

PUBLIC PRE-K SUPPLY & DEMAND IN BEXAR COUNTY

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EXECUTIVE SUMMARY

This study is part of a larger ongoing effort to identify San Antonio's progress in expanding access to high-quality pre-k throughout the larger San Antonio community. In this inaugural study, researchers investigated five major questions:

1. Have more children enrolled in public pre-k in Bexar County?
2. Has there been growth in the share of Bexar County children who enrolled in free public pre-k relative to those who were eligible?
3. What effort has been made to increase access to public pre-k by Bexar County school districts and charter schools?
4. Have more children enrolled in high-quality public pre-k?
5. To which school system do students of Pre-K 4 SA matriculate?



KEY FINDINGS



From 2001 to 2020, the number of Bexar County children enrolled in public pre-k nearly doubled.



The percent of first graders who were eligible for public pre-k in Bexar County and who enrolled increased from 49 percent in 2010 to 58 percent in 2020, with a peak of 61 percent in 2016.



Bexar County lacks communitywide indicators of high-quality pre-kindergarten that are regularly collected and used to inform practice, planning, and communitywide coordination.



Existing research has identified two San Antonio organizations that have met at least 8 out of 10 high-quality, national standards for public pre-k: Pre-K 4 SA and San Antonio ISD. In the last year of this study, these programs were found to educate 43 percent of all public pre-k students in Bexar County.



The public pre-k coverage ratio varied by school district and charter network, ranging from 0% to 74%.



Only 3 out of 16 public school systems studied offered half-day pre-k: Northside ISD and the charter networks of Harmony Science Academy and George Gervin Academy.



Only 2 out of 16 public school systems studied are growing their pre-k population by an annual average of 2%, covering 60% of eligible students, and offering full-day pre-k: ISDs of Harlandale and Southside.

POLICY RECOMMENDATIONS

The key findings suggest that local efforts to expand access to public pre-k are succeeding but there is still room for improvement. Researchers have developed three recommendations to improve access and quality of public pre-k in Bexar County:



- 1. All school systems should offer full-day public pre-k. Half-day programs require working parents, who make up 82% of all parents (Livingston, 2018), leave their place of work and transport their children to a second education and care provider, a process that is impractical and costly.**



- 2. Resources should be dedicated to the development of an instrument for observing the quality of public pre-k programs in the San Antonio region. This instrument should be tailored to meet the needs of San Antonio, which has a meaningful share of English language learners, a growing demand for dual language programs, and a unique policy context. It should produce information that prioritizes the needs of early educators, while being of value for policymakers and administrators. Finally, the instrument should be easy to deploy and not intrude on the practice of educators.**



- 3. School systems should seek out partnerships that will help them address organizational weaknesses. For example, San Antonio ISD has partnered with Head Start to use their door-to-door outreach to generate increased enrollment in all their early education programs while North East ISD used grant funding from Pre-K 4 SA to begin offering full-day pre-k and improve the professional development available to their early educators.**

INTRODUCTION

Early childhood education (ECE)—which includes prekindergarten—has represented an investment in children and their communities. Its payoff has been found in greater academic achievement and social and economic opportunity for participating students. It has also paid off in terms of community benefits such as lower crime, higher tax revenue, and lower dependence on government services. For children from disadvantaged backgrounds, ECE has served as a means of mitigating the negative consequences of childhood poverty (Barnett, 1998; Campbell et al., 2002; Heckman et al., 2010; Magnuson & Shager, 2010). However, regardless of family circumstances, ECE programs have been rigorously studied and found to be effective.

Research from numerous disciplines has produced consistent evidence that high-quality preschool gives children a strong start at school and in life. Bailey et al. (2017) found that ECE programs—based on data from 67 preschool programs—generally yielded positive effects on the learning and development of young children with an averaged effect size of 0.23 standard deviations (SD)¹ at the end of the programs. In addition, Barnett et al. (2018) examined the effects of eight state-funded preschool programs and showed that participating children had higher test scores in language, math, and literacy by averaged

¹ The What Works Clearinghouse of the US Department of Education serves as the repository of “gold-standard” evidence for education interventions. It holds that “effect sizes of 0.25 standard deviations or larger are considered to be substantively important.” (WWC, 2017; p.14).



effect sizes of 0.24, 0.44, and 1.10 SD, respectively. Moreover, English language learners (ELLs) and children from low-income families tended to experience larger improvements in academic skills and self-regulation (Ansari et al., 2021). Additional evidence can also be found in the work of Barnett et al. (2013), Frede et al. (2009), and Ladd et al. (2014), revealing small to modest positive effects on reading and math test scores as well as reductions in the incidence of retention and special education. Finally, Heckman et al. (2010) found that the Perry Preschool project generated estimated return to society between about \$7 and \$12 for each \$1 invested. The returns from Perry Preschool to society accrued from decreased expenditures in the juvenile and criminal justice system, decreased special education costs, increased tax revenues from higher incomes, and decreased reliance on government assistance. In sum, the weight of scientific evidence has found that high-quality preschool produces a significant and meaningful return on investment that benefits the lives of participating children, their families, and their communities.

Such findings have motivated the expansion of publicly funded preschool programs in the United States. From 2005 to 2019, preschool enrollment rates increased by 5 percent. By the school year ending in 2019, 5 million children had enrolled in preschool (McElrath et al., 2021).

