

Executive Summary

States increasingly are incorporating Kindergarten Entry Assessments (KEAs)¹ into their comprehensive assessment systems with the goal of helping educators identify gaps in children’s competencies, target instruction to children’s individual needs, engage parents to better support their child’s learning, and identify needs for expanding and improving early learning opportunities. In 2010, seven states collected KEA data for the purposes of aggregating data at the state level (Daily, Burkhauser, and Halle 2010). By 2014, 29 states were engaged in development and use of KEAs with support from federal programs such as Race To the Top-Early Learning Challenge (RTT-ELC) grants and Enhanced Assessment Grants (EAG). This descriptive study examines the development and early implementation of KEAs in 12 districts and 23 schools within four RTT-ELC states (Maryland, Oregon, Pennsylvania, and Washington) during the 2014–15 school year. This was the first year of KEA implementation in Maryland and Pennsylvania, the second year of KEA implementation in Oregon, and the third year of KEA implementation in Washington, so findings reflect the early implementation of these assessments. The study is intended to help states learn from the experiences of other states as they work to develop and implement their own KEAs and to use KEAs to improve instruction and learning.

Key Findings

- State officials and stakeholders in all four case study states considered multiple criteria when developing or adopting KEA measures: reliability and validity, appropriateness for all students, usefulness for informing classroom instruction, usefulness for informing early learning policies and program improvement, feasibility of administration by teachers, and cost.
- The four states trained teachers on KEA administration through self-paced webinars, in-person presentations, and train-the-trainer models. A majority of the interviewed teachers said the training prepared them to administer the KEA to students, though many teachers reported that they had difficulty in determining what were appropriate accommodations for English learner (EL) students² and students with disabilities³ and indicated that they needed further assistance.

¹ Some states call these kindergarten entry *inventories* rather than *assessments*, but both terms refer to similar kinds of measures. For simplicity, this report uses the generic term *kindergarten entry assessment* to encompass both kindergarten assessments and inventories. As defined by the RTT-ELC Notice Inviting Applications (NIA), a “kindergarten entry assessment” is an assessment that: is administered to children during the first few months of their admission into kindergarten; covers all Essential Domains of School Readiness; is used in conformance with the recommendations of the National Research Council reports on early childhood (National Research Council, 2008); is valid and reliable for its intended purposes and for the target populations; and is aligned to the state’s early learning and development standards. *Essential Domains of School Readiness* means the domains of language and literacy development, cognition and general knowledge (including early mathematics and early scientific development), approaches toward learning, physical well-being and motor development (including adaptive skills), and social and emotional development. Additionally, the NIA states that “results of the assessment should be used to inform efforts to close the school readiness gap at kindergarten entry, to inform instruction in the early elementary school grades, and to inform parents about their children’s status and involve them in decisions about their children’s education. This assessment should not be used to prevent children’s entry into kindergarten or as a single measure for high-stakes decisions.”

² Interviewers used the term “English learners” when asking respondents about this population, but some respondents preferred the term “dual language learner students” or “DLL students,” because in early childhood, all children are learning English. This report uses the term “EL students.”

- District officials reported working to reduce the burden associated with KEA data collection and entry by purchasing new technology, providing staffing assistance to teachers with KEA administration, and omitting or delaying other assessments.
- Although the majority of interviewed teachers reported that they had not yet used formal KEA reports to inform their instructional practices, a few teachers said that the impressions they gained while administering the KEA helped them to understand their students' strengths and needs and to assign students to instructional groups.
- District administrators and teachers identified challenges with administering KEAs with EL students and students with disabilities, using KEA results to inform instruction, and sharing KEA data with parents;⁴ they suggested that state officials could address these challenges by providing explicit training on these topics, on-site coaching, and tailored reports to help educators use and share the data.

Study Design and Limitations

This study addressed the following questions:

1. How did the four case study states develop or adopt KEAs?
2. How did the four states train teachers to administer KEAs and to what extent did teachers feel prepared to do so?
3. What were the KEA implementation experiences of the 12 case study districts?
4. To what extent did the states, districts, and schools in the study use KEA results to inform policy and practice?
5. What challenges did the case study sites experience with KEAs, and what strategies did sites use or suggest using to address these challenges?

