

Stated Briefly

How kindergarten entry assessments are used in public schools and how they correlate with spring assessments



Stated Briefly

Katherine A. Shields

Kyle DeMeo Cook

Sara Greller

Education Development Center, Inc.

In collaboration with the Early Childhood Education Research Alliance

Using data from the Early Childhood Longitudinal Study, Kindergarten Class of 2010–11, this study examined how many public schools used kindergarten entry assessments and for what purposes. Overall, 73 percent of public schools offering kindergarten classes reported using kindergarten entry assessments. Among those schools, the most common purposes were to individualize instruction (93 percent), identify needs for additional testing (65 percent), and determine class placement (41 percent). Schools' use of kindergarten entry assessments was not correlated with student assessment scores in early reading or math in spring of the kindergarten year.

This brief summarizes the findings of 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). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Northeast & Islands. That report is available at <http://ies.ed.gov/ncee/edlabs/projects/project.asp?projectID=329>.



Institute of Education Sciences
U.S. Department of Education



Regional Educational Laboratory
At Education Development Center, Inc.

Why this study?

Child development research on the importance of early experiences for later life outcomes has underscored the need for effective early childhood education (Heckman, 2008; Rouse, Brooks-Gunn, & McLanahan, 2005). With the aim of providing high-quality education, many kindergarten programs use assessments at the time of entry to understand what students know and can do. When such assessments are well-planned, appropriately designed, and implemented with fidelity, they can inform teaching and program improvement, and contribute to better student outcomes (Snow & Van Hemel, 2008). As the number of states that require districts to administer kindergarten entry assessments grows (Stedron & Berger, 2010), state and district administrators are interested in how their peers around the country use these assessments (Center on Enhancing Early Learning Outcomes, 2014; Early Childhood Education Research Alliance, 2012). Given this interest, state administrators participating in the Regional Educational Laboratory Northeast & Islands Early Childhood Education Research Alliance requested this study for information as they implemented plans for statewide assessments.

Best practice guidelines for early childhood education assert the value of using data to guide instructional practice in general (Bredenkamp & Copple, 2009; Hamilton et al., 2009), yet there is limited empirical research linking the use of kindergarten entry assessment data with student learning outcomes. This study seeks to contribute to the limited literature on the relationship between use of kindergarten entry assessments and student early learning outcomes. Because the study draws on observational data, it cannot establish a causal link between use of kindergarten entry assessments and student outcomes. Instead, the analyses are intended to identify relationships that might be explored further with other datasets using a more rigorous experimental design. In addition, the study aims to provide important information to decisionmakers in the field about the landscape of the use of kindergarten entry assessments, based on a nationally representative sample of U.S. public schools.

What the study found

For the first and second research questions, descriptive analyses illustrated the characteristics of public schools that reported using kindergarten entry assessments, overall and for specific purposes. For the third research question, regression analyses examined the relationships between use of kindergarten entry assessments and student early learning assessment scores in reading and math.

Seventy-three percent of public schools reported using kindergarten entry assessments

The finding that 73 percent of schools in the study sample use kindergarten entry assessments corroborates the widespread implementation of kindergarten entry assessment policies reported in state administrator surveys (Shepard, Taylor, & Kagan, 1996; Stedron & Berger, 2010). However, by 2010/11, the proportion of public schools using kindergarten entry assessments had not increased much from the 69 percent reported in the Early Childhood Longitudinal Study, Kindergarten Class of 1998–99 (Prakash, West, & Denton, 2003).

Use of kindergarten entry assessments was not correlated with school characteristics

Schools using kindergarten entry assessments had characteristics similar to those of schools that did not. No statistically significant differences in overall use of the assessments were found based on urban or rural location, percentage of students eligible for the federal school lunch program, school enrollment size, the cutoff age for kindergarten, the percentage of students who are racial/ethnic minority students, and whether the school offered full-day kindergarten.

Box 1. Research questions and sample

Using data from the Early Childhood Longitudinal Study, Kindergarten Class of 2010–11 (National Center for Education Statistics, 2011a), this study addressed three research questions:

- What percentage of public schools offering kindergarten classes administer a kindergarten entry assessment to children, and how does the percentage vary by school characteristics?
- How are kindergarten entry assessments used in education decisionmaking at public schools, and how does the practice vary by school characteristics?
- Is the use of kindergarten entry assessments—overall and for specific purposes—correlated with student assessment scores in early reading and math in spring of the kindergarten year?

