

Research Brief – November 2019

Overview

This research brief summarizes the findings from *Transitional Kindergarten vs. Prekindergarten: A Fuzzy Regression Discontinuity Analysis of Student Literacy Skills*, by Christopher Doss¹. Prior to the implementation of San Francisco Unified School District's (SFUSD) Transitional Kindergarten (TK) program, children were eligible for Kindergarten if they turned five years on, or before, December 2nd. Educational stakeholders in the state were concerned that the youngest children enrolled were not developmentally ready for the academic demands of Kindergarten. Beginning in the 2012-2013 school year, the cutoff date for Kindergarten was gradually moved to September 2, and children who turned five years between September 2nd and December 2nd were eligible for Transitional Kindergarten. This extra year of Kindergarten was meant to provide a more developmentally appropriate curriculum for these younger children.²

In 2004, San Francisco residents voted to fund Universal Pre-Kindergarten (pre-K) for four-year-olds in the city. This study compares the academic outcomes of students who were eligible for TK to students who were only eligible for San Francisco's pre-K services.

Methodology

This study estimated the causal effect of the TK program in the 2013–14 and 2014–15 school years, the first two years of operation. The study compared children who turned five years on, or just before, December 2nd, and were eligible for TK, to children born on, or just after, December 3rd, and were eligible only for pre-K services. Both sets of children (N=6,739) entered the same Kindergarten classrooms in the following academic year. The researchers used SFUSD administration data relating to TK and pre-K enrollment, student characteristics, and absences. They analyzed the fall kindergarten and the fall first grade administrations of the Fountas and Pinnell Benchmark Assessment System (BAS) and the California English Language Development Test (CELDT). The BAS measures student pre-literacy skills and reading levels. The CELDT is given to all students whose families do not speak English at home and measures reading, listening, speaking, and writing.

Findings

- 1. Students who have previously experienced Transitional Kindergarten (TK) outperformed their peers on the foundational literacy skills in kindergarten.**
 - When the BAS foundational skills were aggregated, TK-eligible students missed approximately nine and a half fewer items than their peers, representing a 16.5 percent decrease from the approximate 56 items missed for the TK-ineligible students.
 - There were similar drops in items missed in individual skills, including upper case letters, lower case letters, letter sounds, high frequency words, early literacy behaviors, and rhyming.
- 2. TK-eligible ELL students saw large literacy benefits as measured on the CELDT.**
 - Overall, TK-eligible ELL students performed 0.161 standard deviation higher than their TK-ineligible counterparts ($p < 0.05$).

¹ Doss, C. (2019). How much regulation? A fuzzy regression discontinuity analysis of student literacy skills in prekindergarten vs. Transitional Kindergarten, *Education Finance and Policy*, 14(2), 178-209.

² Starting in 2015–16, children who turn five after December 2nd, 2015, and before the end of school year can either enter TK at the time they turn five, or start TK at the beginning of the school year.

3. **There is some evidence that minority children experience the greatest benefits from TK.**
 - Kindergarten advantages in the BAS are seen in both genders as well as the TK-eligible Asian, Hispanic, and ELL subgroups.
 - There is some indication that the Asian subgroup of TK-eligible students benefited the most, with missing 31.5 percent fewer items on the BAS than their peers.
4. **A different pattern emerged when students entered the first grade.**
 - TK-improved pre-literacy skills did not affect children's ability to read more complex books in first grade, as measured by the BAS. This was true for all students as well as for children of ethnic and language subgroups.
 - TK-eligible ELL students continued to outperform their peers on the CELDT in first grade.
5. **TK had no effect on absences except for the Asian sub- group in kindergarten.**
 - The TK-eligible Asian sub-group in Kindergarten was absent less often (1.2 fewer days).
 - There were no significant differences in absences in the first grade.

Policy Implications

TK and pre-K have different characteristics and offer different programs to students. There are two unique characteristics of the TK program that the author suggests might contribute to the gains in pre-literacy skills in TK-eligible students as measured by the BAS and CELDT in kindergarten and CELDT performance in first grade.

1. TK is part of the larger K-12 system, while pre-K operates outside that system. Pre-K programs operate within multiple sectors, funded with both private and public dollars. As part of the K-12 system, TK programs are uniformly regulated. This regulation likely *increased the compensation and educational qualifications of teachers and decreased variation in the quality of experiences for students*. This potentially helped children who might have attended lower-quality pre-K if TK had not been available to them.
2. TK consistently offers a more academically oriented curriculum than pre-K, as all programs are required to implement the same curriculum and instructional focus. The curriculum contains less student-directed learning and playtime than other pre-K programs and is less structured and academic than kindergarten. Moreover, the TK curriculum and classroom practices are structured to be similar to those of kindergarteners. There is debate among practitioners and researchers as to whether a play-oriented or academic approach to learning in early childhood education is best for children. Some practitioners and researchers are concerned that academic instruction may come at the expense of other child development outcomes such as social-emotional skills.

Since this study was completed, SFUSD has implemented Extended TK. Starting in 2015–16, children who turn five after December 2nd, 2015, and before the end of school year, can either enter TK at the time they turn five, or start TK at the beginning of the school year. Additional research would be needed to determine if students would benefit from extending TK to all four-year-olds and to whether the TK curricula are appropriate for younger children.