp. 374–396). Information Age Publishing.

55. Ketterlin-Geller, L. R. (2005). Knowing what all students know: Procedures for developing universal design for assessment. *Journal of Technology, Learning, and Assessment*, *4*(2). https://ejournals.bc.edu/index.php/jtla/article/download/1649/1491/ (accessed 12/20/20); National Association for the Education of Young Children. (2020). *Developmentally appropriate practice (DAP) position statement*. https://www.naeyc.org/resources/position-statements/dap/contents (accessed 05/24/21); Shepard, L., Kagan, S. L., & Wurtz, E. (1998). *Principles and recommendations for early childhood assessments*. National Education Goals Panel. https://eric.ed.gov/?id=ED416033 (accessed 05/27/21); 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.

56. Burgstahler, S. (2009). *Universal design in education: Principles and applications*. DO-IT Center at the University of Washington. https://files.eric.ed.gov/fulltext/ED506545.pdf (accessed 12/20/20); Ketterlin-Geller, L. R. (2005). Knowing what all students know: Procedures for developing universal design for assessment. *Journal of Technology, Learning, and Assessment*, *4*(2). https://ejournals.bc.edu/index.php/jtla/article/download/1649/1491/ (accessed 12/20/20); Story, M. (2011). "The Principles of Universal Design" in Preiser, W. F. E., & Smith, K. H. (Eds). *Universal Design Handbook* (2nd ed.) (pp. 43–50). McGraw Hill.

57. 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.

58. Espinosa, L. M., & García, E. (2012). *Developmental assessment of young dual language learners with a focus on kindergarten entry assessment: Implications for state policies* [Working paper #1]. CECER–DLL, Frank Porter Graham Child Development Institute, University of North Carolina at Chapel Hill. https://legacy.earlysuccess.org/sites/default/files/KEA%20Policy%20brief.CECER-DLL.12-12.pdf (accessed 12/19/20).

59. 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; Guzman-Orth, D., Lopez, A., & Tolentino, F. (2017). *A framework for the dual language assessment of young dual language learners in the United States*. Educational Testing Service; Lopez, A. A., Turkan, S., & Guzman-Orth, D. (2017). *Conceptualizing the use of translanguaging in initial content assessments for newly arrived emergent bilingual students* [Research Report No. RR-17-07]. Educational Testing Service. https://doi.org/10.1002/ets2.12140.

60. 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; Espinosa, L. M., & García, E. (2012). *Developmental assessment of young dual language learners with a focus on kindergarten entry assessment: Implications for state policies* [Working paper #1]. CECER–DLL, Frank Porter Graham Child Development Institute, University of North Carolina at Chapel Hill. https://legacy.earlysuccess.org/sites/default/files/KEA%20Policy%20brief.CECER-DLL.12-12.pdf (accessed 12/19/20); Espinosa, L. M. (2018). Encouraging the development and achievement of dual language learners in early childhood. *American Educator*, *43*(3), 10–11. https://www.aft.org/sites/default/files/aefall2018.pdf (accessed 12/20/20); Park, M., O'Toole, A., & Katsiaficas, C. (2017). *Dual language learners: A national demographic and policy profile*. Migration Policy Institute. https://www.migrationpolicy.org/research/dual-language-learners-national-demographic-and-policy-profile (accessed 12/20/20).

61. Abedi, J., Huie Hofstetter, C., & Lord, C. (2004). Assessment accommodations for English language learners: Implications for policy-based empirical research. *Review of Educational Research*, *74*, 1–28. https://doi.org/10.3102/00346543074001001; Espinosa, L. M., & García, E. (2012). *Developmental assessment of young dual language learners with a focus on kindergarten entry assessment: Implications for state policies* [Working paper #1]. CECER–DLL, Frank Porter Graham Child Development Institute, University of North Carolina at Chapel Hill. https://legacy.earlysuccess.org/sites/default/files/KEA%20Policy%20brief.CECER-DLL.12-12.pdf (accessed 12/19/20); Espinosa, L. M., & López, M. L. (2007). *Assessment considerations for young English language learners across different levels of accountability*. National Early Childhood Accountability Task Force and First 5 LA. https://www.researchgate.net/publication/253312187_Assessment_Considerations_for_Young_English_Language_Learners_Across_Different_Levels_of_Accountability (accessed 12/18/20).

62. 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 (accessed 12/17/20).

63. Florida S.B. 724, Section 1. https://www.flsenate.gov/Session/Bill/2021/724 (accessed 04/06/21); Brugal, S. (2020, January 10). Will Spanish-, Creole-speaking students be able to take tests in their native languages? *TCPalm*. https://www.tcpalm.com/story/news/2020/01/10/students-soon-able-test-their-native-spanish-and-creole/2842721001/ (accessed 04/06/21).

64. 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.

65. 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.

66. Espinosa, L. M., & García, E. (2012). *Developmental assessment of young dual language learners with a focus on kindergarten entry assessment: Implications for state policies* [Working paper #1]. CECER–DLL, Frank Porter Graham Child Development Institute, University of North Carolina at Chapel Hill. https://legacy.earlysuccess.org/sites/default/files/KEA%20Policy%20brief.CECER-DLL.12-12.pdf (accessed 12/19/20).

67. Rollins, P. R., McCabe, A., & Bliss, L. (2000). Culturally sensitive assessment of narrative skills in children. *Seminars in Speech and Language*, *21*(3), 223–233. https://doi.org/10.1055/s-2000-13196; Espinosa, L. M., & García, E. (2012). *Developmental assessment of young dual language learners with a focus on kindergarten entry assessment: Implications for state policies* [Working paper #1]. CECER–DLL, Frank Porter Graham Child Development Institute, University of North Carolina at Chapel Hill. https://legacy.earlysuccess.org/sites/default/files/KEA%20Policy%20brief.CECER-DLL.12-12.pdf (accessed 12/19/20); 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.

68. 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; Espinosa, L. M., & García, E. (2012). *Developmental assessment of young dual language learners with a focus on kindergarten entry assessment: Implications for state policies* [Working paper #1]. CECER–DLL, Frank Porter Graham Child Development Institute, University of North Carolina at Chapel Hill. https://legacy.earlysuccess.org/sites/default/files/KEA%20Policy%20brief.CECER-DLL.12-12.pdf (accessed 12/19/20).

69. 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 (accessed 12/17/20).

70. Snow, C. E., & Van Hemel, S. B. (2008). *Early Childhood Assessment: Why, What, and How?* National Academies Press. https://doi.org/10.17226/12446; 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 (accessed 12/17/20).

71. Maslow, A. H. (1943). A theory of human motivation. *Psychological Review*, *50*(4), 370–396. https://psychclassics.yorku.ca/Maslow/motivation.htm.

72. 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; Harvey, H., & Ohle, K. (2018). What's the purpose? Educators' perceptions of a state-mandated kindergarten entry assessment. *Education Policy Analysis Archives*, *26*(142). https://epaa.asu.edu/ojs/article/view/3877 (accessed 05/27/21); Regenstein, E., Connors, M., Romero-Jurado, R., & Weiner, J. (2017). Uses and misuses of kindergarten readiness assessment results—Executive Summary. *The Ounce of Prevention Policy Conversations*, *6*, 1–48. https://startearly.org/app/uploads/pdf/PolicyConversationKRAExecSummary.pdf (accessed 05/27/21); Schachter, R. E., Flynn, E. E., Napoli, A. R., & Piasta, S. B. (2020). Teachers' perspectives on year two implementation of a kindergarten readiness assessment. *Early Education and Development*, *31*(5), 778–795; Shepard, L., Kagan, S. L., & Wurtz, E. (1998). *Principles and recommendations for early childhood assessments*. National Education Goals Panel. https://eric.ed.gov/?id=ED416033 (accessed 05/27/21).

73. 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; Harvey, H., & Ohle, K. (2018). What's the purpose? Educators' perceptions of a state-mandated kindergarten entry assessment. *Education Policy Analysis Archives*, *26*(142). https://epaa.asu.edu/ojs/article/view/3877 (accessed 05/27/21); Regenstein, E., Connors, M., Romero-Jurado, R., & Weiner, J. (2017). Uses and misuses of kindergarten readiness assessment results—Executive Summary. *The Ounce of Prevention Policy Conversations*, *6*, 1–48. https://startearly.org/app/uploads/pdf/PolicyConversationKRAExecSummary.pdf (accessed 05/27/21); Schachter, R. E., Flynn, E. E., Napoli, A. R., & Piasta, S. B. (2020). Teachers' perspectives on year two implementation of a kindergarten readiness assessment. *Early Education and Development*, *31*(5), 778–795; Shepard, L., Kagan, S. L., & Wurtz, E. (1998). *Principles and recommendations for early childhood assessments*. National Education Goals Panel. https://eric.ed.gov/?id=ED416033 (accessed 5/27/21).

74. Mashburn, A. J., & Henry, G. T. (2004). Assessing school readiness: Validity and bias in preschool and kindergarten teachers' ratings. *Educational Measurement: Issues and Practice*, *23*(4), 16–30. https://doi.org/10.1111/j.1745-3992.2004.tb00165.x.

75. Alvarez, L., Ananda, S., Walqui, A., Sato, E., & Rabinowitz, S. (2014). *Focusing formative assessment on the needs of English language learners*. WestEd. https://www.wested.org/wp-content/uploads/2016/11/1391626953FormativeAssessment_report5-3.pdf (accessed 12/20/20); Bedore, L., & Peña, E. (2007). Assessment of bilingual children for identification of language impairment: Current findings and implications for practice. *International Journal of Bilingual Education and Bilingualism*, *11*(1), 1–29. https://www.researchgate.net/publication/237806922_Assessment_of_Bilingual_Children_for_Identification_of_Language_Impairment_Current_Findings_and_Implications_for_Practice (accessed 12/20/20); 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; Espinosa, L. M. (2018). Encouraging the development and achievement of dual language learners in early childhood. *American Educator*, *43*(3), 10–11. https://www.aft.org/sites/default/files/aefall2018.pdf (accessed 12/20/20).

76. 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.

77. Cash, A. H., Hamre, B. K., Pianta, R. C., & Myers, S. S. (2012). Rater calibration when observational assessment occurs at large scale: Degree of calibration and characteristics of raters associated with calibration. *Early Childhood Research Quarterly*, *27*(3), 529–542; Diamond, K. E., Reagan, A. J., & Bandyk, J. E. (2010). Parents' conceptions of kindergarten readiness: Relationships with race, ethnicity, and development. *The Journal of Educational Research*, *94*(2), 93–100; Harvey, E. A., Fischer, C., Weieneth, J. L., Hurwitz, S. D., & Sayer, A. G. (2013). Predictors of discrepancies between informants' ratings of preschool-aged children's behavior: An examination of ethnicity, child characteristics, and family functioning. *Early Childhood Research Quarterly*, *28*(4), 668–682. https://doi.org/10.1016/j.ecresq.2013.05.002; Mashburn, A. J., & Henry, G. T. (2004). Assessing school readiness: Validity and bias in preschool and kindergarten teachers' ratings. *Educational Measurement: Issues and Practice*, *23*(4), 16–30. https://doi.org/10.1111/j.1745-3992.2004.tb00165.x.