To address these questions, the study team conducted document reviews, telephone interviews with state respondents and preschool directors, and in-person interviews with district administrators, principals, kindergarten teachers, and other KEA assessors.

Data collection. Data collection occurred between January and June 2015 in the four case study states and in the 12 districts and 23 schools in those states. This sample size enabled the study team to explore the range of strategies that these states, districts, and schools were using to implement KEAs. The study team drew a purposive sample of three school districts from each state, stratified as urban, suburban, and rural. Then the study team drew a sample of schools with both high concentrations of poverty and significant concentrations of EL students, as well as schools with lower concentrations of poverty and EL students. Participating preschool programs provided public or private early care and education at or near the selected schools.

The study team completed 201 interviews across the four states — specifically, interviews with 33 state agency representatives, 48 district representatives (including 13 professional development

³ Interviewers used the term “children with developmental delays or disabilities” when asking respondents about this population. Respondents used other various terms, including “children with special needs” and “children receiving special education.” This report uses the term “students with disabilities.”

⁴ This report uses the term “parents” when discussing schools sharing KEA results because that is the term used in the *Family Educational Rights and Privacy Act* (FERPA); schools may share KEA results with natural parents, guardians, or other individuals acting as a parent in the absence of a parent or guardian under FERPA.

coordinators), 20 principals and one vice principal, 53 kindergarten teachers, five other KEA assessors, and 41 preschool program directors. The study team used structured debrief guides and cross-case analysis meetings to identify themes and verify evidence for findings.

Study limitations. The case study findings in this report are not representative of or generalizable to all districts and schools within or beyond the case study states. The findings are a snapshot in time from fall 2014 and early 2015, and therefore respondents may have reported on activities and circumstances that have since changed. In some cases, interview respondents had not participated in early discussions about the selection or development of KEAs and, therefore, were not able to provide detailed information about their KEAs' historical foundations. Further, the study team did not evaluate the validity or reliability of the selected or developed KEA measures or their administration processes.

Although the state and district experiences described in this study are not generalizable to other sites, state and district policymakers and administrators may use the study findings to inform their own KEA plans by considering the common challenges and potential solutions identified; the tradeoffs of various KEA strategies; and the numerous logistical steps undertaken in adopting, implementing, and using a KEA to inform policy, program improvement, and instruction.

Summary of Findings

Development and Adoption

State officials and stakeholders in all four case study states considered multiple criteria when developing or adopting KEA measures: reliability and validity, appropriateness for all students, usefulness for informing classroom instruction, usefulness for informing early learning policies and program improvement, feasibility of administration by teachers, and cost.

KEA leadership teams in the case study states engaged a wide range of stakeholders in the KEA selection process such as researchers, experts in assessment and psychometrics, experts in assessment and education of students with disabilities and EL students, local administrators, elementary and preschool educators, early learning advocates, and community representatives. Leadership teams worked with stakeholders initially to prioritize the selection criteria for KEA measures and then, in some cases, to review potential measures. Over a multi-year process, these teams continued to examine KEA properties and feasibility, solicit feedback from practitioners, and refine the instrument, its administration, and reporting procedures to support continuous improvement. Recognizing that a single assessment tool may not fully meet all of the desired criteria, decision-makers in all four case study states focused on developing or selecting instruments that were psychometrically sound, aligned with state standards, affordable, and not too burdensome for teachers to administer (see Exhibit S.1 for an overview of the KEA tools used in the four case study states).

In all four case study states, KEA development or adoption began with pilot tests of the selected KEAs to assess the reliability and validity of assessment items, implementation feasibility, and teacher training needs; these studies resulted in revisions of KEA instruments and in modifications to training protocols, procedures, and resources.

