2/13/2017

Prekindergarten Outcomes for Texas Public School Students

Texas Education Agency

Schweinhart et al., 2005; Temple & Reynolds, 2007). Results from the current investigation were in line with previous research.

Researchers are continuing to investigate the mechanisms through which prekindergarten effects are sustained, and there is some evidence that the positive effects of high-quality prekindergarten programs can be lasting when student achievement is fostered by family and school support (Temple & Reynolds, 2007). Indeed, given the length of time between prekindergarten and high school or adulthood, there are likely outside factors that either build on or account for the effects of prekindergarten attendance over time, which may explain why long-term results have varied across studies. For example, there may be a rec.4(o)-14Rrc-4.4(s)-1.re alt lre a2-1.1(r)2.3(e)3(x)1a4ncs cwe

Methodology

Overview

This section describes the steps that were followed to inform research questions of interest regarding the effects associated with attending public prekindergarten in Texas.

The primary focus of this analysis was on students who were eligible to attend prekindergarten and either attended (treatment) or did not attend (comparison) TPS prekindergarten. To examine differences between treatment and comparison groups, three separate cohorts of students were tracked, each with slightly different academic outcomes. The longest cohort ("2000 Cohort") tracked students through the second year of college and examined TAKS test performance in Grades 3 and 7, dropout and graduation rates, and college enrollment and persistence rates. The shorter cohort ("2011 Cohort") tracked students through Grade 3 and examined Early Reading Indicator (ERI) scores in Grades 1 and 2 and Grade 3 STAAR test performance. The shortest cohort ("2015 Cohort") tracked students through kindergarten and examined kindergarten readiness. The analyses also examined whether the effects of prekindergarten attendance on standardized tests differed at high- versus low-performing campuses and urban versus non-urban campuses.

Building the cohorts

Three closed cohorts were constructed:

1. Prekindergarten to 2nd Year in College – "2000 Cohort" – 1999–00 to 2014–15
2. Prekindergarten to Grade 3 – "2011 Cohort" – 2010–11 to 2014–15
3. Prekindergarten to Kindergarten – "2015 Cohort" – 2014-15 to 2015-16

Three separate closed cohorts were built to assess the different outcome variables of interest, as they were not all available to any single cohort. For example, ERI data were not available in the 2000 Cohort, and kindergarten readiness data were neither available in the 2000 nor the 2011 Cohorts. Eligibility status was determined for the treatment and comparison groups using data from their earliest year of school attendance. In other words, eligibility status for those who attended TPS prekindergarten was based on attendance data from their prekindergarten year, while eligibility status for those who did not attend TPS prekindergarten was based on attendance data from their kindergarten year.

A closed cohort refers to s-1.4(r)3.4(e)4.1(f)2.7rten

Determining Prekindergarten Eligibility

Prekindergarten eligibility status was determined differently for the 2000 Cohort than the 2011 and 2015 Cohorts. When prekindergarten programs were first introduced in the 1980s, eligibility was based on *low family income* and *limited English proficiency*. Additional eligibility criteria have been added over the years, such that the 2011 and 2015 cohorts also incorporate *homelessness* and being a child *in foster care* or *of an active duty member of the armed forces* to determine eligibility. It also should be noted that in the 2011 Cohort, two eligibility variables – *child of an active duty member of the armed forces* and *child in foster care* -- were only available in prekindergarten enrollment data; therefore, eligibility status for students who did not attend prekindergarten did not include those criteria. The variables *child of an active duty member of the armed forces* and *child in foster care* were, however, available for both years of the 2015 Cohort. The table below summarizes the variables used to determine eligibility for each grade and cohort.

	Did Not Attend Prekindergarten	**Attended Prekindergarten**
2000 Cohort	Econ, LEP	Econ, LEP
2011 Cohort	Econ, LEP, Homelessness	Econ, LEP, Homelessness, Military, Foster
2015 Cohort	Econ, LEP, Homelessness, Military, Foster	Econ, LEP, Homelessness, Military, Foster

Table M.1 compares the demographics of prekindergarten eligible students who attended prekindergarten with those who did not attend for the three cohorts. Students who attended prekindergarten were demographically similar to those who did not attend, with only a few differences. Students who attended prekindergarten were slightly more likely to be Hispanic and English Language Learners, and slightly less likely to be White, than their peers who did not attend, particularly in the 2011 and 2015 Cohorts.

Table M.1
Students Eligible for Prekindergarten by Race/Ethnicity, Student Characteristics, and

Identifying Campuses within Urban Districts

To examine whether school district location influenced the effects of prekindergarten, students were classified as attending campuses within urban or non-urban districts using the agency's District Type data. Ten districts were identified as *major urban*; all others were identified as non-urban.