78. Alexander, K. L., Entwisle, D. R., & Thompson, M. S. (1987). School performance, status relations, and the structure of sentiment: Bringing the teacher back in. *American Sociological Review*, *52*(5), 665–682. https://doi.org/10.2307/2095602; Capatosto, K. (2015). *Strategies for addressing implicit bias in early childhood education*. Kirwan Institute for the Study of Race and Ethnicity. http://kirwaninstitute.osu.edu/wp-content/uploads/2015/06/implicit-bias-strategies.pdf (accessed 12/20/20); Downey, D., & Pribesh, S. (2004). When race matters: Teachers' evaluations of students' classroom behavior. *Sociology of Education*, *77*(4), 267–282. https://www.researchgate.net/publication/234601288_When_Race_Matters_Teachers'_Evaluations_of_Students'_Classroom_Behavior (accessed 12/20/20); Starck, J. G., Riddle, T., Sinclair, S., & Warikoo, N. (2020). Teachers are people too: Examining the racial bias of teachers compared to other American adults. *Educational Researcher*, *49*(4). https://doi.org/10.3102/0013189X20912758.

79. Espinosa, L. M., & López, M. L. (2007). *Assessment considerations for young English language learners across different levels of accountability*. National Early Childhood Accountability Task Force and First 5 LA. https://www.researchgate.net/publication/253312187_Assessment_Considerations_for_Young_English_Language_Learners_Across_Different_Levels_of_Accountability (accessed 12/18/20).

80. 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; Espinosa, L. M., & García, E. (2012). *Developmental assessment of young dual language learners with a focus on kindergarten entry assessment: Implications for state policies* [Working paper #1]. CECER–DLL, Frank Porter Graham Child Development Institute, University of North Carolina at Chapel Hill. https://legacy.earlysuccess.org/sites/default/files/KEA%20Policy%20brief.CECER-DLL.12-12.pdf (accessed 12/19/20).

81. 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; Cannady, K., Hillegass, M., & Jackle, E. (2019). *Mastering KIDS: Voices from the field*. Teach Plus. https://teachplus.org/sites/default/files/publication/pdf/mastering_kids_til.pdf (accessed 01/25/21); Golan, S., Woodbridge, M., Davies-Mercier, B., & Pistorino, C. (2016). *Case studies of the early implementation of kindergarten entry assessment*. U.S. Department of Education. https://www2.ed.gov/rschstat/eval/disadv/kindergarten-entry-assessments/report.pdf (accessed 03/17/21); Little, M., Cohen-Vogel, L., Sadler, J., & Merrill, B. (2020). Moving kindergarten entry assessments from policy to practice: Evidence from North Carolina. *Early Education and Development*, *31*(5), 796–815. https://doi.org/10.1080/10409289.2020.1724600; Schachter, R. E., Flynn, E. E., Napoli, A. R., & Piasta, S. B. (2020). Teachers' perspectives on year two implementation of a kindergarten readiness assessment. *Early Education and Development*, *31*(5), 778–795.

82. Golan, S., Woodbridge, M., Davies-Mercier, B., & Pistorino, C. (2016). *Case studies of the early implementation of kindergarten entry assessment*. U.S. Department of Education. https://www2.ed.gov/rschstat/eval/disadv/kindergarten-entry-assessments/report.pdf (accessed 03/17/21); 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.

83. Effective schooling, however, may disrupt predicted patterns.

84. 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; American Educational Research Association. (2014). *Standards for educational and psychological testing*. https://www.testingstandards.net/uploads/7/6/6/4/76643089/standards_2014edition.pdf (accessed 05/28/21); Goldstein, J., & Flake, J. K. (2016). Towards a framework for the validation of early childhood assessment systems. *Educational Assessment, Evaluation and Accountability*, *28*(3), 273–293. https://doi.org/10.1007/s11092-015-9231-8; Shepard, L., Kagan, S. L., & Wurtz, E. (1998). *Principles and recommendations for early childhood assessments*. National Education Goals Panel. https://eric.ed.gov/?id=ED416033 (accessed 05/27/21); 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.

85. 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.

86. 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; 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 (accessed 12/17/20).

87. Abedi, J., Huie Hofstetter, C., & Lord, C. (2004). Assessment accommodations for English language learners: Implications for policy-based empirical research. *Review of Educational Research*, *74*, 1–28. https://doi.org/10.3102/00346543074001001; American Educational Research Association. (2014). *Standards for educational and psychological testing*. https://www.testingstandards.net/uploads/7/6/6/4/76643089/standards_2014edition.pdf (accessed 05/28/21); Tindal, G., & Fuchs, L. *A summary of research on test changes: An empirical basis for defining accommodations*. Mid-South Regional Resource Center. https://files.eric.ed.gov/fulltext/ED442245.pdf (accessed 05/28/21).

88. 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.

89. Kim, D. H., Lambert, R. G., & Burts, D. C. (2013). Evidence of the validity of Teaching Strategies GOLD® assessment tool for English language learners and children with disabilities. *Early Education and Development*, *24*(4), 574–595; see also: Teaching Strategies. (2021). *Approach: Research*. https://teachingstrategies.com/our-approach/research/ (accessed 05/06/21).

90. American Institutes for Research. (2013). *Teaching Strategies GOLD assessment system concurrent validity*. Teaching Strategies. https://teachingstrategies.com/wp-content/uploads/2017/03/GOLD-Concurrent-Validity-2013.pdf (accessed 12/17/20); Russo, J. M., Williford, A. P., Markowitz, A. J., Vitiello, V. E., & Bassok, D. (2019). Examining the validity of a widely-used school readiness assessment: Implications for teachers and early childhood programs. *Early Childhood Research Quarterly*, *48*, 14–25.

91. Russo, J. M., Williford, A. P., Markowitz, A. J., Vitiello, V. E., & Bassok, D. (2019). Examining the validity of a widely-used school readiness assessment: Implications for teachers and early childhood programs. *Early Childhood Research Quarterly*, *48*, 14–25; Vitiello, V. E., & Williford, A. P. (2021). Alignment of teacher ratings and child direct assessments in preschool: A closer look at Teaching Strategies GOLD. *Early Childhood Research Quarterly*, *56*, 114–123.

92. Miller-Bains, K. L., Russo, J. M., Williford, A. P., De Coster, J., & Cottone, E. A. (2017). Examining the validity of a multidimensional performance-based assessment at kindergarten entry. *AERA Open*, *3*(2), 1–16. https://doi.org/10.1177/2332858417706969.

93. Joseph, G., Soderberg, J. S., Stull, S., Cummings, K., McCutchen, D., & Han, R. J. (2020). Inter-rater reliability of Washington state's kindergarten entry assessment. *Early Education and Development*, *31*(5), 764–777. https://doi.org/10.1080/10409289.2019.1674589.

94. Russo, J. M., Williford, A. P., Markowitz, A. J., Vitiello, V. E., & Bassok, D. (2019). Examining the validity of a widely-used school readiness assessment: Implications for teachers and early childhood programs. *Early Childhood Research Quarterly*, *48*, 14–25.

95. Desired Results Access Project. (2021). *Specialized guidance for using the DRDP (2015)*. https://www.draccess.org/guidancefordrdp (accessed 05/26/21).

96. Kriener-Althen, K., Newton, E. K., Draney, K., & Mangione, P. L. (2020). Measuring readiness for kindergarten using the Desired Results Developmental Profile. *Early Education and Development*, *31*, 739–763. https://doi.org/10.1080/10409289.2020.1743160; Nguyen, T., Reich, S. M., Marcus Jenkins, J., & Abedi, J. (2019). Psychometric validation and reorganization of the Desired Results Developmental Profile. *Journal of Psychoeducational Assessment*, *38*, 1–20. https://www.researchgate.net/publication/334330536_Psychometric_Validation_and_Reorganization_of_the_Desired_Results_Developmental_Profile (accessed 12/17/20); WestEd, & University of California–Berkeley Evaluation and Assessment Research (BEAR) Center. (2020). *Desired Results Developmental Profile (2015) early infancy through kindergarten continuum: Interrater reliability*. Report prepared for the California Department of Education; WestEd, & University of California–Berkeley Evaluation and Assessment Research (BEAR) Center. (2020). *Desired Results Developmental Profile (2015) early infancy through kindergarten continuum: Validity evidence in relation to external measures of child development*. Report prepared for the California Department of Education.

97. California Department of Education. (n.d.). *Development of the Desired Results Developmental Profile–School Readiness (DRDP-SR)*. https://www.drdpk.org/docs/DRDP-SR_ValidationStudiesSummary.pdf (accessed 12/17/20); Kriener-Althen, K., Newton, E. K., Draney, K., & Mangione, P. L. (2020). Measuring readiness for kindergarten using the Desired Results Developmental Profile. *Early Education and Development*, *31*, 739–763. https://doi.org/10.1080/10409289.2020.1743160; Nguyen, T., Reich, S. M., Marcus Jenkins, J., & Abedi, J. (2019). Psychometric validation and reorganization of the Desired Results Developmental Profile. *Journal of Psychoeducational Assessment*, *38*, 1–20. https://doi.org/10.1177/0734282919859804.

98. Nguyen, T., Reich, S. M., Marcus Jenkins, J., & Abedi, J. (2019). Psychometric validation and reorganization of the Desired Results Developmental Profile. *Journal of Psychoeducational Assessment*, *38*, 1–20. https://doi.org/10.1177/0734282919859804; Stipek, D. (2018). *Getting Down to Facts II: Early childhood education in California* [Research brief]. Policy Analysis for California Education and Stanford University. https://www.gettingdowntofacts.com/sites/default/files/2018-09/GDTFII_Report_Stipek.pdf (accessed 12/17/20); Sutter, C., Ontai, L. L., Nishina, A., Conger, K. J., Shilts, M. K., & Townsend, M. S. (2017). Utilizing the Desired Results Developmental Profile as a measure of school readiness: Evaluating factor structure and predictors of school readiness. *Early Child Development and Care*, *187*, 1433–1445.

99. Stipek, D. (2018). *Getting Down to Facts II: Early childhood education in California*. Policy Analysis for California Education and Stanford University. https://www.gettingdowntofacts.com/sites/default/files/2018-09/GDTFII_Report_Stipek.pdf (accessed 12/17/20).

100. Meisels, S. J. (2011). *Using observational assessment to evaluate young children's learning: The technical quality of the* Work Sampling System. Erikson Institute. https://www.erikson.edu/wp-content/uploads/AERA-FCD-WSS-summary.pdf (accessed 12/17/20); Meisels, S. J., Atkins-Burnett, S., Xue, Y., Nicholson, J., Bickel, D. D., & Son, S-H. (2003). Creating a system of accountability: The impact of instructional assessment on elementary children's achievement. *Education Policy Analysis Archives*, *11*, 9. https://doi.org/10.14507/epaa.v11n9.2003.

101. Meisels, S. J. (2011). *Using observational assessment to evaluate young children's learning: The technical quality of the* Work Sampling System. Erikson Institute. https://www.erikson.edu/wp-content/uploads/AERA-FCD-WSS-summary.pdf (accessed 12/17/20); Meisels, S. J., Bickel, D. D., Nicholson, J., Xue, Y., & Atkins-Burnett, S. (2001). Trusting teachers' judgments: A validity study of a curriculum-embedded performance assessment in kindergarten–grade 3. *American Educational Research Journal*, *38*(1), 73–95. https://doi.org/10.3102/00028312038001073; Meisels, S. J., Xue, Y., & Shamblott, M. (2008). Assessing language, literacy, and mathematics skills with *Work Sampling for Head Start*. *Early Education and Development*, *19*, 963–981. https://doi.org/10.1080/10409280801971890.