The study used data collected from 640 public schools (including public charter schools) nationwide that reported on their use of kindergarten entry assessments, and 9,370 kindergarten students attending those schools. School administrators were asked whether their schools used kindergarten entry assessments for any of six specific purposes (National Center for Education Statistics, 2011b):

- “To determine eligibility for enrollment when a child is below the cutoff age for kindergarten.”
- “To determine children’s class placements.”
- “To identify children who may need additional testing (for example, for a learning problem).”
- “To help teachers individualize instruction.”
- “To support a recommendation that a child delay entry for an additional year.”
- “Other uses.”

Because the survey instrument did not define these terms, administrators may have interpreted them in different ways. The dataset does not provide further information about the types of kindergarten entry assessment instruments, implementation methods, how results were applied, or elaboration on what “other” uses included. The survey did not ask about other forms of assessment that a school might use with kindergarten students, such as ongoing progress monitoring. Also, the Early Childhood Longitudinal Study, Kindergarten Class of 2010–11, data analyzed here were collected before the Common Core State Standards that cover kindergarten were adopted and before many states developed assessment systems with funding from Race to the Top–Early Learning Challenge grants starting in 2011.

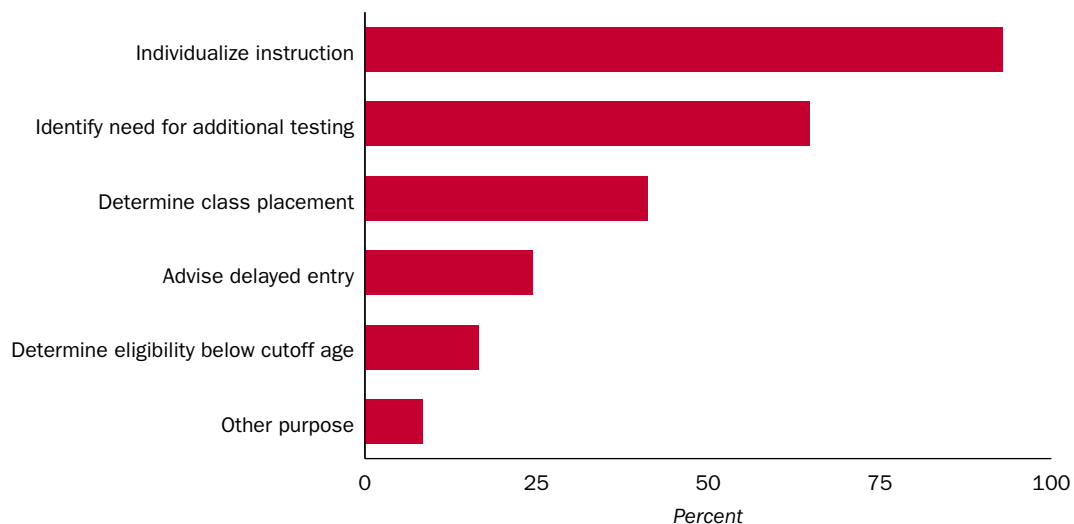
In addition to descriptive statistics, regression analyses were used to analyze the relationship between kindergarten entry assessment use and scores on early learning assessments in reading and math administered to all students as part of the Early Childhood Longitudinal Study, Kindergarten Class of 2010–11, after the analysis controlled for student and school characteristics.

Individualizing instruction was the most commonly reported purpose among public schools that used kindergarten entry assessments (93 percent), and 80 percent used the assessments for multiple purposes

Almost all public schools that administered kindergarten entry assessments reported using them to individualize instruction (93 percent). Identifying students who needed additional testing was the second most commonly selected purpose (65 percent). Users of kindergarten entry assessments also said that they used them for one or more purposes related to enrollment: to determine class placement (41 percent), to advise parents about delayed entry (24 percent), and to determine eligibility for students whose age fell below the cutoff (16 percent; figure 1).