Unfortunately, there is growing evidence that initial gains children make because of participation in preschool may diminish or disappear after preschool ends (Bailey et al. 2017; Durlak et al., 2011; Yoshikawa et al., 2016). Other research asserts that the ability of preschool programs to yield sizable and long-lasting impacts on children's developmental and educational outcomes rests heavily on the quality of the programs (Magnuson et al., 2006; Weiland et al., 2013; Valentino, 2017).

Diminishing effects over time due to low quality preschool should be a concern to policymakers and parents. According to the State of Preschool 2019, most of America's young children are not attending high-quality preschool programs (Friedman-Krauss et al., 2020). The National Institute for Early Education Research (NIEER) defines 10 quality standards as the minimum requirements for effective preschool education. (See Table 1 for explanation of NIEER standards.) Unfortunately, only 8 percent of children enrolled in state-funded preschool programs met 9 or 10 quality standards; while almost 40 percent of children were served in programs that met 4 or fewer quality standards. Closer to home, Texas' public prekindergarten programs were found to meet only three of the 10 high-quality standards. There were only three states - Florida, North Dakota, and Alaska - that met less than three standards (Friedman-Krauss et al., 2020).

TABLE 1: NIEER PRE-K QUALITY POLICY BENCHMARKS

POLICY BENCHMARK	DESCRIPTION	WHY IT MATTERS
Learning goals	Comprehensive early learning and development standards to guide teaching and assessment	Programs need clear and appropriate goals explaining what children are expected to know and be able to do when they complete Pre-K.
Curriculum supports	Guidance for choosing and using content-rich curriculum	Programs should use curricula designed for young learners that focus on language, literacy, mathematics, science, and social-emotional development.
Teacher education level	Lead teachers required to have a bachelor's degree	Teachers with higher education levels generally provide higher quality learning environments for children.
Teacher specialized training	Lead teacher has specialized training for teaching Pre-K	Teachers need to understand how to teach young children in ways that are consistent with a child's learning and development.
Assistant teacher education	Assistant teacher has a formalized entry-level credential such as the Child Development Associates	All members of a teaching team influence classroom quality, so assistants should hold at least an entry-level qualification for teaching young children.
Professional development	Ongoing training for teachers and assistant teachers	Professional learning, including coaching and other classroom support, produces high-quality learning experiences for children.
Maximum class size	Maximum number of children per classroom is 20	Effective Pre-K programs have small classes, enabling teachers to understand and address each child's interests, needs, and capabilities.
Teacher-child ratio	Ratio of teachers to children is 1:10 or better	Working with small groups of children allows teachers to offer more individualized attention, which results in better outcomes.
Health screening and referral	Screenings for vision, hearing, health, and development concerns, along with referrals to needed services	Screening for health and development issues helps children get the help they need and often prevents later costly services.
Continuous quality improvement system	System to assess program quality used to guide improvement	Using data to inform program improvement helps educators provide the high-quality early learning opportunities children need.

Source: NIEER (2019). Pre-K in American Cities: Quality and Access Grow, but Cities are Missing Opportunities to Create Lasting Benefits for their Youngest Learners. Retrieved from: <https://nieer.org/wp-content/uploads/2019/01/Pre-K-Report-Final.pdf>

With this research in mind, civic and business leaders of San Antonio launched a campaign to expand access to high-quality prekindergarten in San Antonio. Voters twice ratified a program of four high-quality pre-k lab schools in each quadrant of the city, professional development open to public schools, and a grant program to support quality improvements in pre-k provided by public schools.

The purpose of this study is to track San Antonio's progress in expanding access to public pre-k and high-quality pre-k in particular. In this inaugural study, researchers investigated five questions:

1. Have more children enrolled in public pre-k in Bexar County?
2. Has there been growth in the share of Bexar County children who enrolled in free public pre-k relative to those who were eligible?
3. What effort has been made to increase access to public pre-k by Bexar County school districts and charter schools?
4. Have more children enrolled in high-quality public pre-k?
5. To which school system do students of Pre-K 4 SA matriculate?

Answers to these questions will help policymakers of the City of San Antonio, area school districts, and the state and U.S. legislature coordinate their efforts to invest in the children of San Antonio at the point in their development when it matters most—their early years of life.

DATA & STUDY SAMPLES

This study used data from Texas' statewide longitudinal data system (SLDS) operated by The University of Texas Educational Research Center (ERC). This data system maintains longitudinal datasets, containing a broad range of student and school characteristics for public pre-k to 12th-grade students, initially collected by public schools and then gathered by Texas Education Agency (TEA). For this study, researchers used data for pre-k, kindergarten, and first-grade children, combined with administrative records provided by Pre-K 4 SA. We also relied on data describing pre-k programs collected by the Education Services Center of Region 20.

Researchers used these data to construct study samples that could be used to answer the report's research questions. For questions related to Bexar County trends, a study sample of all public school students served by either independent school districts (ISDs) or charter school networks was used. For questions that disaggregated county-level results by school system (i.e., ISD or charter network), a study sample of public school students within the 16 largest school systems of Bexar County were used, not including military ISDs. Military ISDs were excluded from this second study sample because of their high levels of student mobility.

FINDINGS

Q1. HAVE MORE CHILDREN ENROLLED IN PUBLIC PRE-K IN BEXAR?