For the 2000 Cohort, students were classified based on the district they attended during the year they took the TAKS test, regardless of their prekindergarten or kindergarten district location. In contrast, for the 2011 Cohort,

Limitations

The current study has several limitations that affect the rigor of the study and subsequen.3(d)-26n

2015 cohort, but it cannot be assumed that such effects would have been observed had the data been available to be examined for the other cohorts.

Results

2015 Cohort

Kindergarten- Readiness Results

Table R.1
Kindergarten Readiness by Exam and Prekindergarten Attendance, Eligible Prekindergarten Students, 2015 Cohort

	Did Not Attend Pre -K		Attended Pre -K	
Status	Students	Percentage (%)	Students	Percentage (%)
ISIP-ER				
Kindergarten-ready	13,			

2011 Cohort

Grade 2 Results, Early Reading Indicator (ERI)

Table R.6
Early Reading Performance by Prekindergarten Attendance , Eligible Prekindergarten Students, Grade 2, 2011 Cohort

	Did Not Attend Pre -K	Attended Pre -K

2011 Cohort

Grade 3 STAAR Results, Overall

Table R.8
STAAR Mathematics and Reading Performance by Prekindergarten Attendance, Eligible Prekindergarten Students, Grade 3, 2011 Cohort

	Did Not Attend Pre-K			Attended Pre-K		
TAKS Test	Students	Mean Scale Score	Percent Passing	Students	Mean Scale Score	Percent Passing
Math	50,878	1421	71.3	155,648	1426	

2011 Cohort

Grade 3 STAAR Results, Campuses within Urban Districts

Table R.12
STAAR Mathematics and Reading Performance by Pre-K Attendance within Campuses in Urban Districts, Eligible Prekindergarten Students, Grade 3, 2011 Cohort

Did Not Attend Pre-K	Attended Pre-K

2000 Cohort

Grade 3 TAKS Results, Overall

Table R.16
TAKS Mathematics and Reading Performance by Pre- K Attendance, Eligible Prekindergarten Students, Grade 3, 2000 Cohort

	Did Not Attend Pre -K		Attended Pre -K	
TAKS Test	Students	Mean Scale Score	Percent Students	

2000 Cohort
Grade 3

2000 Cohort

Grade 7 TAKS Results, Low/High Performing Schools

Table R.22
TAKS Mathematics and Reading Performance by Pre- K Attendance and Campus Performance, Eligible Prekindergarten Students, Grade 7, 2000 Cohort

	Did Not Attend Pre -K			Attended Pre -K		
TAKS Test	Students	Mean Scale Score	Percent Passing	Students	Mean Scale Score	Percent Passing
Math High Performing	28,382	2215.6				

2000 Cohort

Grade 3 TAKS Results, Campuses within Urban Districts

Table R.24
TAKS Performance by Pre-K Attendance within Campuses in Urban Districts, Eligible Prekindergarten Students, Grade 3, 2000 Cohort

	Did Not Attend Pre-K			Attended Pre-K		
TAKS Test	Students	Mean Scale Score	Percent Passing	Students	Mean Scale Score	Percent Passing

2000 Cohort
Grade 7 TAKS Results, Campuses within Urban Districts

Table

2000 Cohort
Grade 3 TAKS Results, Performance/ Campuses within Urban Districts

Table R.

2000 Cohort

Grade 7 TAKS Results, Performance/ Campuses within Urban Districts

Table R.30
TAKS Mathematics and Reading Performance by Pre- K Attendance and Campus Performance within Campuses in Urban Districts , Eligible Prekindergarten Students, Grade 7, 2000 Cohort

	Did Not Attend Pre -K			Attended Pre-K		
TAKS Test	Students	Mean Scale Score	Percent Passing	Students	Mean Scale Score	Percent Passing
Math High Performing	5,060	2220.8	78.8	8,238	2226.1	80.1

2000 Cohort

High School Graduation and Dropout, College Enrollment, and College Persistence Results

Table R.32
High School and Postsecondary Outcomes by Pre -K Attendance, Eligible Prekindergarten Students, 2000 Cohort

	Did Not Attend Pre-K N = 49,521		Attended Pre-K N = 92,017	
Outcome	Students	Percentage (%)	Students	Percentage (%)
Dropped out	4,462	9.0	6,495	7.1
Graduated	32 719			

Supplemental Analyses

2000 Cohort

Grade 5 TAKS Results, Overall

We received an additional data request to investigate the Grade 5 TAKS performance of prekindergarten eligible students who attended prekindergarten versus those who did not attend. Given the similarity of this request to the data already presented in this report, we are presenting the results here. Grade 5 TAKS results were similar to other resuCID 0 >tf2(n)-9.4(g)5(o) 7up30Jb3CAKSt(r re[(t)-14.w 0 di)5.8()4.780e sie porm re[(t);peeke ntekc ne re[(t)-14.w