Before full-scale KEA implementation, researchers in all case study states conducted pilot tests, field tests (i.e., small-scale studies), or both, with teachers in a subset of schools. In three case study states (Maryland, Oregon, and Pennsylvania), the pilot tests were conducted after the state had developed or selected its KEA. The Washington pilot test involved testing three different instruments to inform the

final selection of the *Teaching Strategies GOLD®* (*GOLD®*) for the whole child assessment component of the state's KEA, followed by a field test of a customized version of the selected assessment. At a minimum, the pilot tests involved teachers assessing students using the selected KEA and providing feedback through surveys, focus groups, or interviews. In addition, researchers in the case study states conducted parent surveys and interviews (Washington), student interviews (Maryland), school administrator surveys (Oregon and Pennsylvania), document reviews (Oregon), and direct observations of KEA administration (Oregon). These studies resulted in revisions to KEA instruments and procedures and in modifications to training protocols and resources.

Exhibit S.1. KEA Information At-a-Glance by State

State	Maryland	Oregon	Pennsylvania	Washington
KEA tool	Kindergarten Readiness Assessment (KRA)	Kindergarten Assessment (KA)	Kindergarten Entry Inventory (KEI)	Washington Kindergarten Inventory of Developing Skills (WaKIDS)
Domains assessed	Language and literacy, social-emotional, math, and physical development	Early literacy, early math, and approaches to learning	Language and literacy, social-emotional, math, approaches to learning, and physical development	Language and literacy, social-emotional, math, cognitive, and physical development
Types of items	Selected response, performance, and observational items developed by state	Selected response and performance items from <i>easyCBM</i> ; Observational items from <i>Child Behavior Rating Scale</i>	Observation based on rubric developed by state	Observation based on rubric from <i>GOLD®</i>
Number of items	63	31	34	36

State Support for Teacher Training and Preparation

The four states trained teachers on KEA administration through self-paced webinars, in-person presentations, and train-the-trainer models. A majority of the interviewed teachers said that the training prepared them to administer the KEA to students, though many teachers reported that they had difficulty in determining what were appropriate accommodations for EL students and students with disabilities and indicated that they needed further assistance.

In the four case studies, state staff or state-funded contractors developed and offered trainings for teachers on how to implement their KEAs using carefully scripted training and administration materials and resources. The state-developed trainings for teachers on KEA implementation took different forms—from online self-paced webinars to in-person presentations. These trainings addressed various topics—from detailed administration procedures to data reporting guidelines, but they typically included more focus on administration and data entry than on data use. The majority of interviewed teachers reported feeling prepared for administering the KEA and for using the secure web-based data systems overall, but they wanted more training on assessment strategies for EL students and students with disabilities, access to bilingual assessors and special education experts, and more opportunities for collaboration with colleagues on general KEA implementation and use.

To promote the collection of consistent data, state officials from all four case study states required teachers and other KEA assessors to complete a proficiency exam before administering KEAs.

In Maryland, Pennsylvania, and Washington, teachers completed proficiency exams that compared their own ratings of students' knowledge, skills, and behaviors with experts' ratings. In Oregon and Maryland, teachers also completed a proficiency test of knowledge about the state's KEA assessment. In Oregon and Washington, state officials also reported monitoring teachers' progress toward completing KEA administration tasks by the required deadlines and checking for data anomalies (e.g., teacher reports of extraordinarily high or low scores) in their KEA data systems; however, none of the respondents reported monitoring the actual KEA administration practices of teachers or assessors with students.

Teachers raised concerns about inconsistencies in timing of assessments' administration across classrooms that could result in inaccurate ratings of students' knowledge and skills. Several teachers interviewed who collected KEA data within the first few weeks of school believed this timing may have produced inaccurate results because children were not yet comfortable with their teachers and classrooms to perform their best. Several teachers in Maryland, Pennsylvania, and Washington also reported concerns about variations between results from observational measures collected over a seven- to eight-week window: Students' skills might show dramatic growth between the third and eighth weeks of school, yet their ratings would not reflect this growth.

District Experiences with Early KEA Implementation

KEA participation rates varied across states reaching 95 to 98 percent in the two states that required administration for all kindergarten students, while being much lower in the two states that limited the requirement to certain types of schools (13 percent and 44 percent).