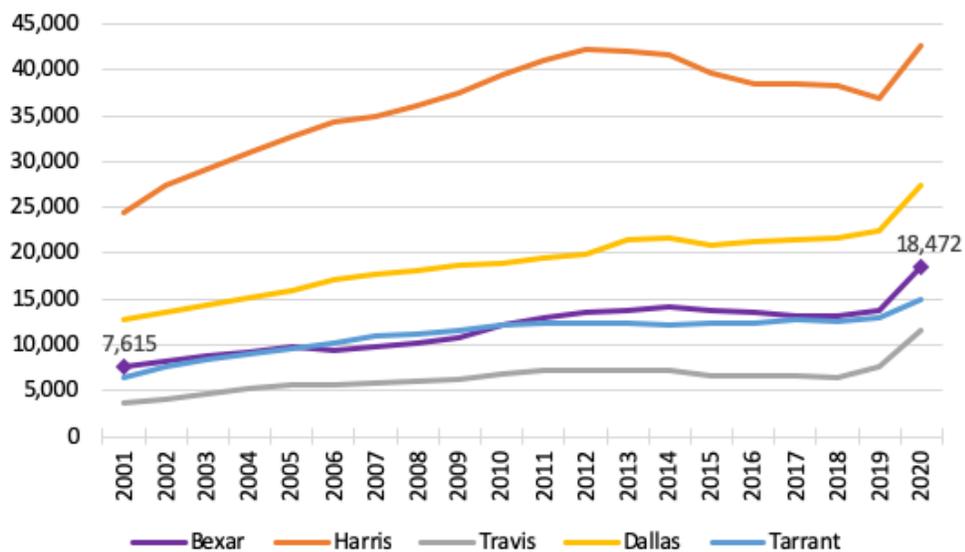
In Bexar County, the total number of children enrolled in public pre-k programs increased over the past two decades, as shown in Figure 1. The total number of children enrolled in public pre-k programs in Bexar County equaled 18,472 in the 2019-2020 school year, a figure 2.4 times greater than the number of children enrolled in the 2000-2001 school year. Furthermore, pre-k enrollment consistently grew year to year, realizing annual increases in 15 out of 19 years. Compared to Texas' other five most populated counties, Bexar County's growth in public pre-k was relatively large. Over the same time (2001 to 2020), public pre-k enrollment increased by a factor of 2.1 in Dallas and Tarrant, and by a factor of 1.7 in Harris County. Travis County was the only county to grow more than Bexar with a factor of 3.1.

In each of these urban counties, there was a sharp increase in enrollment between the school years 2018-2019 and 2019-2020. This sudden increase coincided with the passage of House Bill 3 in 2019, which increased funding for school districts and charter schools to expand full-day pre-k programs.

The number of children enrolled in public pre-k programs also increased during the Great Recession and early recovery periods. One explanation for this pattern is that the recession pushed many families into poverty, thereby increasing the percentage of families eligible for public pre-k programs (Barnett & Carolan, 2013).

As the relationship between enrollment and economic fluctuations demonstrate, enrollment numbers are influenced by demand-side factors in addition to supply-side factors. In particular, pre-k enrollment numbers are driven by birth rates. If fewer babies are born, a community will see fewer children enrolled in public pre-k three and four years later. Therefore, it is important to translate free public pre-k enrollment numbers into a percentage of those who were eligible for free public pre-k.

FIGURE 1: TREND OF PUBLIC PRE-K ENROLLMENT IN FOUR MOST POPULATED TEXAS COUNTIES FROM SCHOOL YEARS ENDING 2001 TO 2020



Q2. HAS THERE BEEN GROWTH IN THE SHARE OF BEXAR COUNTY CHILDREN WHO ENROLLED IN FREE PUBLIC PRE-K RELATIVE TO THOSE WHO WERE ELIGIBLE?

To answer this question with the most valid and reliable metric, researchers devised the following calculation:

$$\text{Free Public PreK Coverage Ratio}_t = \frac{\text{First graders who were ELL/FRL/H and who enrolled in public PreK in Bexar}_t}{\text{First graders in Bexar who were ELL/FRL/H}_t \times (1 - \text{inmigration}_t) \times (\text{ELL/FRL/H Continuity})}$$

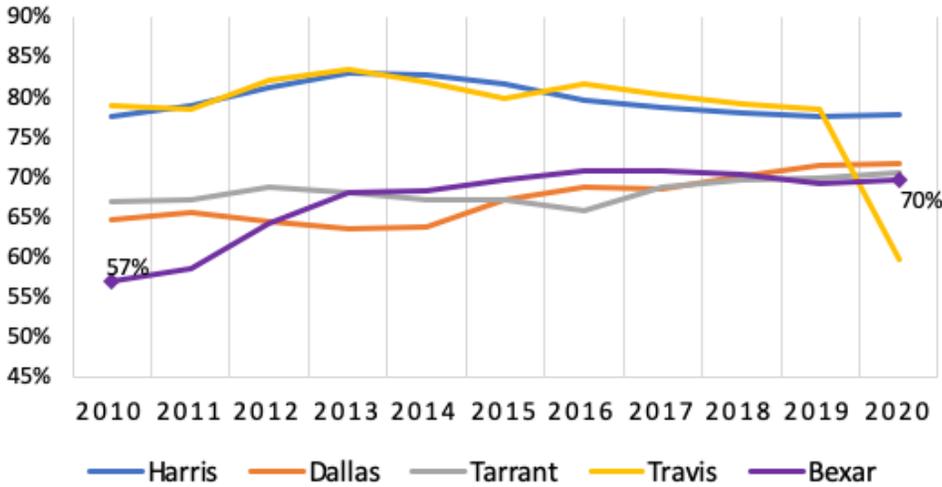
where *ELL* identifies English language learners; *FRL* represents students who were eligible for the national free or reduced-price school lunch program; *H* represents homelessness in year *t*; *in-migration_t* represents an estimated percent of new students who moved to Bexar County after pre-kindergarten; and *ELL/FRL/H Continuity* stands for the percent of first graders who were English language learners, eligible for the national free or reduced-price school lunch program, or homeless in pre-k.