102. Meisels, S. J. (2011). *Using observational assessment to evaluate young children's learning: The technical quality of the* Work Sampling System. Erikson Institute. https://www.erikson.edu/wp-content/uploads/AERA-FCD-WSS-summary.pdf (accessed 12/17/20); Meisels, S. J., Liaw, F-R., Dorfman, A., & Nelson, R. (1995). The *Work Sampling System*: Reliability and validity of a performance assessment for young children. *Early Childhood Research Quarterly*, *10*(3), 277–296. https://doi.org/10.1016/0885-2006(95)90008-X; Human Capital Research Collaborative. (2011). *Summary report: Assessing the validity of Minnesota school readiness indicators*. http://hcrc.umn.edu/sites/hcrc.dl.umn.edu/files/summary_report_assessing_the_validity_of_minnesota_school_readiness_indicators_1-28-11.pdf (accessed 05/06/21); Maryland State Department of Education. (2009). *Reliability Analysis: Maryland kindergarten students' MMSR kindergarten assessment data*.

103. Gallant, D. J., & Moore, J. L. (2008). Assessing ethnicity: Equity for first-grade male students on a curriculum-embedded performance assessment. *Urban Education*, *43*(2), 172–188; Gallant, D. J., & Moore, J. L. (2008). Ethnic-based equity in teacher judgment of student achievement on a language and literacy curriculum-embedded performance assessment for children in grade one. *Educational Foundations*, *22*(1–2), 63–77.

104. S. Meisels, personal communication (2021, February 7).

105. Hanson, M. F., & Gilkerson, D. (1999). Portfolio assessment: More than ABCs and 123s. *Early Childhood Education Journal*, *27*(2), 81–86. https://www.academia.edu/25666472/Portfolio_assessment_More_than_ABCs_and_123s?auto=citations&from=cover_page (accessed 05/26/21).

106. Maier, A., Adams, J., Burns, D., Kaul, M., Saunders, M., & Thompson, C. (2020). *Using performance assessments to support student learning: How district initiatives can make a difference*. Learning Policy Institute. https://learningpolicyinstitute.org/product/cpac-performance-assessments-support-student-learning-report (accessed 01/15/21).

107. Darling-Hammond, L. (2017). *Developing and measuring higher order skills: Models for state performance assessment systems*. Council of Chief State School Officers and Learning Policy Institute. https://learningpolicyinstitute.org/product/models-state-performance-assessment-systems-report (accessed 01/15/21); Meisels, S. J. (1993). Remaking the classroom assessment with the Work Sampling System. *Young Children*, *48*(5), 34–40; 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.

108. Strauss, V. (2014, December 18). Why kindergarten teachers don't want to give this test to their students. *Washington Post*. https://www.washingtonpost.com/news/answer-sheet/wp/2014/12/18/why-kindergarten-teachers-dont-want-to-give-this-test-to-their-students/ (accessed 03/19/21); Strauss, V. (2015, June 6). The kindergarten testing mess. *Washington Post*. https://www.washingtonpost.com/news/answer-sheet/wp/2015/06/06/the-kindergarten-testing-mess/ (accessed 03/19/21).

109. Golan, S., Woodbridge, M., Davies-Mercier, B., & Pistorino, C. (2016). *Case studies of the early implementation of kindergarten entry assessments*. U.S. Department of Education. https://www2.ed.gov/rschstat/eval/disadv/kindergarten-entry-assessments/report.pdf (accessed 03/17/21); ICF. (2018). *Summary of responses to the Kindergarten Readiness Assessment (KRA) Survey administered to Maryland kindergarten teachers*. Maryland State Department of Education. http://marylandpublicschools.org/stateboard/Documents/01222019/TabE-KindergartenReadinessResults.pdf (accessed 03/19/21); 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 (accessed 03/17/21).

110. Maryland State Department of Education. (2019). *The 2018–2019 Kindergarten Readiness Assessment technical report*. https://earlychildhood.marylandpublicschools.org/system/files/filedepot/4/kra_2018-19_technical_report.pdf (accessed 12/17/20); WestEd. (2014). *Ready for kindergarten: Kindergarten readiness assessment technical report*. http://education.ohio.gov/getattachment/Topics/Early-Learning/Kindergarten/Ohios-Kindergarten-Readiness-Assessment/Kindergarten-Readiness-Assessment-for-Data-Manager/KRA_Technical_Report_2014_Final.pdf.aspx (accessed 03/19/21); WestEd (2015). *Ready for kindergarten: Kindergarten readiness assessment technical report addendum*. http://education.ohio.gov/getattachment/Topics/Early-Learning/Kindergarten/Ohios-Kindergarten-Readiness-Assessment/Kindergarten-Readiness-Assessment-for-Data-Manager/KRA_Technical_Report_Addendum_2015_Final.pdf.aspx (accessed 03/19/21).

111. Maryland State Department of Education. (2019). *The 2018–2019 Kindergarten Readiness Assessment technical report*. https://earlychildhood.marylandpublicschools.org/system/files/filedepot/4/kra_2018-19_technical_report.pdf (accessed 12/17/20).

112. Maryland State Department of Education. (2019). *The 2018–2019 Kindergarten Readiness Assessment technical report*. https://earlychildhood.marylandpublicschools.org/system/files/filedepot/4/kra_2018-19_technical_report.pdf (accessed 12/17/20).

113. Early Childhood Comprehensive Assessment Advisory Group. (2019). *Recommendations on Ohio's kindergarten readiness assessment*. http://education.ohio.gov/getattachment/Topics/Early-Learning/Kindergarten/Ohios-Kindergarten-Readiness-Assessment/ECCAAG_KRA_Recommendations_Final_May2019.pdf.aspx?lang=en-US (accessed 03/19/21).

114. Schachter, R. E., Strang, T. M., & Piasta, S. B. (2017). *Teachers' perspectives on the Kindergarten Readiness Assessment in year 2: Easier to administer but what role can it play in instruction?* Schoenbaum Family Center and Crane Center for Early Childhood Research and Policy, Ohio State University. https://earlychildhood.ehe.osu.edu/files/2017/06/KRA-2-whitepaper.pdf (accessed 05/28/21).

115. French, B. (2013). *BRIGANCE Screens III technical manual*. Curriculum Associates. https://oms.brigance.com/Reports/ScreensIII-Tech-Manual-04.pdf (accessed 12/17/20); Mantzicopoulos, P. (1999). Risk assessment of Head Start children with the Brigance K&1 Screen: Differential performance by sex, age, and predictive accuracy for early school achievement and special education placement. *Early Childhood Research Quarterly*, *14*, 383–408. https://doi.org/10.1016/S0885-2006(99)00019-8.

116. Curriculum Associates. (n.d.). *The BRIGANCE Screens III: A summary of technical information*. https://www.curriculumassociates.com/-/media/mainsite/files/brigance/early-childhood-screensiii-summary-of-technical-information-sample.pdf (accessed 12/17/20); French, B. (2013). *BRIGANCE Screens III technical manual*. Curriculum Associates. https://oms.brigance.com/Reports/ScreensIII-Tech-Manual-04.pdf (accessed 12/17/20); Glascoe, F. P. (1996). Can the BRIGANCE® Screens detect children who are gifted and academically talented? *Roeper Review*, *19*(1), 20–24; Mantzicopoulos, P. (1999). Reliability and validity estimates of the Brigance K&1; screen based on a sample of disadvantaged preschoolers. *Psychology in the Schools*, *36*(1), 11–19. https://doi.org/10.1002/(SICI)1520-6807(199901)36:1<11::AID-PITS2>3.0.CO;2-R; Mantzicopoulos, P. (2000). Can the Brigance K&1 screen detect cognitive/academic giftedness when used with preschoolers from economically disadvantaged backgrounds? *Roeper Review*, *22*(3), 185–191. https://doi.org/10.1080/02783190009554031.

117. National Center on Intensive Intervention. (2020). *Academic screening tools chart*. American Institutes for Research. https://charts.intensiveintervention.org/ascreening (accessed 12/18/20).

118. Centers for Disease Control and Prevention. (2021, February 22). *Developmental monitoring and screening*. https://www.cdc.gov/ncbddd/childdevelopment/screening.html (accessed 05/06/21).

119. Shepard, L., Kagan, S. L., & Wurtz, E. (1998). *Principles and recommendations for early childhood assessments*. National Education Goals Panel. https://eric.ed.gov/?id=ED416033 (accessed 05/27/21); 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.

120. Atkins-Burnett, S., & Meisels, S. J. (2005). *Developmental Screening in Early Childhood: A Guide* (5th ed.). National Association for the Education of Young Children; Lavigne, J. V., Binns, H. J., Christoffel, K. K., Rosenbaum, D., Arend, R., Smith, K., Hayford, J. R., & McGuire, P. A. (1993). Behavioral and emotional problems among preschool children in pediatric primary care: Prevalence and pediatricians' recognition. *Pediatrics, 91*(3), 649–655; Studts, C. R., & van Zyl, M. A. (2013). Identification of developmentally appropriate screening items for disruptive behavior problems in preschoolers. *Journal of Abnormal Child Psychology*, *41*(6), 851–863. https://doi.org/10.1007/s10802-013-9738-8.

121. Clemens, N. H., Hagan-Burke, S., Luo, W., & Cerda, C. (2015). The predictive validity of a computer-adaptive assessment of kindergarten and first-grade reading skills. *School Psychology Review*, *44*(1), 76–97. https://www.researchgate.net/publication/275040844_The_Predictive_Validity_of_a_Computer-Adaptive_Assessment_of_Kindergarten_and_First-Grade_Reading_Skills (accessed 12/17/20); McBride, J. R., Ysseldyke, J., Milone, M., & Stickney, E. (2010). Technical adequacy and cost benefit of four measures of early literacy. *Canadian Journal of School Psychology*, *25*(2), 189–204; Renaissance Learning. (2019). *Star Assessments for Early Literacy technical manual*. https://help.renaissance.com/US/PDF/SEL/SELRPTechnicalManual.pdf (accessed 12/17/20).

122. Clemens, N. H., Hagan-Burke, S., Luo, W., & Cerda, C. (2015). The predictive validity of a computer-adaptive assessment of kindergarten and first-grade reading skills. *School Psychology Review*, *44*(1), 76–97. https://www.researchgate.net/publication/275040844_The_Predictive_Validity_of_a_Computer-Adaptive_Assessment_of_Kindergarten_and_First-Grade_Reading_Skills (accessed 12/17/20).

123. States using other assessment tools: Arkansas, Colorado, Iowa, Kansas, Maine, Nebraska, Wisconsin, and Wyoming. Of these, Maine, Nebraska, Wisconsin, and Wyoming allow local district discretion.

124. Seven states require that KEA data be shared with parents or guardians (Arkansas, Kentucky, Mississippi, Ohio, South Carolina, Utah, and Washington). Eight states specify that KEA data be used to inform instruction (Kentucky, Louisiana, New Mexico, North Carolina, South Carolina, Utah, Virginia, and Washington). Two states (Kentucky and North Carolina) indicate that KEA data can be used to inform efforts to improve early childhood programs and reduce the achievement gap at kindergarten entry. Four states (Florida, Kentucky, New Mexico, and Utah) allow KEA data to be used for evaluation of prekindergarten or kindergarten programs. Another four states (Colorado, Kentucky, Massachusetts, and Ohio) explicitly specify that KEA data may not be used for determining or denying entry into kindergarten. Education Commission of the States. (2018). *50-state comparison: State kindergarten-through-third-grade policies. What are states required to do with the results of the KEA?* http://ecs.force.com/mbdata/MBQuest2RTanw?rep=KK3Q1812 (accessed 01/24/21).