Three case study states (Maryland, Oregon, and Washington) had legislative requirements for districts and schools to participate in the KEA and achieved widespread implementation. Maryland and Oregon, states that required KEA administration for all kindergarten students, achieved KEA participation rates of 98 percent and 95 percent, respectively. In Washington, where the KEA was required only in state-

funded full-day kindergarten classrooms (which represents 44 percent of the state’s kindergarteners), 52 percent of the state’s kindergarten students participated. In Pennsylvania, the state education department only required Title I focus and priority schools⁵ to participate, and 13 percent of the state’s kindergarten students participated. Of the 215 public schools whose teachers participated in the KEI, 116 were Title I focus schools or priority schools (54 percent); teachers in some schools that were not Title I focus or priority schools participated as mandated by their district.

District officials reported working to reduce the burden associated with KEA data collection and entry by purchasing new technology, providing staffing assistance to teachers with KEA administration, and omitting or delaying other assessments.

A combination of both state and federal funds supported the development and the majority of the implementation costs (such as training and material costs) of the KEAs in the case study states. School and district respondents, however, reported that they were cognizant of the additional demands that KEA training, administration, and data entry placed on their teachers, so they invested local funding to support teachers with their new responsibilities and to minimize the burden where they could. District officials reported that they used local funds to provide aides to monitor the classroom during KEA administration, coaching support, or technology resources to make data submission easier and faster. For example, the majority of district officials in Maryland and Washington reported purchasing tablets (i.e., mobile personal computers with touchscreen interfaces) for data collection, and IT staff in Maryland, Pennsylvania, and Washington uploaded student demographics (e.g., student identification number, gender, birthdate) into KEA data systems to streamline data entry for teachers. However, respondents reported some challenges with using the technology, such as hardware or software malfunctions or the system lacking capacity to accommodate large numbers of concurrent users.

Teachers across districts in all four case study states reported that having an extra pair of hands in the classroom during administration of the KEA—a teacher’s aide or substitute teacher—helped facilitate KEA implementation. A few teachers found it helpful when their district eliminated other kindergarten assessments during KEA administration. Yet the majority of district administrators and teachers interviewed across all districts in all case study states reported continuing with other assessments in addition to their state KEAs, because the assessments were part of district benchmark systems or teachers needed additional information beyond what their state KEA was providing.

KEA Data Use by States, Districts, and Schools

Although the majority of interviewed teachers reported that they had not yet used formal KEA reports to inform their instructional practices, a few teachers said that the impressions they gained while administering the KEA helped them to understand their students’ strengths and needs and to assign students to instructional groups.

Authorized district staff and teachers had access to online school, classroom, and student-level reports in Pennsylvania and Washington. Maryland, Oregon, and Washington placed state- and district-level KEA reports and data tables on public websites. However, the majority of district administrators and

⁵ Priority and focus schools are schools identified by a State in accordance with its approved request for flexibility under the *Elementary and Secondary Education Act of 1965*, as amended by the *No Child Left Behind Act of 2001* (ESEA flexibility). Generally speaking, under ESEA flexibility, priority schools are the lowest-performing five percent of Title I schools and focus schools are Title I schools with large within-school gaps between high-achieving subgroups and low-achieving subgroups and schools with one or more subgroups with low achievement or graduation rates.

teachers reported obstacles to using KEA results to inform policy and practice. District administrators and teachers reported not using the available data to inform their practices, policies, or programs because they were unaware of the reports, found them difficult to understand and use, or received the reports too late in the school year to be useful. Teachers in states with available real-time reports were either unaware of this capability or did not find the reports meaningful. Respondents in Oregon and Pennsylvania also reported not receiving the results in an easily understandable format and not having the time or skills to analyze the data.

Despite not using KEA reports to inform their instructional practices, a few teachers said that administering the KEA helped them to become acquainted with and group their students. In Pennsylvania and Washington, interviewed teachers also relied on impressions they had from observing students for the KEA (as opposed to using KEA ratings or scores) to group students by ability level for instruction and to identify students who might need additional help with social-emotional skills. In Pennsylvania, a few teachers reported that making observations of students for the KEA helped them become acquainted with their students, with the inventory typically affirming what teachers perceived about their students' entering skills. A teacher in Washington discussed altering her expectations about a students' writing progress after administering the KEA.