This ratio controls for three confounding factors that can cause an over or underestimation of public pre-k coverage. First, this metric controls for changes in birth rates from year to year because it is a ratio of children who received free public pre-k to those who were eligible for free public pre-k from the same first-grade cohort, which is a proxy for the same birth year. Second, it would be unfair to expect Bexar County schools to provide public pre-k to students who did not live in Bexar County when they would have been in pre-k. To factor out these new arrivals, the denominator is reduced by a factor of one minus the estimated percent of in-migration for a given year. The in-migration factor is unique for each year and is based on where students were

enrolled in first and second grade. Finally, student attributes of ELL, FRL, and homelessness are not perfectly constant over two-year periods, such as from pre-k to first grade. From pre-k to third grade, students with anyone of these attributes had a 93 percent likelihood of having one of these three attributes two years earlier or two years later, respectively. This figure was consistent in all five of the most populated urban counties in Texas and over the last decade. As such, the *ELL/FRL/H Continuity* factor was fixed at 93 percent for all urban counties and school systems included in this study.

The *Free Public Pre-K Coverage Ratio* has consistently improved in Bexar County over the past decade, as seen in Figure 2. While in the other urban counties, coverage improved in Dallas and Tarrant but at a slower pace than Bexar. And coverage peaked in Harris County in the 2012-2013 school year, followed by a long decline. Notably, coverage in Bexar County sharply increased following the launch of Pre-K 4 SA.

FIGURE 2: FREE PUBLIC PRE-K COVERAGE RATION FOR FIVE MOST POPULATED COUNTIES FROM SCHOOL YEARS ENDING 2010 TO 2020



Q3. WHAT EFFORT HAS BEEN MADE TO INCREASE ACCESS TO PUBLIC PRE-K BY BEXAR COUNTY SCHOOL DISTRICTS AND CHARTER SCHOOLS?

This study used three indicators to describe the effort made by school districts and charter schools to increase access to public pre-k:

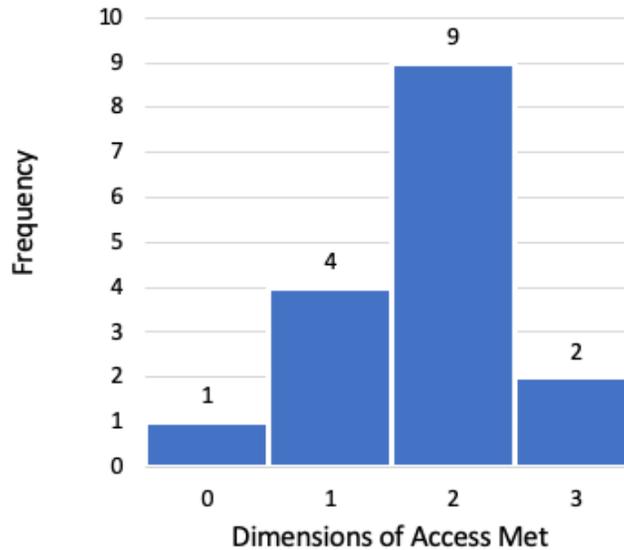
1. Average annual growth of 2% or higher in pre-k enrollment from 2010 to 2020;
2. Pre-K Coverage Ratio of 50% or higher in 2020; and
3. Supply of full-day pre-k in 2020.

Researchers deemed the use of multiple measures as a more reliable and valid approach to assessing a diverse set of school systems. For example, growth in enrollment identified districts that were building their pre-k programs from previous low enrollment levels. However, looking at growth alone did not give credit to school systems that had built mature pre-k programs and had already reached a larger majority of their eligible students, an accomplishment that can be identified with the Pre-K Coverage Ratio. Likewise, districts may have had significant growth or high coverage ratios but were only providing half-day pre-k, which research has found to be less beneficial for children's education (Atteberry et al., 2018). Each metric addresses a weakness of another. Used together, they painted a more accurate picture of a school system's effort to expand pre-k access.

Sixteen school systems were evaluated using these three indicators of pre-k access, as shown in Figure 3. Two ISDs met all measures of pre-k access. Nine met two of the three measures. Four school systems met one criterion. And one school systems met no criterion of pre-k access.

FIGURE 3: FREQUENCY OF SCHOOL SYSTEMS BY EFFORT MADE TO IMPROVE ACCESS TO PUBLIC PRE-K

*Effort was evaluated along three dimensions. Three means all four criteria of access were met. Zero means no criteria were met.