125. The Ounce of Prevention Fund is now called Start Early. 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).

126. Education Commission of the States. (2018). *50-state comparison: State kindergarten-through-third-grade policies. What are states required to do with the results of the KEA?* http://ecs.force.com/mbdata/MBQuest2RTanw?rep=KK3Q1812 (accessed 01/24/21); Garver, K. (2020). *The "why" behind kindergarten entry assessments*. National Institute for Early Education Research. https://nieer.org/policy-issue/the-why-behind-kindergarten-entry-assessments (accessed 12/17/20); The Ounce of Prevention Fund is now called Start Early. 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.

127. Early Childhood Education State Collaborative on Assessment and Student Standards. (2011). *Moving forward with kindergarten readiness assessment efforts*. Council of Chief State School Officers. https://files.eric.ed.gov/fulltext/ED543310.pdf (accessed 12/17/20); Shields, K. A., Cook, K. D., & Greller, S. (2016). *How kindergarten entry assessments are used in public schools and how they correlate with spring assessments* [REL 2017-182]. U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, and Regional Educational Laboratory Northeast & Islands. https://ies.ed.gov/ncee/edlabs/regions/northeast/pdf/REL_2017182.pdf (accessed 12/17/20).

128. States that specify that KEA data are to be used to inform instruction are Kentucky, Louisiana, New Mexico, North Carolina, South Carolina, Utah, Virginia, and Washington. See: Education Commission of the States. (2018). *50-state comparison: State kindergarten-through-third-grade policies. What are states required to do with the results of the KEA?* http://ecs.force.com/mbdata/MBQuest2RTanw?rep=KK3Q1812 (accessed 01/24/21).

129. Garver, K. (2020). *The "why" behind kindergarten entry assessments*. National Institute for Early Education Research. https://nieer.org/policy-issue/the-why-behind-kindergarten-entry-assessments (accessed 12/17/20).

130. Early Childhood Education State Collaborative on Assessment and Student Standards. (2011). *Moving forward with kindergarten readiness assessment efforts*. Council of Chief State School Officers. https://files.eric.ed.gov/fulltext/ED543310.pdf (accessed 12/17/20).

131. Regenstein, E., Connors, M. C., Romero-Jurado, R., & Weiner, J. (2018). Effective kindergarten readiness assessments: Influencing policy, informing instruction, and creating joyful classrooms. *YC Young Children*, *73*(1), 36–43. https://www.jstor.org/stable/90019477 (accessed 05/26/21).

132. Early Childhood Education State Collaborative on Assessment and Student Standards. (2011). *Moving forward with kindergarten readiness assessment efforts*. Council of Chief State School Officers. https://files.eric.ed.gov/fulltext/ED543310.pdf (accessed 12/17/20); 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.

133. Stipek, D., Franke, M., Clements, D., Farran, D., & Coburn, C. (2017). PK–3: What does it mean for instruction? *Social Policy Report*, *30*(2), 1–23. https://doi.org/10.1002/j.2379-3988.2017.tb00087.x; Kagan, S. L., & Kauerz, K. (Eds.). (2012). *Early Childhood Systems: Transforming Early Learning*. Teachers College Press.

134. Garver, K. (2020). *The "why" behind kindergarten entry assessments*. National Institute for Early Education Research. https://nieer.org/policy-issue/the-why-behind-kindergarten-entry-assessments (accessed 12/17/20).

135. States that require a KEA and KEA data to be shared with parents or guardians are Arkansas, Kentucky, Mississippi, Ohio, South Carolina, Utah, and Washington. See: Education Commission of the States. (2018). *50-state comparison: State kindergarten-through-third-grade policies. What are states required to do with the results of the KEA?* http://ecs.force.com/mbdata/MBQuest2RTanw?rep=KK3Q1812 (accessed 01/24/21).

136. Garver, K. (2020). *The "why" behind kindergarten entry assessments*. National Institute for Early Education Research. https://nieer.org/policy-issue/the-why-behind-kindergarten-entry-assessments (accessed 12/17/20).

137. 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 (accessed 05/06/21); Schilder, D., & Dahlin, M. (2017). *Key considerations to assist states in developing or revising a kindergarten entry assessment (KEA)*. Center on Enhancing Early Learning Outcomes. http://ceelo.org/wp-content/uploads/2017/12/ceelo_kea_key_questions_development_12_2017.pdf (accessed 05/26/21).

138. 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 (accessed 05/06/21); Schilder, D., & Dahlin, M. (2017). *Key considerations to assist states in developing or revising a kindergarten entry assessment (KEA)*. Center on Enhancing Early Learning Outcomes. http://ceelo.org/wp-content/uploads/2017/12/ceelo_kea_key_questions_development_12_2017.pdf (accessed 05/26/21).

139. Education Commission of the States. (2018). *50-state comparison: State kindergarten-through-third-grade policies. What are states required to do with the results of the KEA?* http://ecs.force.com/mbdata/MBQuest2RTanw?rep=KK3Q1812 (accessed 01/24/21).

140. The study found evidence that Idaho and Washington use KEA data to measure progress toward state goals. Garver, K. (2020). *The "why" behind kindergarten entry assessments*. National Institute for Early Education Research. https://nieer.org/policy-issue/the-why-behind-kindergarten-entry-assessments (accessed 12/17/20).

141. The study found evidence that Alabama, California, Delaware, Florida, Kansas, Oregon, Pennsylvania, and South Carolina use KEA data to provide targeted supports to schools. Garver, K. (2020). *The "why" behind kindergarten entry assessments*. National Institute for Early Education Research. https://nieer.org/policy-issue/the-why-behind-kindergarten-entry-assessments (accessed 12/17/20).

142. Golan, S., Woodbridge, M., Davies-Mercier, B., & Pistorino, C. (2016). *Case studies of the early implementation of kindergarten entry assessments*. U.S. Department of Education. https://www2.ed.gov/rschstat/eval/disadv/kindergarten-entry-assessments/report.pdf (accessed 03/17/21).

143. Shum, H. (2019, January 8). *More than ABCs and 123s: Health and kindergarten readiness*. Children's Institute. https://childinst.org/health-measures-kindergarten-readiness/.

144. Illinois State Board of Education. (2020, August 24). ISBE releases data showing second consecutive year of increases in kindergarten readiness [Press release]. https://www.isbe.net/Lists/News/NewsDisplay.aspx?ID=1331 (accessed 03/05/21); 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 (accessed 03/17/21); Zimskind, L., & Crow, S. (2020). *Readying our state: How kindergarten readiness inventories can benefit California* [Policy brief]. First 5 Center for Children's Policy. https://first5center.org/assets/files/kri-paper-v6-WEB.pdf (accessed 12/17/20).

145. 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; Council of Chief State School Officers. (2019). *K–2 assessments: An update on state adoption and implementation.* https://ccsso.org/sites/default/files/2019-06/K-2%20Assessments%20Paper%20FINAL.pdf (accessed 01/15/21).

146. Lauen, D. L., & Gaddis, S. M. (2013). Exposure to classroom poverty and test score achievement: Contextual effects or selection? *American Journal of Sociology*, *118*(4), 943–979. https://doi.org/10.1086/668408.

147. Garver, K. (2020). *The "why" behind kindergarten entry assessments*. National Institute for Early Education Research. https://nieer.org/policy-issue/the-why-behind-kindergarten-entry-assessments (accessed 12/17/20).

148. 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 (accessed 05/27/21).

149. Jacobson Chernoff, J., Keuter, S., Uchikoshi, Y., Quick, H., & Manship, K. (2021). *Challenges in assessing California's diverse dual language learners*. American Institutes for Research and First 5 California; Meisels, S. J. (2006). *Accountability in early childhood: No easy answers* [Occasional Paper No. 6]. Herr Research Center for Children and Social Policy at Erikson Institute. https://www.erikson.edu/wp-content/uploads/2017/10/opmeisels2006.pdf (accessed 05/28/21); 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 (accessed 05/27/21).

150. 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; Daily, S., & Maxwell, K. (2018). *Frequently asked questions about kindergarten entry assessments* [Research brief]. Alliance for Early Success and Child Trends. https://www.childtrends.org/publications/frequently-asked-questions-about-kindergarten-entry-assessments (accessed 05/27/21); 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 (accessed 05/27/21).

151. The Ounce of Prevention Fund is now called Start Early. 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).

152. Education Commission of the States. (2018). *50-state comparison: State kindergarten-through-third-grade policies. What are states required to do with the results of the KEA?* http://ecs.force.com/mbdata/MBQuest2RTanw?rep=KK3Q1812 (accessed 01/24/21).

153. Betebenner, D. W. (2009). *Growth, standards and accountability*. The Center for Assessment. http://www.nciea.org/publications/growthandStandard_DB09.pdf; Daily, S., & Maxwell, K. (2018). *Frequently asked questions about kindergarten entry assessments*. Alliance for Early Success and Child Trends; 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 (accessed 12/18/20).

154. Garver, K. (2020). *The "why" behind kindergarten entry assessments*. National Institute for Early Education Research; 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. http://www.theounce.org/wp-content/uploads/2017/03/PolicyConversationKRAExecSummary.pdf (accessed 12/18/20).

155. Shields, K. A., Cook, K. D., & Greller, S. (2016). *How kindergarten entry assessments are used in public schools and how they correlate with spring assessments*. U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance. http://ies.ed.gov/ncee/edlabs.

156. Bernstein, S., Barnett, S., & Ackerman, D. J. (2019). *What is readiness? Preparing all children to succeed in kindergarten and beyond* [Policy brief]. National Institute for Early Education Research. https://nieer.org/wp-content/uploads/2019/08/NIEER-Policy-Brief-August-2019.pdf (accessed 03/11/21).

157. 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.

158. 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 (accessed 12/17/20).

159. Massachusetts does not require the use of a KEA. Education Commission of the States. (2018). *50-state comparison: State kindergarten-through-third-grade policies. What are states required to do with the results of the KEA?* http://ecs.force.com/mbdata/MBQuest2RTanw?rep=KK3Q1812 (accessed 01/24/21).

160. Schultz, T. (2013). If kg. entry assessments are the answer, what is the question? [Slide presentation]. Council of Chief State School Officers. http://ceelo.org/wp-content/uploads/2013/08/CEELO_CCSSO_Kg-Entry-Assessments.pdf (accessed 05/06/21).

161. Daily, S., & Maxwell, K. (2018). *Frequently asked questions about kindergarten entry assessments*. Alliance for Early Success and Child Trends.

162. For example, see Garver, K. (2020). *The "why" behind kindergarten entry assessments*. National Institute for Early Education Research. https://nieer.org/policy-issue/the-why-behind-kindergarten-entry-assessments (accessed 12/17/20); 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 (accessed 12/17/20).

163. Garver, K. (2020). *The "why" behind kindergarten entry assessments*. National Institute for Early Education Research. https://nieer.org/policy-issue/the-why-behind-kindergarten-entry-assessments (accessed 12/17/20).