Most public schools used kindergarten entry assessments for multiple purposes (figure 2). Eighty percent of schools using the assessments reported more than one purpose: 61 percent said that they used assessments for two or three purposes, and 19 percent said that they used assessments for four to six purposes. Users of kindergarten entry assessments combined the most common purpose—individualizing instruction—with

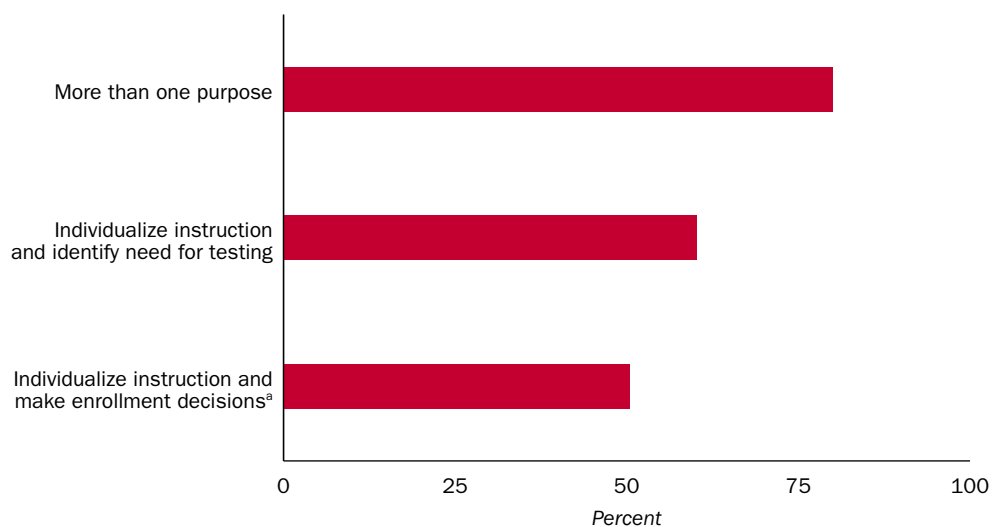
Figure 1. Individualizing instruction was the most commonly reported purpose among public schools that used kindergarten entry assessments, 2010/11



Note: $n = 470$. Percentages were estimated using sampling weights and accounting for the complex sampling structure of the survey. Unweighted sample size is reported, rounded to the nearest 10 to avoid disclosure of confidential information. Public schools not providing information about use of kindergarten entry assessments (10.5 percent) were excluded. Respondents could select more than one purpose.

Source: Authors' analysis based on data from the National Center for Education Statistics Early Childhood Longitudinal Study, Kindergarten Class of 2010–11.

Figure 2. Most public schools that used kindergarten entry assessments did so for multiple purposes, 2010/11



Note: $n = 470$. Percentages were estimated using sampling weights and accounting for the complex sampling structure of the survey. Unweighted sample size is reported, rounded to the nearest 10 to avoid disclosure of confidential information. Public schools not providing information about use of kindergarten entry assessments (10.5 percent) were excluded.

a. Enrollment decisions include determining class placement, advising delayed entry, and determining eligibility below cutoff age.

Source: Authors' analysis based on data from the National Center for Education Statistics Early Childhood Longitudinal Study, Kindergarten Class of 2010–11.

other goals: 60 percent reported both identifying testing needs and individualizing instruction, and 50 percent reported using assessments for both enrollment decisionmaking and individualizing instruction.

None of the reported purposes of kindergarten entry assessments was correlated with student early learning assessment scores in reading or math in spring of the kindergarten year

After the analysis controlled for student characteristics such as race/ethnicity and family socioeconomic status and school characteristics such as enrollment size and urban or rural location, use of kindergarten entry assessments overall was not correlated with students' spring early learning scores in either reading or math on an assessment administered as part of the Early Childhood Longitudinal Study, Kindergarten Class of 2010–11. Furthermore, none of the six specific purposes of the entry assessments was correlated with these student outcomes. The absence of a relationship between use of kindergarten entry assessments—overall and for specific purposes—and student outcomes was found across students and public schools with different characteristics. Schools reporting no use of kindergarten entry assessments may nevertheless use other forms of assessment during the kindergarten year; information about student assessments administered later in the school year was not collected.

Implications of the study findings

The findings from this study indicate that nearly three-quarters of public schools use kindergarten entry assessments. The study gives administrators a high-level view of how their peers across the country report using the assessments. However, several questions remain for further research regarding the validity and quality of kindergarten entry assessments and the contexts in which the assessments are used.