Most official communications about KEAs mentioned the explicit intention of sharing KEA results with parents and preschool programs, but district officials and teachers reported delays in receiving results, concerns about data sharing, and a lack of meaningful and usable reports to share with these stakeholders.

Teachers in 11 of the 12 districts reported that they did not share KEA results with parents. Teachers in Maryland and Pennsylvania reported that data were not available in time to share with parents at parent-teacher conferences, but a few teachers in Pennsylvania shared observations they had made during the KEI administration. Despite the intention to share data in the future with parents, the majority of teachers interviewed across districts in Maryland reported that they saw no use in sharing the KEA results with parents, because the KEA did not offer helpful information beyond what teachers shared from other assessments. The majority of interviewed teachers from Oregon had not seen KEA results themselves, and one district respondent further reported that the district administration was reluctant to share results with parents in order to avoid an "anti-testing" backlash. Only one district, Washington's urban district, reported sharing summary KEA reports with parents (as their fall report card). These teachers provided parents with the assessment results and discussed the results during fall parent-teacher conferences. A few teachers interviewed in this district, however, reported that parents did not attend these conferences or showed little interest in the KEA findings.

In addition, the majority of the directors of preschool programs associated with the selected case study schools had little or no awareness of the KEAs or their results. Respondents from Head Start or district-operated programs reported greater awareness of the KEAs than interviewed directors from private preschool programs, but directors from all types of programs expressed interest in the KEA and wanted additional information about the results and how they could use them to collaborate with kindergarten teachers. None of the respondents in Maryland, Oregon, or Pennsylvania reported that they had procedures currently in place to involve the preschool community, but a few district and school administrators in Washington reported that initial meetings had occurred between preschool and kindergarten teachers to build relationships and joint professional development opportunities. Although none of the respondents had personally participated in these meetings, one principal in Washington discussed plans to create a feedback loop to include preschool teachers who worked on her school site in sharing KEA data.

Challenges and Potential Solutions

District administrators and teachers identified challenges with administering KEAs with EL students and students with disabilities, using KEA results to inform instruction, and sharing KEA data with parents; they suggested that state officials could address these challenges by providing explicit training on these topics, on-site coaching, and tailored reports to help educators use and share the data.

Teachers in all four states reported feeling confused about the procedural guidelines for using KEAs with EL students, and teachers in three states (Maryland, Oregon, and Pennsylvania) reported feeling unsure about whether and how to provide accommodations during KEA administration to students with disabilities. Teachers suggested that trainers provide more direction on the use of tools meant to help teachers determine accommodations (e.g., decision trees and guidelines), more instruction on administration practices with special populations, and in-class monitoring of and real-time support for KEA administration from experts in assessing EL students and students with disabilities. Even with written guidance about administering KEAs to students from these populations, teachers in Maryland, Oregon, and Pennsylvania reported disagreeing with or having challenges following the provided guidance and decision-making processes for allowable and suitable supports.

Despite the availability of KEA data reports, district administrators and teachers reported not using the data to inform their practices, policies, or programs or sharing them with parents and preschool providers. State officials and trainers suggested that teachers and principals may benefit from explicit training on how to use KEA data to inform instruction. Additionally, KEA data reports should be user-friendly, with the findings closely tied to concrete actions such as specific instructional strategies. District administrators and teachers reported that they needed training to increase their awareness of available KEA data reports and materials that could be useful to share with parents. State and district officials suggested that KEA data reports must be comprehensible and useful to the preschool community for widespread use.

Several district and school respondents expressed uncertainty about the usefulness of the KEA to serve all its intended purposes; they suggested simplifying and strengthening the messages about the purpose of KEAs to build buy-in for statewide administration and use of data by districts, schools, preschools, and parents.