164. One set of case studies in four states was conducted in 2014–15, when these states were in their first years of KEA implementation: Golan, S., Woodbridge, M., Davies-Mercier, B., & Pistorino, C. (2016). *Case studies of the early implementation of kindergarten entry assessment*. U.S. Department of Education. https://www2.ed.gov/rschstat/eval/disadv/kindergarten-entry-assessments/report.pdf (accessed 03/17/21). Another key study of KEAs in seven states was published in 2018 and focuses more on the properties of the assessment than state-level implementation: 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. A 2020 special edition of *Early Education and Development* included individual studies of four states, with some information regarding state-level perspectives on implementation: Ackerman, D. J., & Lambert, R. (2020). Introduction to the special issue on kindergarten entry assessments: policies, practices, potential pitfalls, and psychometrics. *Early Education and Development*, *31*(5), 629–631.

165. Georgia Department of Education. (2019). *Georgia Kindergarten Inventory of Developing Skills (GKIDS) 2.0-Readiness Check 2019–2020 administration manual*. https://www.gadoe.org/Curriculum-Instruction-and-Assessment/Assessment/Documents/GKIDS/Readiness_19-20/GKIDS_2.0_Readiness_Check_Administration_Manual_2019-20.pdf (accessed 05/06/21).

166. Kids Count Data Center. (2020). *Georgia indicators: Demographic indicators*. Annie E. Casey Foundation. https://datacenter.kidscount.org/data#GA/2/0/char/0 (accessed 09/11/20).

167. Friedman-Krauss, A. H., Barnett, W. S., Garver, K. A., Hodges, K. S., Weisenfeld, G. G., & Gardiner, B. A. (2020). *The state of preschool 2019: State preschool yearbook*. National Institute for Early Education Research. https://nieer.org/state-preschool-yearbooks/2019-2 (accessed 05/06/21).

168. Georgia Department of Education. (2019). *Georgia Kindergarten Inventory of Developing Skills (GKIDS) 2.0-Readiness Check 2019–2020 administration manual*. https://www.gadoe.org/Curriculum-Instruction-and-Assessment/Assessment/Documents/GKIDS/Readiness_19-20/GKIDS_2.0_Readiness_Check_Administration_Manual_2019-20.pdf (accessed 05/06/21).

169. Owens, S. (2020). *English learners deserve more: An analysis of Georgia's education for speakers of other languages*. Georgia Budget & Policy Institute. https://gbpi.org/wp-content/uploads/2020/11/English-Learners-Deserve-More-An-Analysis-of-Georgias-Education-for-Speakers-of-Other-Languages.pdf (accessed 12/20/20).

170. Georgia Department of Education. (2020). *Georgia Kindergarten Inventory of Developing Skills (GKIDS 2.0). Platform user guide*. https://s3.amazonaws.com/lenn-resources/userdocs/gkids/GKIDS%202.0_User%20Guide_FINAL.pdf.

171. Georgia Department of Education. (2020). *GKIDS Readiness Check resources 2020–2021*. https://www.gadoe.org/Curriculum-Instruction-and-Assessment/Assessment/Pages/GKIDS-Readiness-Resources.aspx (accessed 12/17/20).

172. Georgia Department of Education. (2019). *Georgia Kindergarten Inventory of Developing Skills (GKIDS) 2.0-Readiness Check 2019–2020 administration manual*. https://www.gadoe.org/Curriculum-Instruction-and-Assessment/Assessment/Documents/GKIDS/Readiness_19-20/GKIDS_2.0_Readiness_Check_Administration_Manual_2019-20.pdf (accessed 05/06/21).

173. Georgia Department of Education. (2021). *Georgia Kindergarten Inventory of Developing Skills (GKIDS) 2.0-Readiness Check: 2021–2022 optional resources*. https://www.gadoe.org/Curriculum-Instruction-and-Assessment/Assessment/Documents/GKIDS/Readiness_Resources/gkids_2.0_readiness-check_optional_resources_2021-22.pdf (accessed 07/09/21).

174. Georgia Department of Education. (2021). *The GKIDS Readiness Check: Frequently asked questions (FAQ) teachers*. https://www.gadoe.org/Curriculum-Instruction-and-Assessment/Assessment/Documents/GKIDS/Readiness_Resources/gkids_2.0_readiness-check_teacher_faq_2021-22.pdf (accessed 06/24/21); Georgia Department of Education. (2021). *The GKIDS Readiness Check: Frequently asked questions (FAQ) system and school leaders*. https://www.gadoe.org/Curriculum-Instruction-and-Assessment/Assessment/Documents/GKIDS/Readiness_Resources/gkids_2.0_readiness-check_system_and_school_leader_faq_2021-22.pdf (accessed 06/24/21).

175. Georgia Department of Education. (2020). *GKIDS Readiness Check: Next steps guide*. https://www.gadoe.org/Curriculum-Instruction-and-Assessment/Assessment/Documents/GKIDS/Readiness_Resources/GKIDS_2.0_Readiness_Check_Next_Steps_Guide_2020-21.pdf (accessed 12/17/20).

176. Georgia Department of Education. (2020). *GKIDS Readiness Check*. https://www.gadoe.org/Curriculum-Instruction-and-Assessment/Assessment/Pages/Readiness.aspx (accessed 01/12/21).

177. Georgia Department of Education. (2018). *Chapter 12: The validity argument* [excerpt from GKIDS Readiness Check Technical Report].

178. Georgia Department of Education. (2019). *Georgia Kindergarten Inventory of Developing Skills (GKIDS) 2.0-Readiness Check 2019–2020 administration manual*. https://www.gadoe.org/Curriculum-Instruction-and-Assessment/Assessment/Documents/GKIDS/Readiness_19-20/GKIDS_2.0_Readiness_Check_Administration_Manual_2019-20.pdf (accessed 05/06/21).

179. Georgia Department of Education. (2017). *GKIDS Readiness Check*. http://gkidsreadinesscheck.gadoe.org/ (accessed 12/18/20).

180. Georgia Department of Education. (2019). *Testing brief: Spring 2019 GKIDS*. https://www.gadoe.org/Curriculum-Instruction-and-Assessment/Assessment/Documents/GKIDS/2019_GKIDS_Brief.pdf (accessed 01/11/21).

181. Kids Count Data Center. (2020). *Illinois indicators: Demographics indicators.* Annie E. Casey Foundation. https://datacenter.kidscount.org/data#IL/2/0/char/0 (accessed 04/22/21).

182. Kindergarten Readiness Assessment Stakeholder Committee. (2011). *A new beginning: The Illinois Kindergarten Individual Development Survey*. https://www.isbe.net/Documents/kindergarten_survey.pdf. (accessed 12/17/20).

183. More specifically, the report outlined eight major priorities of a KEA:
    1. Promote early childhood and k–3 alignment.
    2. Strengthen community collaborations to support transition into kindergarten.
    3. Provide ongoing professional development.
    4. Measure child development across multiple domains.
    5. Yield authentic, valid information about young children and their development.
    6. Employ valid and reliable assessment methods.
    7. Address the needs of children with varying cultures, languages, abilities, and experiences.
    8. Incorporate strategies for supporting children with varied needs.

184. Illinois has 852 districts, 761 of which offer kindergarten. T. Lamb, personal communication (2021, February 17). Illinois State Board of Education. (2016). *Illinois School Readiness Initiative*. https://www.isbe.net/Documents/KIDS-IL-School-Readiness-Initiative.pdf (accessed 12/17/20).

185. Illinois Joint Committee on Administrative Rules. (2018). Administrative Code Title 23: Education and Cultural Resources Section 1.420 h.3.C https://www.ilga.gov/commission/jcar/admincode/023/023000010D04200R.html#:~:text=By%20August%201%20of%20each%20school,This%20can%20include%20teachers%20and%20administrators (accessed 03/05/21).

186. Illinois State Board of Education. (2020, August 24). ISBE releases data showing second consecutive year of increases in kindergarten readiness [Press release]. https://www.isbe.net/Lists/News/NewsDisplay.aspx?ID=1331 (accessed 03/05/21).

187. The English language development measures are for use with children whose home language is not English, and the Spanish language development measures are for use with children whose classrooms provide opportunities for developing Spanish language skills. Either domain may be used in conjunction with the 14- or 29-measure forms. In addition, the 14 State Readiness Measures version includes alternate measures from the English language development domain for use with children who are dual language learners.

188. Illinois State Board of Education: Division of Early Childhood Education. (n.d.). *Illinois Early Learning Standards Kindergarten*. https://www.isbe.net/Documents/iel_standards.pdf (accessed 12/18/20).

189. Illinois State Board of Education and California Department of Education. (2017). *Kindergarten Individual Development Survey user's guide & instrument*. https://www.isbe.net/Documents/KIDS-User-Guide-Instrument.pdf (accessed 12/17/20).

190. In collaboration with the Center for the Study of Education Policy at Illinois State University, the Illinois State Board of Education created crosswalk documents that show alignment between KIDS measures and the respective indicators for the prekindergarten assessments. Illinois State Board of Education, & Center for the Study of Education Policy. (2019). *KIDS instrument crosswalk for the 14 State Readiness Measures*. https://www.isbe.net/Documents/KIDS-EL-Instrument-Crosswalk-14-Required-Measures.pdf (accessed 12/18/20); Illinois State Board of Education. (2019). *KIDS instrument crosswalk for the Five Readiness Domains*. https://www.isbe.net/Documents/KIDS-EL-Instrument-Crosswalk-5-Readiness-Domains.pdf (accessed 12/18/20).

191. The KIDS administration manual encourages teachers to document their observations using a variety of methods that can include using anecdotal notes, charts, checklists, photos, audio or video recordings, or other data collection techniques.

192. California Department of Education. (2017). *Kindergarten Individual Development Survey user's guide & instrument*. https://www.isbe.net/Documents/KIDS-User-Guide-Instrument.pdf (accessed 12/17/20).

193. California Department of Education. (2017). *Kindergarten Individual Development Survey user's guide & instrument*. https://www.isbe.net/Documents/KIDS-User-Guide-Instrument.pdf (accessed 12/17/20).

194. Illinois State Board of Education. (2017). *Guidance for dual language learners*. https://www.isbe.net/Documents_KIDSWebsiteResources/LLD_Guidance.pdf (accessed 12/18/20).

195. Illinois State Board of Education. (n.d.). *Participation or exemption guidance for children with special needs*. https://www.isbe.net/Documents_KIDSWebsiteResources/KIDS_Exempt_Special_Needs_Guidance.pdf (accessed 12/18/20).

196. Illinois State Board of Education. (n.d.). *Participation or exemption guidance for children with special needs*. https://www.isbe.net/Documents_KIDSWebsiteResources/KIDS_Exempt_Special_Needs_Guidance.pdf (accessed 12/18/20).

197. Part 1 Public Schools Evaluation, Recognition and Supervision. Ill. Admin. Code Title 23, §1.420 https://www.ilga.gov/commission/jcar/admincode/023/023000010D04200R.html (accessed 12/18/20).

198. Illinois State Board of Education. (2020). *2019–2020 Illinois Kindergarten Individual Development Survey (KIDS) report: A look at kindergarten readiness*. https://www.isbe.net/Documents/Fall-2019-KIDS-Report.pdf (accessed 12/18/20).

199. Illinois State Board of Education. (2020). Illinois Report Card: Early learning. https://www.illinoisreportcard.com/State.aspx?source=environment&source2=earlylearning_studentsmeasured&Stateid=IL (accessed 03/05/21).