As shown in Table 2, Harlandale and Southside ISDs were the only two school systems that reached all three criteria of public pre-k access.

The nine school systems that met two of the three criteria included the ISDs of East Central, Edgewood, Judson, North East, San Antonio, South San Antonio, Somerset, and Southwest; and the George Gervin Academy.

The four school systems that met only one criterion for providing access to pre-k included Alamo Heights ISD, Northside ISD, and the charter networks of Jubilee Academies and the School of Science and Technology.

Finally, the Harmony charter school network of San Antonio was the only school system that did not meet any of the three measures of pre-k access.

For a more detailed analysis of growth trends and coverage ratios by school system, please see figures 7-11 in the appendix on pages 29-31.

TABLE 2: THREE INDICATORS THAT DESCRIBE THE EFFORT MADE BY SCHOOL SYSTEMS TO EXPAND PRE-K ACCESS

	Average annual growth in pre-k enrollment of 2% or higher, 2010 - 2020	Coverage rate greater than 60%, 2020	Full-day pre-k, 2020
Alamo Heights ISD	0.6%	56%	✓
East Central ISD	4.0%	56%	✓
Edgewood ISD	-1.5%	71%	✓
George Gervin Academy	3.6%	79%	
Harlandale ISD	2.4%	66%	✓
Harmony Science Academy (SA)	*	26%	.
Jubilee Academies	*	47%	✓
Judson ISD	7.5%	38%	✓
North East ISD	5.4%	40%	✓
Northside ISD	4.9%	52%	
San Antonio ISD	-0.2%	73%	✓
School of Science and Technology	*	2%	✓
Somerset ISD	-0.8%	75%	✓
South San Antonio ISD	-1.4%	62%	✓
Southside ISD	2.4%	71%	✓
Southwest ISD	8.0%	57%	✓

Note: For school systems with less than 10 years of enrollment history, an asterisk was used as a place holder for their decade-long average annual growth rate. A school system's coverage ratio represents the share of first graders who the school system or Pre-K 4 SA provided free pre-k to relative to those who were eligible and living in their service area, similarly defined to the county coverage ratio.



Q4. HAVE MORE CHILDREN ENROLLED IN HIGH-QUALITY PUBLIC PRE-K?

Researchers were unable to estimate without qualification the enrollment of children in high-quality pre-k. Neither the San Antonio community, nor any Texas community—systematically collects data to assess if their pre-k programs reach national standards of high-quality.

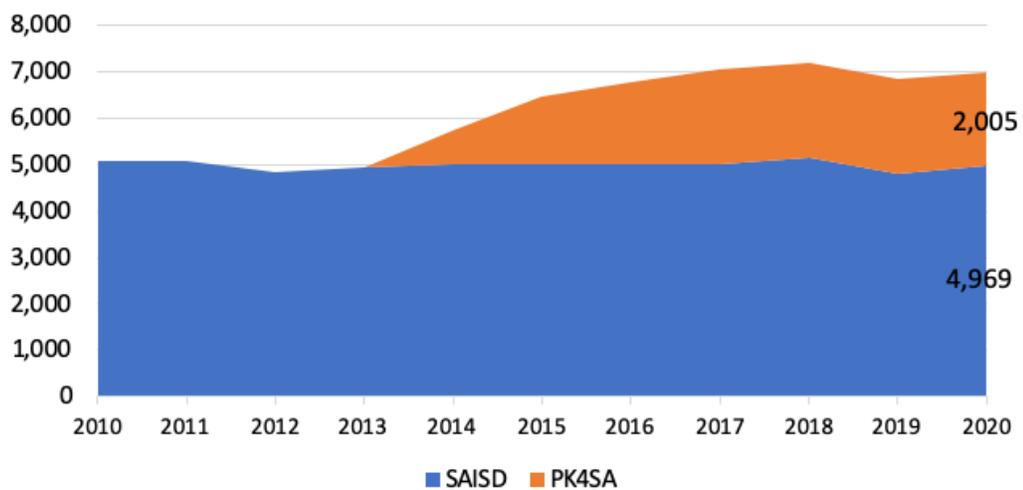
However, researchers did find that two Bexar County organizations met high-quality standards. By design, the lab schools of Pre-K 4 SA meet 10 out of 10 high-quality standards set by the National Institute for Early Education Research (NIEER) and exceed some of these standards. For example, Pre-K 4 SA requires all teachers to have bilingual expertise. They also pay their teachers a higher rate than public school systems. (For a summary of NIEER standards, refer to Table 1.)

The second organization was San Antonio ISD (SAISD). In a 2018 report produced by CityHealth, an initiative of the de Beaumont Foundation and Kaiser Permanente, and NIEER, SAISD was recognized as reaching 8 out of 10 NIEER standards.

Researchers were unable to find any evidence that suggests that other school systems have offered high-quality pre-k. As mentioned earlier, Texas' public prekindergarten programs were found to meet only three of the 10 high-quality standards (Friedman-Krauss et al., 2020).

Given these findings, an estimate of high-quality pre-k enrollment can be made with a few assumptions. If we assume the Texas study (Friedman-Krauss et al., 2020) of public pre-k is accurate and Pre-K 4 SA and SAISD are the only providers of high-quality pre-k, and the quality of their program was consistent, growth in high-quality pre-k can be charted as shown in Figure 4. From school year-ending 2010 to 2020, the number of children enrolled in high-quality pre-k increased from about 5,000 to 7,000.

