

# Pennsylvania Kindergarten Entry Inventory Cohort 2 (2015) Summary Report

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*August 2016*



**COMMONWEALTH OF PENNSYLVANIA  
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# Pennsylvania Kindergarten Entry Inventory Cohort 2 (2015) Summary

## Introduction

The Pennsylvania Kindergarten Entry Inventory (KEI) was developed through a three-year process, which included three distinct pilots of the inventory and the KEI process. For information on these pilots, visit the [Office of Child Development and Early Learning Research](#) site.

The Pennsylvania Kindergarten Entry Inventory (KEI) is intended to be used by kindergarten teachers to record students' demonstration of skills and serve as an indicator of individual student needs in the cognitive and non-cognitive key learning areas of: social and emotional development; language and literacy; mathematics; approaches to learning; and health, wellness and physical development. This tool serves to report to parents, guide teacher instruction, and inform policy by providing a picture of aggregate student outcomes upon entry into kindergarten classrooms across the commonwealth. The KEI is an observational snapshot of children entering kindergarten, which is implemented during the first 45 calendar days on the kindergarten year.

Pennsylvania's work to gather information about the status of children at kindergarten entry is tied to the development of a continuum of early learning standards. These standards outline Pennsylvania's expectations for children at significant age intervals and form the basis for an outcomes reporting tool that may be used to answer the question of what children know and are able to do when they enter kindergarten. These standards start with infant-toddler and maintain alignment through pre-kindergarten, kindergarten, and grades 1 and 2, ultimately linking to Pennsylvania's grade 3 academic standards. The KEI is unique in that its foundation is Pennsylvania's standards, developed by Pennsylvania educators.

Rather than reporting student progress on all of the Pennsylvania learning standards, 30 standards from five key learning areas were identified as salient indicators for determining child level of proficiency on benchmark standards, referred to by some as the child's level of kindergarten readiness. According to the National Association for Education of Young Children's position statement on school readiness ([www.naeyc.org/about/positions/pdf/psready98.pdf](http://www.naeyc.org/about/positions/pdf/psready98.pdf)), readiness should be flexibly and broadly defined taking into account multiple components including:

- A comprehensive set of skills (cognitive and non-cognitive);
- The teacher's and school's ability to meet the needs of all children, including a focus on reflective practice (learning environment, pedagogy, school structures);
- The family's readiness to share information and advocate for their child; and
- The community's readiness to provide services to ensure effective learning experiences.

The KEI provides a snapshot of skills captured at one single point in time, and should not be used in a high-stakes manner. Although the KEI only focuses on 30 standards-based indicators, it is important for programs to focus on a comprehensive standards-based approach to kindergarten readiness. The KEI and its resulting information can be utilized as a catalyst for meaningful discussions on all the components of readiness detailed above.

## Implementation

OCDEL, in partnership with the Pennsylvania Department of Education's Office of Elementary and Secondary Education, is implementing a phased deployment of the KEI. Phase 1 began with Cohort 1, which implemented the KEI in 2014, and included Title I schools designated in Focus and Priority status under the Elementary and Secondary Education Act. Focus schools meet any one or more of the following criteria: Title I schools with a graduation rate below 60 percent; schools not otherwise designated as a Priority school, but falling in the lowest 10 percent of Title I schools (excluding bottom 5 percent); or test participation below 95 percent. Priority schools are the lowest 5 percent of Title I schools (based on aggregate math and reading PSSA or Keystone scores) or Title I schools receiving School Improvement Grant (SIG) funds. Focus and Priority schools were required to use the KEI as part of their planning process for instructional improvements. In addition to these required schools, the KEI was also open for voluntary use to any interested local education agency or private kindergarten. Cohort 1 implementation included 707 teachers from 217 schools covering 21 districts. Approximately 16,000 child outcomes were collected. These numbers include Pennsylvania's largest school district, the School District of Philadelphia. A detailed summary of Cohort 1 can be accessed at on the [Kindergarten Entry Inventory](#) section of the Pennsylvania Department of Education Site.

Cohort 2 implemented the KEI in 2015, and included 285 schools. Nine-hundred and twenty teachers finalized approximately 21,091 outcomes. The tool was once again available for voluntary use in any interested classroom, school or district. Focus and priority schools were again required to implement the KEI as part of their school turn-around efforts. In addition, implementation was also required of schools partnering with Community Innovation Zones (CIZ). In 2014, the Office of Child Development and Early Learning (OCDEL) awarded 12 CIZ grants. An additional 38 grants were awarded in 2015. Grantees were awarded up to \$75,000 a year to strengthen and implement strategies within their communities to help reduce the achievement gap by grade 3. Specifically, grantees are required to work collaboratively with early childhood programs and local school districts to align their work around standards, family engagement and community partnerships.