200. Escapa, M. (n.d.). *Steps to set up district KIDStech account* [Memorandum]. Illinois State Board of Education. https://www.isbe.net/Documents_KIDSWebsiteResources/KIDSTech_Account_Instructions.pdf (accessed 12/18/20).

201. Illinois State Board of Education. (n.d.). *An overview on measures and data reporting*. https://www.isbe.net/Documents_KIDSWebsiteResources/Summary_of_KIDS_Measures_and_Reports.pdf.

202. Cannady, K., Hillegass, M., & Jackle, E. (2019). *Mastering KIDS: Voices from the field*. Teach Plus. https://teachplus.org/sites/default/files/publication/pdf/mastering_kids_til.pdf (accessed 01/25/21).

203. Illinois State Board of Education. (2019). *Mastering KIDS Summit: Third annual Mastering KIDS Summit 2019 highlights*. https://www.isbe.net/Documents/KIDS-Conf-Highlights.pdf (accessed 12/17/20).

204. Robert R. McCormick Foundation. (2019). *Third annual Mastering KIDS Summit*. https://drive.google.com/file/d/1JiyHUJMaO-ucAscgRAnLSBYZwO6A5EvW/view (accessed 12/17/20).

205. Although the state intends to name KIDS MVPs annually, it did not select MVPs for 2020–21 due to the COVID-19 pandemic. T. Lamb, personal communication (2021, February 18).

206. District coach assignments and contact information is available through an interactive map on the KIDS website. Illinois State Board of Education. (n.d.). *Learning opportunities with KIDS coaches*. https://www.isbe.net/Documents/Learning-Opp-KIDS-Coaches.pdf (accessed 12/19/20).

207. Illinois State Board of Education. (n.d.). *Learning opportunities with KIDS coaches*. https://www.isbe.net/Documents/Learning-Opp-KIDS-Coaches.pdf (accessed 12/19/20).

208. California Department of Education. (2017). *Kindergarten Individual Development Survey user's guide & instrument*. https://www.isbe.net/Documents/KIDS-User-Guide-Instrument.pdf (accessed 12/17/20).

209. Cannady, K., Hillegass, M., & Jackle, E. (2019). *Mastering KIDS: Voices from the field*. Teach Plus. https://teachplus.org/sites/default/files/publication/pdf/mastering_kids_til.pdf (accessed 01/25/21).

210. Illinois State Board of Education. (2020). *2019–2020 Illinois Kindergarten Individual Development Survey (KIDS) report: A look at kindergarten readiness*. https://www.isbe.net/Documents/Fall-2019-KIDS-Report.pdf (accessed 12/18/20).

211. Illinois State Board of Education. (2020). *2019–2020 Illinois Kindergarten Individual Development Survey (KIDS) report: A look at kindergarten readiness*. https://www.isbe.net/Documents/Fall-2019-KIDS-Report.pdf (accessed 12/18/20).

212. Illinois State Board of Education. (2020, August 24). ISBE releases data showing second consecutive year of increases in kindergarten readiness [Press release]. https://www.isbe.net/Lists/News/NewsDisplay.aspx?ID=1331 (accessed 03/05/21).

213. School District U-46. (2021). About School District U-46. https://www.u-46.org/domain/76 (accessed 12/18/20).

214. School District U-46. (2021). About School District U-46. https://www.u-46.org/domain/76 (accessed 12/18/20).

215. Elgin Partnership for Early Learning. (2020). About EPEL. https://www.elginpartnership.org/about-epel (accessed 12/17/20).

216. Tulare City School District. (n.d.). Tulare City School District. https://www.tcsdk8.org/ (accessed 12/17/20).

217. California Department of Education. (n.d.). District Profile: Tulare City. https://www.cde.ca.gov/sdprofile/details.aspx?cds=54722310000000 (accessed 12/17/20); California Department of Education Data Reporting Office. (n.d.). *English learner students by language by grade: Tulare City 2019–20*. https://dq.cde.ca.gov/dataquest/SpringData/StudentsByLanguage.aspx?Level=District&TheYear=2019-20&SubGroup=All&ShortYear=1920&GenderGroup=B&RecordType=EL&CDSCode=54722310000000 (accessed 12/17/20).

218. California Department of Education. (n.d.). District Profile: Tulare City. https://www.cde.ca.gov/sdprofile/details.aspx?cds=54722310000000 (accessed 12/17/20).

219. California Department of Education. (n.d.). *2019–20 enrollment by ethnicity* [Tulare City Report 54-72231]. DataQuest. https://dq.cde.ca.gov/dataquest/dqcensus/enrethlevels.aspx?agglevel=District&year=2019-20&cds=5472231 (accessed 12/17/20).

220. Learning Genie. (2020). Learning Genie. https://www.learning-genie.com/ (accessed 12/17/20).

221. Hanover Research. (2013). *Kindergarten entry assessments: Practices and policies*. https://www.hanoverresearch.com/media/Kindergarten-Entry-Assessments-Practices-and-Policies.pdf (accessed 05/28/21); Espinosa, L. M., & López, M. L. (2007). *Assessment considerations for young English language learners across different levels of accountability*. National Early Childhood Accountability Task Force and First 5 LA. https://www.researchgate.net/publication/253312187_Assessment_Considerations_for_Young_English_Language_Learners_Across_Different_Levels_of_Accountability (accessed 12/18/20); Pyle, R. P. (2002). Best practices in assessing kindergarten readiness. *The California School Psychologist*, *7*, 63–73; Shepard, L., Kagan, S. L., & Wurtz, E. (1998). *Principles and recommendations for early childhood assessments*. National Education Goals Panel. https://eric.ed.gov/?id=ED416033 (accessed 05/27/21); 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.

222. Little, M., Cohen-Vogel, L., Sadler, J., & Merrill, B. (2020). Moving kindergarten entry assessments from policy to practice: Evidence from North Carolina. *Early Education and Development*, *31*(5), 796–815. https://doi.org/10.1080/10409289.2020.1724600.

223. Schachter, R. E., Strang, T. M., & Piasta, S. B. (2015). *Using the new kindergarten readiness assessment: What do teachers and principals think?* Schoenbaum Family Center and Crane Center for Early Childhood Research and Policy. https://earlychildhood.ehe.osu.edu/files/2016/04/KRA_supplemental_file.pdf (accessed 05/28/21); Schachter, R. E., Flynn, E. E., Napoli, A. R., & Piasta, S. B. (2020). Teachers' perspectives on year two implementation of a kindergarten readiness assessment. *Early Education and Development*, *31*(5), 778–795.

224. Golan, S., Woodbridge, M., Davies-Mercier, B., & Pistorino, C. (2016). *Case studies of the early implementation of kindergarten entry assessment.* U.S. Department of Education. https://www2.ed.gov/rschstat/eval/disadv/kindergarten-entry-assessments/report.pdf (accessed 03/17/21).

225. Little, M., Cohen-Vogel, L., Sadler, J., & Merrill, B. (2020). Moving kindergarten entry assessments from policy to practice: Evidence from North Carolina. *Early Education and Development*, *31*(5), 796–815. https://doi.org/10.1080/10409289.2020.1724600; 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 (accessed 05/06/21); Schachter, R. E., Flynn, E. E., Napoli, A. R., & Piasta, S. B. (2020). Teachers' perspectives on year two implementation of a kindergarten readiness assessment. *Early Education and Development*, *31*(5), 778–795; Schilder, D., & Dahlin, M. (2017). *Key considerations to assist states in developing or revising a kindergarten entry assessment (KEA)*. Center on Enhancing Early Learning Outcomes. http://ceelo.org/wp-content/uploads/2017/12/ceelo_kea_key_questions_development_12_2017.pdf (accessed 05/26/21).

226. Georgia Department of Education. (2020). *GKIDS 2.0 Training Checklist: New Kindergarten Teachers 2020–21*. https://www.gadoe.org/Curriculum-Instruction-and-Assessment/Assessment/Pages/GKIDS-2.0-Training.aspx (accessed 05/06/21).

227. Georgia Department of Education. (2020). *GKIDS Readiness Check: Next steps guide*. https://www.gadoe.org/Curriculum-Instruction-and-Assessment/Assessment/Documents/GKIDS/Readiness_Resources/GKIDS_2.0_Readiness_Check_Next_Steps_Guide_2020-21.pdf (accessed 05/06/21).

228. Maryland Department of Education. (2019). *Ready for kindergarten: Maryland's Early Childhood Comprehensive Assessment System*. https://earlychildhood.marylandpublicschools.org/system/files/filedepot/4/kra_2018-19_technical_report.pdf (accessed 05/06/21); Electronic Learning Company. (2011). *Ready for Kindergarten Maryland: Kindergarten Readiness Assessment (KRA). Professional development*. Johns Hopkins University School of Education, Center for Technology in Education. https://pd.kready.org/105956 (accessed 01/26/21).

229. ICF. (2018). *Summary of responses to the Kindergarten Readiness Assessment (KRA) Survey administered to Maryland kindergarten teachers*. Maryland State Department of Education. http://marylandpublicschools.org/stateboard/Documents/01222019/TabE-KindergartenReadinessResults.pdf (accessed 03/19/21).

230. Illinois State Board of Education. (2019). *Third annual Mastering KIDS Summit*. https://drive.google.com/file/d/1JiyHUJMaO-ucAscgRAnLSBYZwO6A5EvW/view (accessed 12/17/20).

231. Darling-Hammond, L., Hyler, M. E., & Gardner, M. (2017). *Effective teacher professional development*. Learning Policy Institute. https://learningpolicyinstitute.org/product/effective-teacher-professional-development-report (accessed 05/06/21).

232. Illinois State Board of Education. (n.d.). KIDS: Professional development & coaching. https://www.isbe.net/Pages/KIDS-ProfDev.aspx (accessed 06/24/21).

233. Cannady, K., Hillegass, M., & Jackle, E. (2019). *Mastering KIDS: Voices from the field*. Teach Plus. https://teachplus.org/sites/default/files/publication/pdf/mastering_kids_til.pdf (accessed 12/17/20).

234. Cannady, K., Hillegass, M., & Jackle, E. (2019). *Mastering KIDS: Voices from the field*. Teach Plus. https://teachplus.org/sites/default/files/publication/pdf/mastering_kids_til.pdf (accessed 12/17/20).

235. Joseph, G., Soderberg, J. S., Stull, S., Cummings, K., McCutchen, D., & Han, R. J. (2020). Inter-rater reliability of Washington state's kindergarten entry assessment. *Early Education and Development*, *31*(5), 764–777. https://doi.org/10.1080/10409289.2019.1674589; Zimskind, L., & Crow, S. (2020). *Readying our state: How kindergarten readiness inventories can benefit California*. First 5 Center for Children's Policy. https://first5center.org/assets/files/kri-paper-v6-WEB.pdf (accessed 12/17/20).

236. 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; Cannady, K., Hillegass, M., & Jackle, E. (2019). *Mastering KIDS: Voices from the field*. Teach Plus. https://teachplus.org/sites/default/files/publication/pdf/mastering_kids_til.pdf (accessed 12/17/20); Golan, S., Woodbridge, M., Davies-Mercier, B., & Pistorino, C. (2016). *Case studies of the early implementation of kindergarten entry assessment*. U.S. Department of Education. https://www2.ed.gov/rschstat/eval/disadv/kindergarten-entry-assessments/report.pdf (accessed 03/17/21); Little, M., Cohen-Vogel, L., Sadler, J., & Merrill, B. (2020). Moving kindergarten entry assessments from policy to practice: Evidence from North Carolina. *Early Education and Development*, *31*(5), 796–815. https://doi.org/10.1080/10409289.2020.1724600; Schachter, R. E., Strang, T. M., & Piasta, S. B. (2017). *Teachers' perspectives on the Kindergarten Readiness Assessment in year 2: Easier to administer but what role can it play in instruction?* Schoenbaum Family Center and Crane Center for Early Childhood Research and Policy, Ohio State University. https://earlychildhood.ehe.osu.edu/files/2017/06/KRA-2-whitepaper.pdf (accessed 05/28/21).