Individualizing instruction remains the most frequently cited purpose of kindergarten entry assessments

This study confirms individualizing instruction as the most commonly stated purpose of kindergarten entry assessment, as previously reported by states and schools (Prakash et al., 2003; Stedron & Berger, 2010). Although actual practices within schools may vary, at a minimum these findings signal to early childhood education administrators that most schools are pursuing the goal of assessment-informed instruction at the start of the kindergarten year. A future study could examine the guidance and training that schools give teachers for using kindergarten entry assessment results, how teaching practices change in response to assessment data, and how these practices relate to student outcomes.

Schools may need guidance on appropriate uses of kindergarten entry assessments that do not result in denying entry to eligible children

Delaying kindergarten entry for eligible children has been linked to negative effects for their learning (Bassok & Reardon, 2013), and the Race to the Top–Early Learning Challenge grant application cautions against using kindergarten entry assessments to prevent children's entry into kindergarten (U.S. Department of Education, 2011). This study found that 24 percent of schools reported using kindergarten entry assessments to support a recommendation that a child delay entry for an additional year. Although the specific practices at these schools are unknown, when states and districts develop policies for using kindergarten entry assessments, they may consider educating schools about appropriate uses of assessment results during the enrollment process.

Schools may need guidance on selecting and using appropriate instruments for different purposes as part of the kindergarten entry assessment process

Among public schools that used kindergarten entry assessments, the majority (80 percent) indicated that they did so for two or more purposes. Because school administrators who were surveyed as part of the Early Childhood Longitudinal Study, Kindergarten Class of 2010–11, were limited to selecting among six purposes with no explicit definitions or additional detail for each purpose, it is not possible to ascertain how schools in the study actually used kindergarten entry assessments in their classrooms. Given that most schools are attempting to meet multiple objectives through their use of kindergarten entry assessments, district and state administrators may consider providing guidelines and training to ensure the appropriate use of assessment instruments. Future research drawing on more specific teacher and school data could investigate which assessment instruments schools use, which domains they assess, and what policies differentiate the use of separate instruments for distinct purposes.

Future research could examine variation in the fidelity and quality of kindergarten entry assessment implementation

In theory the impact of kindergarten entry assessments on student achievement depends on several components working together successfully. The assessment must provide valid, reliable information about the student's strengths and weaknesses; it must be administered correctly; teachers must interpret the results accurately; teachers must continue to monitor student progress throughout the year to track the rapid, often nonlinear development typical of young children; and teachers must respond to the results of entry and subsequent assessments with appropriate, effective instruction and interventions. Given that implementation data are not included in the Early Childhood Longitudinal Study, Kindergarten Class of 2010–11, future studies could gather information about the fidelity and quality of kindergarten entry assessment administration, interpretation, and use of data.

Further information about the presence or absence of a comprehensive assessment system in each state would provide important context for results

According to best practice guidelines in the field, kindergarten entry assessments work best as part of a comprehensive system that includes clearly articulated standards, measures of specific content areas within those standards, practices that respond to assessment findings, and monitoring of progress on achieving the standards (Center on Enhancing Early Learning Outcomes, 2014; Snow & Van Hemel, 2008). Further analysis could use more recent data, collected since the Common Core State Standards and new assessments were implemented, to examine the extent to which schools align kindergarten entry assessments with state learning standards and to what degree a more comprehensive system of articulated standards, assessments, and practices facilitates effective use of these assessments. Because many states have policies dictating the instrumentation and purposes of kindergarten entry assessments, research drawing on a sample that is representative at the state level (unlike the Early Childhood Longitudinal Study, Kindergarten Class of 2010–11) could inform these questions.