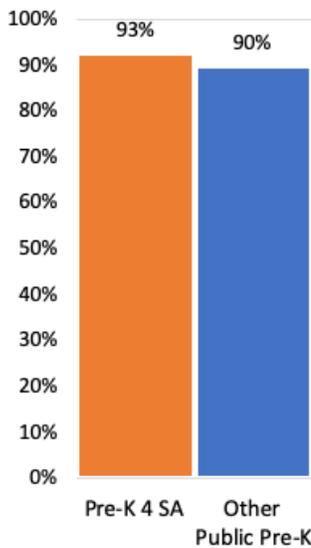
FIGURE 4: GROWTH IN HIGH-QUALITY PUBLIC PRE-K EDUCATION IN BEXAR COUNTY, PRE-K 4 SA AND SAISD, SCHOOL YEAR ENDING 2010 TO 2020



Q5. TO WHICH SCHOOL SYSTEM DO STUDENT OF PRE-K 4 SA MATRICULATE?

Participation in public pre-k predicted enrollment in public elementary schools. Furthermore, this relationship was found to be stronger for students who participated in Pre-K 4 SA. A little more than 9 in 10 children who participated in Pre-K 4 SA (93%) and other public pre-k programs (90%) in Bexar County went on to enroll in public elementary schools as shown in Figure 5.

FIGURE 5: PERCENT OF PRE-K 4 SA AND OTHER PUBLIC PRE-K STUDENTS WHO GO ON TO ENROLL IN PUBLIC ELEMENTARY SCHOOLS

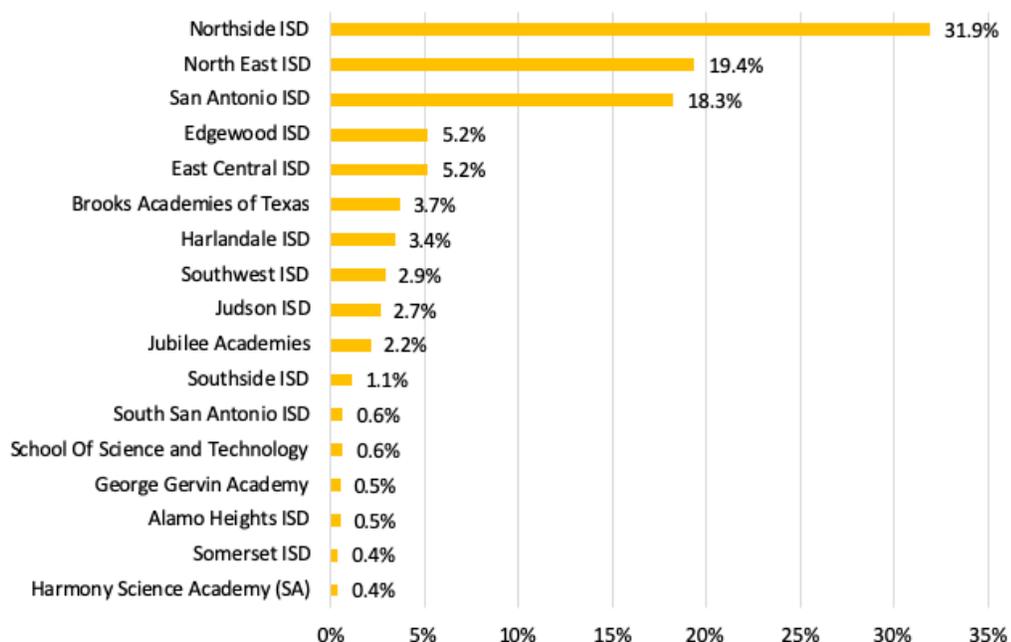


Many public-school systems of Bexar County benefited from Pre-K 4 SA as a source for students who were prepared for kindergarten. While Pre-K 4 SA has developed formal partnerships with nine school systems (ISDs of East Central, Edgewood, Harlandale, Northside, North East, San Antonio, South San Antonio, Southwest and New Frontiers Public Schools), their students can be found in nearly every school system's elementary schools.

However, some school systems received more Pre-K 4 SA students than others. This was because some school systems had 71 elementary schools while others had only one. Furthermore, the local residential migration patterns of young families have historically favored north bound moves to suburban neighborhoods.

Consequently, the distribution of Pre-K 4 SA students across school systems varied significantly. As shown in Figure 6, Northside ISD receives the largest share of Pre-K 4 SA students (32%). The ISDs of North East (19%) and San Antonio (18%) were nearly tied as the second most popular elementary school destination. Following these three leading destination school systems, the ISDs of Edgewood (5%) and East Central (5%) were tied as the fourth most popular elementary school destination. Finally, the remaining school systems received the remaining 20% of the 2019/2020 Pre-K 4 SA cohort.