State officials across all case study states communicated multiple purposes of their KEAs. One major purpose was to measure school readiness consistently to inform state-level investments in early learning. Another was to identify students' strengths and needs to inform preschool and kindergarten teachers' professional development and classroom instruction. In addition, in all four states, state officials intended for KEA results to provide parents with information about their children's learning and development. In contrast to the various purposes reported by state officials, district and school respondents in all four states most often reported that the primary purpose of KEAs was to provide a state snapshot of kindergarten entry skills for state-level planning. Teachers in the case study states that mandated participation often viewed it as a compliance task rather than an activity designed to benefit their classroom instruction. For example, in Maryland and Oregon, several interviewed teachers reported that they viewed the KEA as yet one more required assessment in addition to others that were either mandated by district administrators or deemed more useful to educators.

There was a disconnect between the stated objectives of the KEAs and actual practice, especially related to the access of KEA results, interpretation of data, and use of data to inform practice and improve

programs. Respondents in Oregon, Pennsylvania, and Washington suggested that clear communication about expected uses of the KEAs prior to full implementation would have increased buy-in among kindergarten teachers and the preschool community. A couple of Washington state and district officials thought that demonstrating that one tool could serve multiple purposes would bolster the argument for administering it statewide, but two respondents (one at a district and one at the state) reported that overstating the KEA's use to accomplish some purposes may have undermined support within schools. Similarly, several state, district, and school respondents in Oregon suggested that better communication in the initial development and adoption stage about the KEA's purpose and intended uses would have supported teachers' understanding about and acceptance of the KEA. Likewise, state respondents in Pennsylvania suggested that future messages aimed at teachers must be explicit about the KEA's benefits and uses, and reassure teachers that it is not a high-stakes assessment or a teacher evaluation.

Recommendations for Policymakers and Administrators

Interviewed state officials, district administrators, and teachers in the four case study states and 12 districts shared several important lessons they learned from launching a statewide KEA. Researchers analyzed themes that emerged across the sites and developed the following recommendations for states and districts to consider as they work towards a statewide KEA:

- To develop a statewide KEA system, be prepared for a multi-year process and iterative roll-out, including pilot testing and gathering feedback from a wide range of stakeholders (including groups expected to use the data such as representatives from districts, schools, preschools, and parents, as well as individuals with expertise in psychometrics, students with disabilities, and EL students) on KEA selection and later on implementation and reporting.
- To increase buy-in for using KEA results, be clear about how the KEA will and will not be used by early childhood programs, kindergarten teachers, school administrators, and parents, and build structures (e.g., dedicated time for intended users to review findings), training, and reports associated with the intended uses.
- To increase the utility and accuracy of KEA data for all students and to meet federal requirements for assessing students with disabilities participating in state and districtwide assessments,⁶ place a high priority on selecting KEA tools that have an adequate developmental range to capture skills of all students and that have been shown to be valid and reliable particularly for EL students and students with disabilities.
- To reduce burden of data collection and entry on teachers, eliminate other kindergarten assessments that inventory the same skills and serve the same purpose of the KEA, and provide assistance with data entry by employing additional staff and technology tools.
- To adequately prepare teachers to administer KEAs with EL students and students with disabilities, provide teachers with explicit training, coaching, and guidance on the administration of KEAs with these populations, including appropriate accommodations consistent with federal regulations,⁷ as well as access to bilingual assessors and special education experts.
- To support the use of KEA results to inform instruction, develop user-friendly and timely reports closely tied to instructional decisions.

⁶ *Individuals with Disabilities Education Act* (IDEA; 34 CFR §300.16).

⁷ *Ibid.*

- To support the use of KEA results with parents, develop timely reports that teachers can share with parents that describe children’s strengths and identify particular skills that parents and other family members can support at home.
- To support the use of KEA results in preschool programs, include preschool practitioners in the development of KEA reports that identify instructional areas in which early learning programs could help children be better prepared for kindergarten; reports should also provide data that can inform state and district investments to increase access and the quality of early learning programs, such as identifying geographic areas where students who demonstrate gaps in preparedness reside.
- Provide training and coaching to teachers, district and school administrators, and preschool directors with information on the use of relevant KEA reports, and make sure they are aware of and able to access reports.