237. 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; Golan, S., Woodbridge, M., Davies-Mercier, B., & Pistorino, C. (2016). *Case studies of the early implementation of kindergarten entry assessment*. U.S. Department of Education. https://www2.ed.gov/rschstat/eval/disadv/kindergarten-entry-assessments/report.pdf (accessed 03/17/21); Little, M., Cohen-Vogel, L., Sadler, J., & Merrill, B. (2020). Moving kindergarten entry assessments from policy to practice: Evidence from North Carolina. *Early Education and Development*, *31*(5), 796–815. https://doi.org/10.1080/10409289.2020.1724600.

238. Georgia Department of Education. (n.d.). For educators. https://www.gadoe.org/Curriculum-Instruction-and-Assessment/Assessment/Pages/Information-For-Educators.aspx (accessed 12/20/20).

239. ICF. (2018). *Summary of responses to the Kindergarten Readiness Assessment (KRA) Survey administered to Maryland kindergarten teachers*. Maryland State Department of Education. http://marylandpublicschools.org/stateboard/Documents/01222019/TabE-KindergartenReadinessResults.pdf (accessed 03/19/21).

240. 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; Cannady, K., Hillegass, M., & Jackle, E. (2019). *Mastering KIDS: Voices from the field*. Teach Plus. https://teachplus.org/sites/default/files/publication/pdf/mastering_kids_til.pdf (accessed 12/17/20); Ferrara, A. M., & Lambert, R. G. (2016). *Findings from the 2015 statewide implementation of the North Carolina k–3 formative assessment process: Kindergarten entry assessment*. Center for Educational Measurement and Evaluation at the University of North Carolina Charlotte. https://ceme.uncc.edu/sites/ceme.uncc.edu/files/media/Findings%20from%20the%202015%20North%20Carolina%20K-3%20FAP%20KEA%20Implementation.pdf (accessed 12/18/20); Little, M., Cohen-Vogel, L., Sadler, J., & Merrill, B. (2020). Moving kindergarten entry assessments from policy to practice: Evidence from North Carolina. *Early Education and Development*, *31*(5), 796–815. https://doi.org/10.1080/10409289.2020.1724600; Schachter, R. E., Strang, T. M., & Piasta, S. B. (2017). *Teachers' perspectives on the Kindergarten Readiness Assessment in year 2: Easier to administer but what role can it play in instruction?* Schoenbaum Family Center and Crane Center for Early Childhood Research and Policy, Ohio State University. https://earlychildhood.ehe.osu.edu/files/2017/06/KRA-2-whitepaper.pdf (accessed 05/28/21); Schachter, R. E., Strang, T. M., & Piasta, S. B. (2019). Teachers' experiences with a state-mandated kindergarten readiness assessment. *Early Years*, *39*(1), 80–96.

241. 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; Cannady, K., Hillegass, M., & Jackle, E. (2019). *Mastering KIDS: Voices from the field*. Teach Plus. https://teachplus.org/sites/default/files/publication/pdf/mastering_kids_til.pdf (accessed 12/17/20); Ferrara, A. M., & Lambert, R. G. (2016). *Findings from the 2015 statewide implementation of the North Carolina k–3 formative assessment process: Kindergarten entry assessment*. Center for Educational Measurement and Evaluation at the University of North Carolina Charlotte. https://ceme.uncc.edu/sites/ceme.uncc.edu/files/media/Findings%20from%20the%202015%20North%20Carolina%20K-3%20FAP%20KEA%20Implementation.pdf (accessed 12/18/20); Little, M., Cohen-Vogel, L., Sadler, J., & Merrill, B. (2020). Moving kindergarten entry assessments from policy to practice: Evidence from North Carolina. *Early Education and Development*, *31*(5), 796–815. https://doi.org/10.1080/10409289.2020.1724600; Schachter, R. E., Strang, T. M., & Piasta, S. B. (2019). Teachers' experiences with a state-mandated kindergarten readiness assessment. *Early Years*, *39*(1), 80–96.

242. 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.

243. Illinois State Board of Education. (n.d.). *IL districts embracing KIDS: West Chicago. KIDS helps West Chicago teachers improve instruction*. https://www.isbe.net/Documents_KIDSWebsiteResources/WChicago_Case_Study.pdf.

244. Cannady, K., Hillegass, M., & Jackle, E. (2019). *Mastering KIDS: Voices from the field*. Teach Plus. https://teachplus.org/sites/default/files/publication/pdf/mastering_kids_til.pdf (accessed 12/17/20).

245. ICF. (2018). *Summary of responses to the Kindergarten Readiness Assessment (KRA) Survey administered to Maryland kindergarten teachers*. http://marylandpublicschools.org/stateboard/Documents/01222019/TabE-KindergartenReadinessResults.pdf (accessed 03/19/21).

246. Georgia Department of Education. (2020). GKIDS Readiness Check. https://www.gadoe.org/Curriculum-Instruction-and-Assessment/Assessment/Pages/Readiness.aspx (accessed 02/05/21).

247. California Department of Education. (2017). *Kindergarten Individual Development Survey user's guide & instrument*. https://www.isbe.net/Documents/KIDS-User-Guide-Instrument.pdf (accessed 12/17/20); Illinois State Board of Education. (n.d.). *KIDS: Materials & resources*. https://www.isbe.net/Pages/KIDS-Materials.aspx (accessed 07/09/21).

248. Hodges, K. (2020). *NIEER Pre-k data snapshot: Pre-k and kindergarten entry assessment (KEA) alignment: 2018–2019 school year*. National Institute for Early Education Research. https://nieer.org/wp-content/uploads/2020/12/Data-Snapshot_PK-Assessment_8.2020.pdf (accessed 02/05/21).

249. Georgia Department of Early Care and Learning. (n.d.). *Work Sampling System and Georgia Early Learning and Development Standards (GELDS) reverse correlations*. http://www.decal.ga.gov/documents/attachments/ReverseWSSCorrelation.pdf (accessed 12/17/20).

250. Illinois State Board of Education. (2019). *KIDS instrument crosswalk for the 14 State Readiness Measures*. https://www.isbe.net/Documents/KIDS-EL-Instrument-Crosswalk-14-Required-Measures.pdf (accessed 12/17/20).

251. Stipek, D., Franke, M., Clements, D., Farran, D., & Coburn, C. (2017). PK–3: What does it mean for instruction? *Social Policy Report*, *30*(2), 1–23. https://doi.org/10.1002/j.2379-3988.2017.tb00087.x.

252. Washington State Legislature. RCW 28A.150.315. https://app.leg.wa.gov/rcw/default.aspx?cite=28A.150.315.

253. Washington Office of the Superintendent of Public Instruction. (n.d.). Early Learning Collaboration. https://www.k12.wa.us/student-success/testing/state-testing-overview/washington-kindergarten-inventory-developing-skills-wakids/early-learning-collaboration (accessed 12/19/20).

254. Georgia Department of Education. (n.d.). Georgia Kindergarten Inventory of Developing Skills 2.0 (GKIDS 2.0). https://www.gadoe.org/Curriculum-Instruction-and-Assessment/Assessment/Pages/GKIDS-2.0.aspx (accessed 02/05/21); Georgia Department of Education. (2021). *The GKIDS Readiness Check: Frequently asked questions (FAQ) system and school leaders*. https://www.gadoe.org/Curriculum-Instruction-and-Assessment/Assessment/Documents/GKIDS/Readiness_Resources/gkids_2.0_readiness-check_system_and_school_leader_faq_2021-22.pdf (accessed 06/24/21).

255. Illinois State Board of Education. (n.d.). *IL districts embracing KIDS: Morrison. Morrison teachers embrace KIDS, reap benefits*. https://www.isbe.net/Documents_KIDSWebsiteResources/Morrison_Case_Study.pdf (accessed 12/17/20).

256. Espinosa, L. M., & García, E. (2012). *Developmental assessment of young dual language learners with a focus on kindergarten entry assessment: Implications for state policies* [Working paper #1]. CECER–DLL, Frank Porter Graham Child Development Institute, University of North Carolina at Chapel Hill. https://legacy.earlysuccess.org/sites/default/files/KEA%20Policy%20brief.CECER-DLL.12-12.pdf (accessed 12/19/20).

257. Bornfreund, L., Ewen, D., Loewenberg, A., McDonald, D., Rafa, A., & Weyer, M. (2020). *State policies to enhance transitions into kindergarten*. Education Commission of the States. https://www.ecs.org/wp-content/uploads/State_Policies_to_Enhance_Transitions_Into_Kindergarten.pdf (accessed 05/28/21); Hanover Research. (2013). *Kindergarten entry assessments: Practices and policies*. https://www.hanoverresearch.com/media/Kindergarten-Entry-Assessments-Practices-and-Policies.pdf (accessed 05/28/21); Owens, J. S., Holdaway, A., Storer, J., & Serrano, V. (2015). Screening for social, emotional, and behavioral problems at kindergarten entry: Utility and incremental validity of parent report. *School Psychology Review*, *44*(1) 21–40. https://files.eric.ed.gov/fulltext/EJ1141709.pdf (accessed 05/28/21).

258. Golan, S., Woodbridge, M., Davies-Mercier, B., & Pistorino, C. (2016). *Case studies of the early implementation of kindergarten entry assessment*. U.S. Department of Education. https://www2.ed.gov/rschstat/eval/disadv/kindergarten-entry-assessments/report.pdf (accessed 03/17/21).

259. Georgia Department of Education. (2017). FAQs. http://gkidsreadinesscheck.gadoe.org/faqs (accessed 12/17/20).

260. Washington Office of Superintendent of Public Instruction. (n.d.). Family Connection. https://www.k12.wa.us/student-success/testing/state-testing-overview/washington-kindergarten-inventory-developing-skills-wakids/family-connection (accessed 05/06/21).

261. Golan, S., Woodbridge, M., Davies-Mercier, B., & Pistorino, C. (2016). *Case studies of the early implementation of kindergarten entry assessment*. U.S. Department of Education. https://www2.ed.gov/rschstat/eval/disadv/kindergarten-entry-assessments/report.pdf (accessed 03/17/21).

262. Garver, K. (2020). *The "why" behind kindergarten entry assessments*. National Institute for Early Education Research. https://nieer.org/policy-issue/the-why-behind-kindergarten-entry-assessments (accessed 12/17/20).

263. Illinois State Board of Education. (2019). *2018–2019 Illinois Kindergarten Individual Development Survey (KIDS) report: A look at kindergarten readiness*. https://www.isbe.net/Documents/RMF19-001-KIDS%20Report.pdf (accessed 12/17/20).

264. Shields, K. A., Cook, K. D., & Greller, S. (2016). *How kindergarten entry assessments are used in public schools and how they correlate with spring assessments* [REL 2017-182]. U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, and Regional Educational Laboratory Northeast & Islands. https://ies.ed.gov/ncee/edlabs/regions/northeast/pdf/REL_2017182.pdf (accessed 12/17/20).