References

- Bassok, D., & Reardon, S. F. (2013). "Academic redshirting" in kindergarten: Prevalence, patterns, and implications. *Educational Evaluation and Policy Analysis*, 35(3), 283–297. <http://eric.ed.gov/?id=EJ1015022>
- Bredenkamp, S., & Copple, C. (2009). *Developmentally appropriate practice in early childhood programs (3rd ed.)*. Washington, DC: National Association for the Education of Young Children. <http://eric.ed.gov/?id=ED510265>
- Center on Enhancing Early Learning Outcomes. (2014). *Fast fact: Information and resources on developing state policy on kindergarten entry assessment (KEA)*. New Brunswick, NJ: Author. <http://eric.ed.gov/?id=ED555719>
- Early Childhood Education Research Alliance. (2012). *Research agenda 2012–2016*. Waltham, MA: Regional Educational Laboratory Northeast & Islands at EDC. Retrieved April 15, 2015, from <http://www.relnei.org/wp-content/uploads/2012/12/ECEA-Research-Agenda.pdf>.
- Hamilton, L., Halverson, R., Jackson, S., Mandinach, E., Supovitz, J., & Wayman, J. (2009). *Using student achievement data to support instructional decision making* (NCEE No. 2009–4067). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance. <http://eric.ed.gov/?id=ED506645>
- Heckman, J. J. (2008). Schools, skills, and synapses. *Economic Inquiry*, 46(3), 289–324. <http://eric.ed.gov/?id=ED387210>
- National Center for Education Statistics. (2011a). *ECLS–K:2011 restricted-use kindergarten–first grade data file and electronic codebook*. Washington, DC: U.S. Department of Education, Institute of Education Sciences.
- National Center for Education Statistics. (2011b). *Spring 2011 kindergarten school administrator questionnaire*. Washington, DC: U.S. Department of Education, Institute of Education Sciences.
- Prakash, N., West, J., & Denton, K. (2003). *Schools' use of assessments for kindergarten entrance and placement 1998–99* (Statistics in Brief). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics. <http://eric.ed.gov/?id=ED476810>
- Rouse, C., Brooks-Gunn, J., & McLanahan, S. (2005). Introducing the issue. *The Future of Children*, 15(1), 5–14.
- Shepard, L. A., Taylor, G. A., & Kagan, S. L. (1996). *Trends in early childhood assessment policies and practices*. Washington, DC: U.S. Department of Education, Office of Educational Research and Improvement, Center for Research on Evaluation, Standards, and Student Testing.
- Snow, C. E., & Van Hemel, S. B. (2008). *Early childhood assessment: Why, what, and how*. Washington, DC: The National Academies Press. <http://eric.ed.gov/?id=ED555247>
- Stedron, J., & Berger, A. (2010). *NCSL technical report: State approaches to school readiness assessment*. Denver, CO: National Conference of State Legislators. Retrieved February 16, 2012, from <http://www.ncsl.org/documents/Educ/KindergartenAssessment.pdf>.

U.S. Department of Education. (2011). Race to the top: Early learning challenge application for initial funding. Washington, DC: Author. Retrieved July 10, 2015, from <http://www2.ed.gov/programs/racetothetop-earlylearningchallenge/applicant-phase-1.html>.

The National Center for Education Evaluation and Regional Assistance (NCEE) conducts unbiased large-scale evaluations of education programs and practices supported by federal funds; provides research-based technical assistance to educators and policymakers; and supports the synthesis and the widespread dissemination of the results of research and evaluation throughout the United States.

October 2016

This report was prepared for the Institute of Education Sciences (IES) under Contract ED-IES-12-C-0009 by Regional Educational Laboratory Northeast & Islands administered by Education Development Center, Inc. The content of the publication does not necessarily reflect the views or policies of IES or the U.S. Department of Education, nor does mention of trade names, commercial products, or organizations imply endorsement by the U.S. Government.

This REL report is in the public domain. While permission to reprint this publication is not necessary, it should be cited as:

Shields, K. A., Cook, K. D., & Greller, S. (2016). *Stated Briefly: How kindergarten entry assessments are used in public schools and how they correlate with spring assessments* (REL 2017–183). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Northeast & Islands. Retrieved from <http://ies.ed.gov/ncee/edlabs>.

This report is available on the Regional Educational Laboratory website at <http://ies.ed.gov/ncee/edlabs>.

The Regional Educational Laboratory Program produces 7 types of reports

	Making Connections Studies of correlational relationships
	Making an Impact Studies of cause and effect
	What's Happening Descriptions of policies, programs, implementation status, or data trends
	What's Known Summaries of previous research
	Stated Briefly Summaries of research findings for specific audiences
	Applied Research Methods Research methods for educational settings
	Tools Help for planning, gathering, analyzing, or reporting data or research