FIGURE 6: DISTRIBUTION OF 2019/20 FIRST GRADERS WHO RECEIVED PRE-K SCHOOLING FROM PRE-K 4 SA



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APPENDIX

FIGURE 7: TREND OF PUBLIC PRE-K ENROLLMENT IN FOUR BEXAR COUNTY SCHOOL DISTRICTS FROM SCHOOL YEARS ENDING 2010-2020

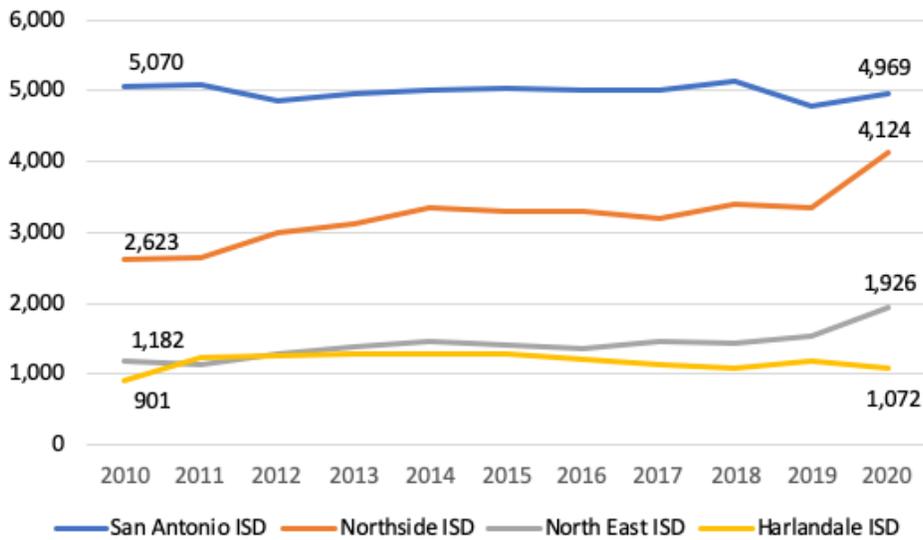


FIGURE 8: TREND OF PUBLIC PRE-K ENROLLMENT IN FOUR BEXAR COUNTY SCHOOL DISTRICTS FROM SCHOOL YEARS ENDING 2010-2020

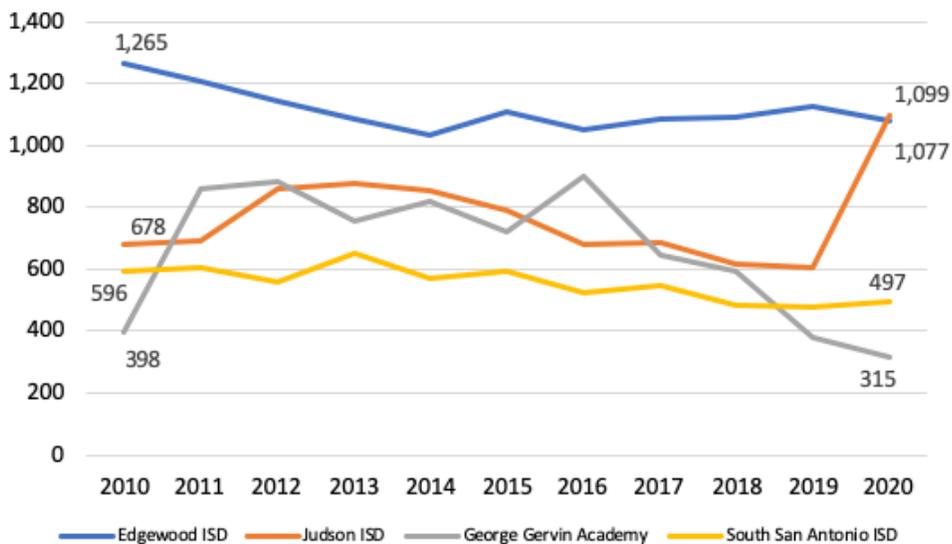


FIGURE 9: TREND OF PUBLIC PRE-K ENROLLMENT IN FOUR BEXAR COUNTY SCHOOL DISTRICTS FROM SCHOOL YEARS ENDING 2010-2020

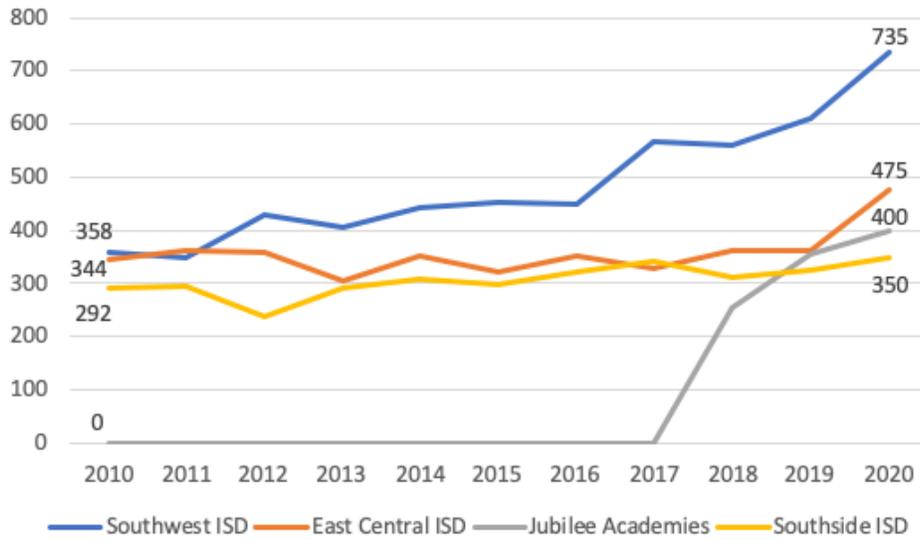


