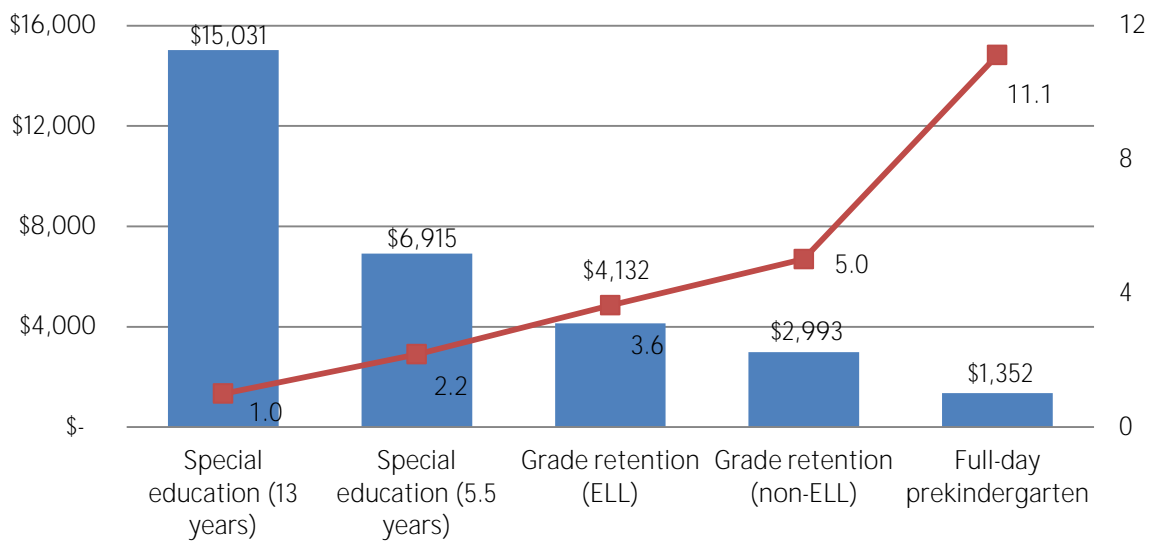


PREKINDERGARTEN PROGRAM  
COST ALLOCATION ANALYSIS





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included in these analyses. Another source for savings not yet considered in the literature may be related to the reduced need for Tier 2 response to intervention (RTI) in early grade levels by those who attend full-day pre-K.

**Cost-per-student allocation for 2010–2011.** AISD offered a full-day pre-K program to 5,614 pre-K students, supported through the use of local, state, and federal funds in the amount of \$18.3 million (Brunner, 2011b). The overall cost per student for the 2010–2011 AISD pre-K program was \$3,234, a \$94 per-student decrease from the 2009–2010 year. This amount was less than spent statewide. For 2010–2011, the average overall cost per pre-K student enrolled in the state of Texas was \$3,761 (for both half-day and full-day pre-K programs using state funds only), according to the National Institute for Early Education Research (NIEER; Barnett, Carolan, Fitzgerald, & Squires, 2011). Based on AISD’s Fall 2010 enrollment, the estimated cost savings was \$2.8 million (i.e., \$527 per student). Based on last year’s total AISD pre-K enrollment of 5,614 students, a nearly \$3 million dollar saving compared with the cost of other Texas programs.

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for the district (i.e., 7% of the estimated \$7 million required to pay for full-day pre-K).

According to AISD's chief financial officer, AISD plans to lower the staff-to-student ratio from 1:20 to 1:19 for the 2013–2014 school year. The increase to the staff-to-student ratio in 2012–2013 was “only made as part of a budget balancing maneuver due to severe budgetary constraints resulting from significant State cuts” (N. Conley-Abram, personal communication, December 21, 2012). Although the proposed staff-to-student ratio for 2013–2014 might be lower than the 2012–2013 year, the ratio is higher than the 1:18 ratio in 2010–2011 and prior school years.

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## Appendix

**Appendix A.** From 2006–2007 through 2010–2011, AISD tested a sample of pre-K students in the fall and spring with the Peabody Picture Vocabulary Test (PPVT; English version). Spanish-speaking English language learners (ELLs) were additionally tested with the Test de Vocabulario en Imagenes Peabody (TVIP; Spanish version). The PPVT and the TVIP measure knowledge of receptive (i.e., hearing) vocabulary (Dunn & Dunn, 2007).

Receptive vocabulary is one domain of language development, and cut-off scores of 1.5 and 2 standard deviations ( ) below the mean are commonly used benchmarks in language delay diagnosis (VUC, 2011). Based on the normed distribution of scores, 6% of students should score 77 or below (i.e., 1.5 below the mean), while 2% are expected to score 70 or below (i.e., 2 below the mean).

The PPVT and TVIP are reliable assessments, meaning students are very likely to continue to score near their pretest score without intervention. DRE staff assumed students who would potentially be eligible for special education services would score on the PPVT/TVIP in the students' native language at 75 or below (i.e., 5<sup>th</sup> percentile) for the high estimate and at 70 or below (i.e., 2<sup>nd</sup>

percentile) for the low estimate. AISD’s Department of Special Education recommended the 6th percentile, which would be higher than the high estimate.

DRE further assumed that pre-K students who scored 1.5 or 2 below the mean in the fall of their pre-K year and later did not receive special education services eventually would have been declassified (i.e., dismissed) from special education without the availability of a pre-K program. This assumption differed from the assumption of the VUC study, which found students would not have been declassified (due to the low rate [i.e., 5% to 10%] of students who are declassified nationally). The VUC study estimated the cost savings for special education services based on 13 years of services (i.e., kindergarten through 12<sup>th</sup> grade). DRE staff estimated the cost for special education services on 5.5 years of service.

DRE staff used data from five cohorts of pre-K students, from 2006–2007 through 2010–2011. Cohorts were based on the fall snapshot date for the Public Education Information Management System (PEIMS) submission and PPVT/TVIP results from the corresponding school year. Average cost per student for special education came from Academic Excellence Indicator System (AEIS) district reports (TEA, 2008, 2009, 2010, 2011). To calculate a present value for future costs not yet incurred, a discount rate of 3% was applied.

Table A-1. Student Prekindergarten Cohorts, 2006–2007 Through 2010–2011

Cohort	Total fall enrollment	Total English non-ELLs and Spanish ELLs	% English non-ELLs and Spanish ELLs	Total in PPVT sample	% in PPVT sample
2006–2007	4,622	4,389	95	1,817	41
2007–2008	4,704				





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students with greater need for academic intervention (i.e., students who are low income, immigrant, or from single-parent households) might be disproportionately affected (Barnett, 2008; Crosnoe, 2007).

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