265. Shields, K. A., Cook, K. D., & Greller, S. (2016). *How kindergarten entry assessments are used in public schools and how they correlate with spring assessments*. U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance. https://ies.ed.gov/ncee/edlabs/regions/northeast/pdf/REL_2017182.pdf (accessed 12/17/20); Weisenfeld, G. G., Garver, K., & Hodges, K. (2020). Federal and state efforts in the implementation of kindergarten entry assessments (2011–2018). *Early Education and Development*, *31*(5), 632–652. https://doi.org/10.1080/10409289.2020.1720481.

266. Zimskind, L., & Crow, S. (2020). *Readying our state: How kindergarten readiness inventories can benefit California*. First 5 Center for Children's Policy. https://first5center.org/assets/files/kri-paper-v6-WEB.pdf (accessed 12/17/20).

267. Georgia Department of Education. (2020). *Georgia Kindergarten Inventory of Developing Skills (GKIDS) 2.0–Readiness Check 2020–2021 administration manual*. https://www.gadoe.org/Curriculum-Instruction-and-Assessment/Assessment/Documents/GKIDS/Readiness_Resources/GKIDS%202.0_Readiness_Check_Administration_Manual_2020-21.pdf (accessed 12/17/20).

268. Georgia Department of Education. (2021). *The GKIDS Readiness Check: Frequently asked questions (FAQ) teachers*. https://www.gadoe.org/Curriculum-Instruction-and-Assessment/Assessment/Documents/GKIDS/Readiness_Resources/gkids_2.0_readiness-check_teacher_faq_2021-22.pdf (accessed 06/24/21).

269. Illinois State Board of Education. (n.d.). *KIDS resource list*. https://www.isbe.net/Documents/KIDS-Digital-Resources.pdf (accessed 12/17/20).

270. Illinois State Board of Education. (2020, January 6). ISBE recognizes five educators for leadership and excellence in implementing KIDS [Press release]. https://www.isbe.net/Lists/News/NewsDisplay.aspx?ID=1304 (accessed 12/17/20).

271. Colorado Rev. Stat. Ann. §22-7-1004.3.a. (p. 162). http://leg.colorado.gov/sites/default/files/images/olls/crs2018-title-22.pdf (accessed 02/05/21).

272. Maryland State Board of Education. (2020). *Readiness matters: 2019–2020 Kindergarten Readiness Assessment report*. https://www.readyatfive.org/download-document/getting-ready/readiness-matters-2020/1713-200178-ready-5-book-web/file.html (accessed 01/26/21).

273. Maryland State Board of Education. (2018). *Readiness matters: Equity matters*. https://www.readyatfive.org/download-document/getting-ready/readiness-matters-2018/1499-readiness-matters-equity-matters-maryland-s-2017-2018-kindergarten-readiness-assessment-report/file.html (accessed 01/26/21).

274. Maryland State Board of Education. (2018). *Ready for kindergarten: Maryland's early childhood comprehensive assessment system. Technical report*. https://www.readyatfive.org/download-document/getting-ready/readiness-matters-2018/1621-kra-technical-report-17-18/file.html (accessed 01/26/21).

275. Terri Lamb's position has moved to the Assessment Office since this interview took place.

276. Bernstein, S., Barnett, W. S., & Ackerman, D. J. (2019). *What is readiness? Preparing all children to succeed in kindergarten and beyond* [Policy brief]. National Institute for Early Education Research. https://nieer.org/policy-issue/34656 (accessed 12/18/20).

277. U.S. Department of Education, & U.S. Department of Health and Human Services. (2015). *At a glance: Race to the Top Early Learning Challenge. 2014 progress update*. https://www2.ed.gov/programs/racetothetop-earlylearningchallenge/2015apr/aprupdate.pdf (accessed 02/05/21).

278. Little, M., Cohen-Vogel, L., Sadler, J., & Merrill, B. (2020). Moving kindergarten entry assessments from policy to practice: Evidence from North Carolina. *Early Education and Development*, *31*(5), 796–815. https://doi.org/10.1080/10409289.2020.1724600.

279. North Carolina Department of Public Instruction. (n.d.). NC Early Learning Inventory. https://www.dpi.nc.gov/districts-schools/classroom-resources/early-learning-read-achieve/nc-early-learning-inventory (accessed 12/20/20).

280. ICF. (2018). *Summary of responses to the Kindergarten Readiness Assessment (KRA) Survey administered to Maryland kindergarten teachers*. Maryland State Department of Education. http://marylandpublicschools.org/stateboard/Documents/01222019/TabE-KindergartenReadinessResults.pdf (accessed 03/19/21).

281. Zakharov, A., & Carnoy, M. (2021). Does teaching to the test improve student learning? *International Journal of Educational Development*, *84*(March), 102422; Wilder, T., Jacobsen, R., & Rothstein, R. (2008). *Grading Education: Getting Accountability Right*. Teachers College Press; Carlsson-Paige, N., McLaughlin, G. B., & Almon, J. W. (2015). *Reading instruction in kindergarten: Little to gain and much to lose*. Defending the Early Years. https://dey.org/publication/our-new-report-reading-instruction-in-kindergarten-little-to-gain-and-much-to-lose/ (accessed 03/10/21); Meisels, S. J. (1989). High-stakes testing in kindergarten. *Educational Leadership*, *46*(7), 16–22.

282. Ackerman, D. J., & Barnett, W. S. (2005). *Prepared for kindergarten: What does "readiness" mean?* National Institute for Early Education Research. https://nieer.org/policy-issue/policy-report-prepared-for-kindergarten-what-does-readiness-mean (accessed 12/19/20); Meloy, B., & Schachner, A. (2019). *Early childhood essentials: A framework for aligning child skills and educator competencies*. Learning Policy Institute. https://learningpolicyinstitute.org/product/early-childhood-essentials-framework-report (accessed 12/17/20); National Association for the Education of Young Children. (2009). *Where we stand on school readiness*. https://www.naeyc.org/sites/default/files/globally-shared/downloads/PDFs/resources/position-statements/Readiness.pdf (accessed 12/19/20).

283. Joseph, G., Soderberg, J. S., Stull, S., Cummings, K., McCutchen, D., & Han, R. J. (2020). Inter-rater reliability of Washington state's kindergarten entry assessment. *Early Education and Development*, *31*(5), 764–777. https://doi.org/10.1080/10409289.2019.1674589.

284. Washington Office of Superintendent of Public Instruction. (n.d.). Early Learning Collaboration. https://www.k12.wa.us/student-success/testing/state-testing-overview/washington-kindergarten-inventory-developing-skills-wakids/early-learning-collaboration (accessed 12/17/20).

285. Wechsler, M. E., Kirp, D. L., Ali, T. T., Gardner, M., Maier, A., Melnick, H., & Shields, P. M. (2018). *On the Road to High-Quality Early Learning: Changing Children's Lives*. Teachers College Press.

286. Garver, K. (2020). *The "why" behind kindergarten entry assessments*. National Institute for Early Education Research. https://nieer.org/policy-issue/the-why-behind-kindergarten-entry-assessments (accessed 12/17/20).

287. Weisenfeld (2017) suggests that not engaging the union was a potentially critical mistake in Maryland, which chose to assess only a sample of students. 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).

288. Golan, S., Woodbridge, M., Davies-Mercier, B., & Pistorino, C. (2016). *Case studies of the early implementation of kindergarten entry assessment*. U.S. Department of Education. https://www2.ed.gov/rschstat/eval/disadv/kindergarten-entry-assessments/report.pdf (accessed 03/17/21); Little, M., Cohen-Vogel, L., Sadler, J., & Merrill, B. (2020). Moving kindergarten entry assessments from policy to practice: Evidence from North Carolina. *Early Education and Development*, *31*(5), 796–815. https://doi.org/10.1080/10409289.2020.1724600; Schachter, R. E., Strang, T. M., & Piasta, S. B. (2019). Teachers' experiences with a state-mandated kindergarten readiness assessment. *Early Years*, *39*(1), 80–96.

289. Center for Standards, Assessment, and Accountability. (2019). *State of the states: Pre-k/k assessment* [Interactive data map]. WestEd. https://csaa.wested.org/tools/state-of-states/ (accessed 12/17/20); Kelley, B., Weyer, M., McCann, M., Broom, S., & Keily, T. (2020). *50-state comparison: State k–3 policies*. Education Commission of the States. https://www.ecs.org/kindergarten-policies/ (accessed 12/17/20); Regional Educational Laboratory Northwest. (2016). 50-state scan of kindergarten readiness definitions and assessments [Spreadsheet]. Institute of Education Sciences. https://ies.ed.gov/ncee/edLabs/regions/northwest/pdf/50-state-scan-kindergarten-readiness.xlsx (accessed 12/17/20); Weisenfeld, G. G. (2017, January). Assessment tools used in kindergarten entry assessments (KEAs): State scan. *CEELO Fast Fact.* Center on Enhancing Early Learning Outcomes. http://ceelo.org/wp-content/uploads/2017/01/ceelo_fast_fact_kea_state_scan_2017_01_for_web.pdf (accessed 12/17/20); Weisenfeld, G. G., Garver, K., & Hodges, K. (2020). Federal and state efforts in the implementation of kindergarten entry assessments (2011–2018). *Early Education and Development*, *31*(5), 632–652. https://doi.org/10.1080/10409289.2020.1720481.

About the Authors

Cathy Yun is a Senior Researcher on LPI's Early Childhood and Educator Quality teams. Yun is committed to working to promote equity and inclusion throughout the education continuum from birth to higher education. Yun's work prior to LPI included comprehensive continuous improvement efforts in a large-scale teacher preparation program; deep work with teacher residencies; development of partnerships with schools, districts, and community organizations; and support of local-level policies to positively impact the early childhood community. Yun holds a doctorate in Learning, Teaching, and Diversity from Vanderbilt University; a Master of Education in Neuroscience and Education; a master's degree in Reading Specialist from Teachers College, Columbia University; and bachelor's degrees in Psychology and English from Wellesley College.

Hanna Melnick is a Senior Policy Advisor at LPI, where she coleads the Early Childhood Learning team. Her work centers on policies that can improve early learning systems in California and other states, including preparing a high-quality, diverse educator workforce; supporting coherent systems of governance and financing; and improving children's access to high-quality programs. She is also a member of the Deeper Learning team, with a focus on school climate and social-emotional learning. Before joining LPI, Melnick was a public school teacher in the Bay Area. Melnick holds a Master of Public Policy from the Goldman School of Public Policy at the University of California, Berkeley, and a bachelor's degree from Harvard University.

Marjorie Wechsler is the Principal Research Manager at LPI and is co-lead of LPI's Educator Quality team. She leads mixed-methods research studies related to teacher and leader quality and early childhood learning. Her work at LPI focuses on supporting and documenting systems change to advance equity. Wechsler was the lead author of the book *On the Road to High-Quality Early Learning: Changing Children's Lives*. Wechsler received her doctorate in Education Administration and Policy Analysis from Stanford University, a Master of Education in Education Policy from Harvard University, and a teaching credential and bachelor's degree in Psychology from Brandeis University.

1530 Page Mill Road, Suite 250
Palo Alto, CA 94304
p: 650.332.9797

1100 17th Street, NW, Suite 200
Washington, DC 20036
p: 202.830.0079
@LPI_Learning | learningpolicyinstitute.org