In 2015, 17 of the 50 CIZ grantees implemented the KEI. The remaining 33 CIZ will implement in 2016. In order to support the CIZ over the next two years, OCDEL will provide targeted intervention and support around the KEI and use of data for decision-making, instruction and quality improvement. OCDEL has already received initial feedback regarding the incorporation of the KEI into the CIZ grant process and requirements:

*"The CIZ grant was a good opportunity to get a better understanding of the KEI. Our partnering school district needed more information about the KEI and we used the grant as a way to talk with them about it."* -2014 focus group participant

A complete listing of both Cohort 1 and Cohort 2 districts and schools is detailed in Appendix 1.

## Kindergarten Entry Inventory Cohort 2 Enhancements

Several components comprise the KEI process and include: awareness building; communication to Cohort participants; professional development; proficient user assignment; collecting evidence, conducting scoring, data entry, data finalization, and accessing and utilizing information. The process for KEI implementation was discussed in the Cohort 1 summary report, which can be accessed on the [Kindergarten Entry Inventory](#) section of the Pennsylvania Department of Education Site.

Cohort 2 implementation focused on significant enhancements in several of these areas.

### **Awareness Building:**

Outreach to key audiences continued in Year 2, and, as a result, the number of voluntary schools implementing the KEI tripled from Year 1. Use of peer-to-peer strategy was utilized to build awareness about the benefits of the KEI, its connectedness to effective instruction, and family and community engagement. In February 2015, a KEI promotional video was released. This collaborative video uses teachers, principals, and families involved in the 2014 Cohort 1 to promote use of the KEI. The video was integrated into all outreach and professional development conducted in 2015, and can be viewed by accessing the [KEI landing page](#).

Specific outreach efforts during 2015 targeted the Pennsylvania State Education Association (PSEA); Pennsylvania Association of School Administrators (PASA); Pennsylvania School Boards Association (PSBA); and Focus and Priority schools administration. Specifically efforts included:

- The creation of a PSBA-specific professional development module available to PSBA members through their designated learning management system;
- Presentations at PASA-PSBA annual conference in October 2015; and
- Integration of KEI into a special Pennsylvania Department of Education Standards Aligned System (SAS) professional development day for Focus and Priority school leaders in December 2015.

Awareness and recruitment trainings were conducted at typically scheduled events to “get the word out” about the KEI, to address misconceptions, and to potentially recruit participants. These occurred during the CIZ grantee meetings in November 2015 and during the four regional Governor’s Institutes in June and July 2015. The Institutes focused on P-3 alignment strategies, building collaborative partnerships, administrator and teacher effectiveness, P-3 instructional tools, strategies in systems change, instituting improvements in data-driven decision-making and family engagement. Each of the 62 participating teams consisted of up to eight members, who included, at minimum: a birth- to-5 administrator and practitioner and a kindergarten-to-grade-3 administrator and practitioner. Additional representation was added based upon community need and composition (e.g. librarian, curriculum specialist, higher education faculty, early intervention, business leader, family member, etc.). The goals of the Institute were for participants to strengthen partnerships between community and school district early childhood programs, build collaboration between community and school district early childhood programs within the community, apply a P-3 framework to early childhood settings, participate in the (P-3) Early Learning Community on SAS, and to engage in continuous improvement via implementation and sharing of strategies and programs that will enhance student achievement.

### **Communication to Cohort participants:**

Communication with participants was enhanced during Cohort 2 implementation due to feedback from Cohort 1 participants. The state team learned that implementation during Cohort 1 was most effective when a designated liaison was identified to share information between the state team and the implementing teachers. As such, a designated point of contact (POC) was a newly established requirement for Cohort 2. Systems enhancements that facilitated easier online communication were also added to the KEI data system, and included a dedicated list serve, and the inclusion of multiple levels of contact information within the system. In addition, the KEI landing page was further developed and messaged as the “one-stop shop” for KEI information. The [KEI landing page](#) includes a variety of public information related to the KEI; as well as the log-in required options for professional development and data entry. As the number of implementing schools continues to increase, effective communication will continue to present challenges. Communication strategies will continue to be enhanced in Cohort 3.

### **Professional Development:**

As part of Cohort 2 implementation, technical assistance and training was enhanced to build capacity to optimally use the KEI. This included an available asynchronous scoring and skill practice with a required proficient user assignment, the availability of extended face-to-face sessions, web-based systems training opportunities, and systems step-by-step guides by topic. The enhanced training can be accessed at the [KEI landing page](#). Professional development still presents a challenge, especially when implementing schools use the asynchronous module. It has been challenging to get a realistic picture if all of the nuances of an observation-based assessment are being implemented with fidelity. In order to address these challenges, additional information learned from face-to-face sessions was added to the professional development tab on the landing page. In addition, other viable options for professional development continue to be explored. During Cohort 2 success with recruitment and professional development was noticeable when partnerships were formed with existing professional development agencies such as Intermediate Units. Overcoming professional development challenges will continue to be a focus into Cohort 3, especially as we anticipate increasing the number of users.

### **Data Entry and Finalization:**

Due to data entry challenges that occurred during Cohort 1 implementation, enhancing our existing data system for Cohort 2 implementation was a significant focus during Year 2.