FIGURE 10: TREND OF PUBLIC PRE-K ENROLLMENT IN FOUR BEXAR COUNTY SCHOOL DISTRICTS FROM SCHOOL YEARS ENDING 2010-2020

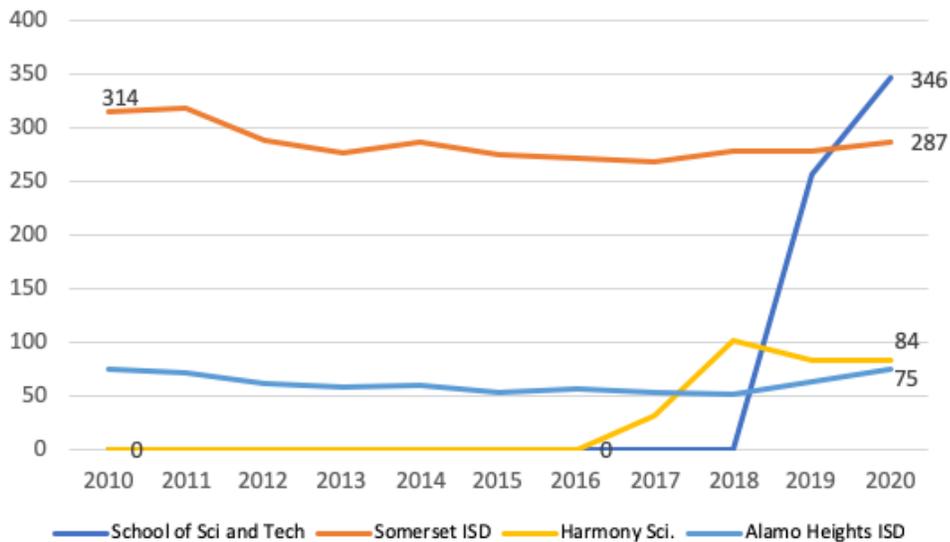
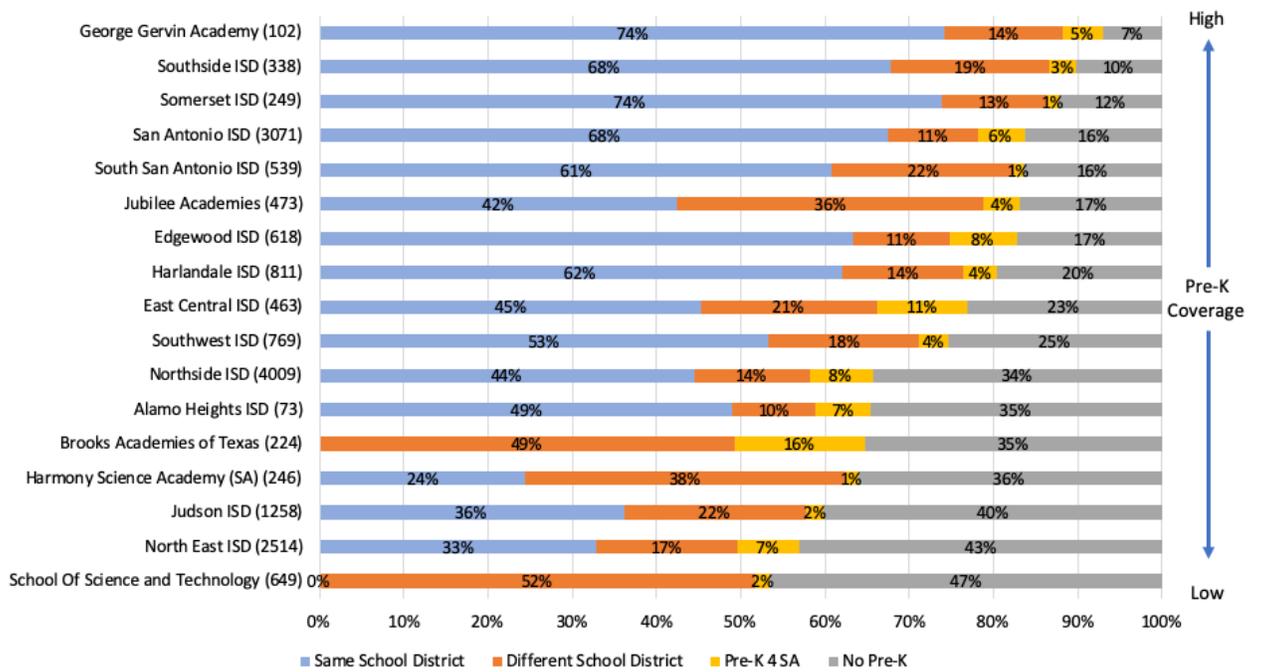


FIGURE 11: DISTRIBUTION OF 2019/20 FIRST GRADERS WHO WERE PRE-K ELIGIBLE BY THE SCHOOL SYSTEM THAT PROVIDED THEM PUBLIC PRE-K

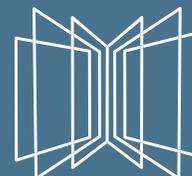
Parenthesis summarize pre-k-eligible, first grade population, only school systems with 70 or more pre-K eligible first graders.



PUBLIC PRE-K SUPPLY & DEMAND IN BEXAR COUNTY

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