In 2015, a new data system was created for collecting KEI assessment data. The KEI database was created using new database development tools. The new system provided for more scalability, which was crucial, due to the anticipated growth in the number of users in 2015 and beyond. The change to a PHP/SQL model from the FileMaker Pro Instant Web publishing model (used in 2014) significantly reduced input latency (a lag in data entry time and response) issues experienced by users. The input latency went from minutes (using FileMaker) to milliseconds (using PHP/SQL). Using a PHP/SQL model allowed users to connect using their choice of browser software (Safari, Explorer, Chrome, Firefox) and did not face the same limitations or issues that the FileMaker Pro model faced. This new solution also allowed users to be able to connect to the database using IOS (iPhone, iPad) and Android -based devices. Finally, the cost of using PHP/SQL software is significantly less expensive than providing users with licensing through the FileMaker Pro model.

In addition, the 2015 version of the KEI system allowed users to change passwords without having to contact technical support which significantly reduced the number of calls for support staff compared to the 2014 version. Feedback from systems users during Cohort 2 has been very positive.

### **Accessing and Utilizing Information:**

During the 2015 Governor's Institutes, designated breakout sessions were designed in partnership with the Mid-Atlantic Comprehensive Center, OCDEL, and Governor Mifflin School District to address effective use of data. KEI data was used as the cornerstone of these sessions. A similar session was presented to focus and priority school leadership in December 2015.

A significant area of feedback from Cohort 1 participants dealt with the availability of reports from the KEI system. System enhancements during Cohort 2 provided easier, printable access

to teacher reports both at the child level and at the class level by indicator for instructional purposes. Directions were posted to the KEI landing page to assist teachers in understanding how to access these reports. In order to address the reporting needs at building, district, and community levels, OCDEL staff has engaged with implementing schools that have already been using KEI data within their data team meetings. The goal is to understand, from the end user perspective, how KEI data can be used in various decision-making processes.

In December 2015, the data system was enhanced to generate indicator level reports at the state, district, and building levels. A communication was sent announcing the availability of these reports along with a request to collect feedback on what other types of reporting options users might like from the system. Continuing into Year 3, this feedback, along with feedback from Community Innovation Zone (CIZ) teams will be utilized to inform the creation of other reporting features within the system. Access to useful reports and how KEI data can be used will be the major focus moving into Year 3.

## Next Steps

### Validation Study:

In addition to the analysis detailed above and within the available pilot reports, which occurred prior to RTT-ELC funding, Pennsylvania has contracted an external validation study which began in Year 2. The American Institute for Research (AIR), partnering with University of Pennsylvania, submitted a validity study plan in August 2015 with the following goals:

#### *Phase 1: Construct Validity Study*

- To provide validity evidence based on the associations between sets of KEI items to determine the degree to which they align with the five school readiness domains (i.e., [1] language and literacy; [2] mathematics; [3] social and emotional development; [4] approaches to learning; and [5] health, wellness, and physical development) or with other early learning domains
- To provide validity evidence of the extent to which the KEI can be used by educators as an equitable, unbiased indicator of the developmental status across multiple domains for *all* children in the Commonwealth of Pennsylvania, including those with special needs and dual language learners (DLLs)
- To provide evidence about the reliability of teacher reports in providing information on children's knowledge and skills across multiple domains in an effort to determine whether teachers are reliable reporters of children's knowledge and skills

#### *Phase 2—Path 1: Concurrent Validity and Usability Studies*

- To examine the concurrent relationship between the children's scores on the evidence-based domains of the KEI's items and their scores on domains of other established, independent measures of school readiness
- To determine the usability of the KEI for kindergarten teachers and examine teachers' level of satisfaction with and use of the KEI (e.g., are kindergarten teachers able to complete the KEI with minimal disruption of instruction and use the information to guide their instructional)

As outlined, the study will occur in two phases. Phase 1 will occur August 2015 through April 2016 and will include a rigorous construct validity study. Preliminary findings using 2014 outcomes were presented in September 2015. The summary of findings shows that there is an adequate overall sample size; as well as, adequate samples of subgroup populations. AIR will conduct additional construct validity analysis on both 2014 and 2015 outcomes until April 2016.



At this point, based on the results, a decision will be made on whether additional refinements to the KEI are necessary or if the tool meets construct validity standards and can move into Phase 2, a congruent study to occur in the fall of 2016.

### **Kindergarten Entry Inventory Resource Kits:**

Four regional workgroup sessions are planned for the summer 2016. These workgroups will bring together interested kindergarten teachers and administrative staff who were involved with Cohort 2 implementation to develop content for resource kits in order to enhance and support KEI implementation. The resource kits may include activities and materials to assist teachers in observing student skills behaviors, as well as instructing students based on the information gathered through KEI implementation. Activities may also be shared with prekindergarten teachers and families to promote student skill development.

Additional information about the KEI can be found on the [KEI landing page](#).

Questions about the KEI should be sent to [RA-PWOCDELKEI@pa.gov](mailto:RA-PWOCDELKEI@pa.gov).