Evaluation Report for Big Thought: Dallas City of Learning Student Outcomes – *Equity Focus*

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Center on Research & Evaluation

Contents

Executive Summary

The Center on Research and Evaluation at Southern Methodist University completed an evaluation of Dallas City of Learning (DCoL), the summer learning ecosystem in Dallas, Texas that comprises over 2,700 different summer learning opportunities for Dallas youth each summer. Findings empirically indicate that summer learning matters, and it matters for youth that need it the most. Attending summer programming that is associated with DCoL positively impacts students' attendance and academic achievement. Specifically, there is a clear relationship between days of programming and these outcomes, indicating that the amount of programming matters – the more the better. Every little bit of summer programming does relate to better outcomes and the strongest and most consistent positive outcomes happen after about 30 days of programming, even when days are spread across 2 summers.

The objective of these analyses is to examine statistical associations between participation in summer programming and later student outcomes during the 2016-17, 2017-18 and 2018-19 school years . Six outcomes were explored: school attendance rates, beginning of year grade point average, STAAR reading, STAAR math, and Algebra 1 and English 1 End-of-Course exams.

Two types of analyses were conducted:

1. Within-group regression analyses to examine how days of dosage of summer programs predicts later outcomes when controlling for baseline performance, and
2. Between-group propensity score matching comparison analyses to examine differences in outcomes between students who participate in DCoL programming compared to a matched sample of students who did not participate in any programming[1].

These analyses give us our best-available estimate of the *unique* contribution of summer programs. The methods described here isolate the estimates of outcomes based on DCoL participation by controlling for prior performance and/or by using advanced methods to create a matched comparison group of non-DCoL students.

Among the numerous takeaways that emerged from these analyses, CORE established evidence that **summer programs matter most for kids who need it most, and DCOL programming is reaching those kids that need it.**

We were thinking of this in two ways. First, who are the students who need programming and are they accessing it? **The students that are accessing DCoL programming represent an overall higher-needs group compared to their peers that do not access these programs.** This is evidenced by lower attendance rates, lower GPAs, and lower STAAR passing rates prior to attending summer programs. The second question is who is benefiting from summer opportunities? In addition to looking at the overall effects for all students, we also isolated findings to specific groups of interest. **Findings were more often positive and significant for African American and Hispanic students than for students that were white or from other races.** This is a meaningful finding as we all grapple with how best to deliver culturally relevant and equitable programming.

These findings challenge us to wrestle with questions about who has access to rich and varied experiences and whose access might instead get narrowed in favor of reading and math test prep at the exclusion of other opportunities. This is fundamentally about equitable access to a wide range of learning opportunities and life experiences. Who gets this access and who doesn't?

[1] Comparison students had no programming according to DCoL enrollment and dosage records. It is possible that these students did receive programming undocumented by the DCoL system.

Introduction

This current report focuses on outcomes for Dallas ISD students that participate in DCoL-affiliated programs. Specifically, the analyses described here focus on approximately 100,000 Dallas ISD students across the 2016-17, 2017-18 and 2018-19 school years, and explores how outcomes for students across these years are associated with varying amounts participation, or no participation, in DCoL-affiliated summer programs.

Student Sample

The total sample size is 100,465 students; 51.6% are male, 68.6% are Hispanic, 24.2% are Black/African American, 4.5% are White, and 3.7% are of other races. The age of the students (as of November 2019) ranged between 2.9 years and 25.5 years with a mean/standard deviation of around 13 years-old.

Table One describes the percent of students in the study sample that were categorized as low socioeconomic status (Low SES), special education (SPED), and limited English proficiency (LEP) during each academic year. The majority of students are classified as Low SES and approximately 44% are LEP. SPED students' rates were between 8 to 10 percent across three academic years.

Table One. *Percent of sample students in demographic groups; by school year*

Academic Year	Low SES		SPED		LEP	
	No	Yes	No	Yes	No	Yes
2016-2017	20.6	79.4	92.2	7.8	56.6	43.4
2017-2018	22.7	77.3	90.9	9.1	55.2	44.8
2018-2019	20.5	79.5	89.4	10.6	55.7	44.3

Demographic Description of DCoL Students & Non-DCoL Students

Approximately 30% of the overall sample attended at least one of the DCoL summer programs in any of the 2017 and/or 2018 summers; this is 31,065 unique students across three academic years. Half (50.9%) of those students attended only Summer 2017 programs, 26.3% of them attended only Summer 2018 programs, and 22.8% of them attended programs in both summers. The majority of the students attended only one program in each summer (93.2% of summer 2017 students and 83.6% of summer 2018 students).

Table Two describes the gender and race of the students in both groups. Gender is very similar among the DCoL and non-DCoL students. However, there was a higher rate of participation for males. **Race percentages showed slight differences between the two groups. For example, the students enrolled in programs have more black and less white students than the pool of comparison students.**

Table Two. *Gender & race of students in DCoL and reference group; 2016-17 through 2018-19*

		N (%)	
		DCoL Group	Non-DCoL (Reference) Group
Gender	Female	14,016 (45.2%)	34,585 (49.8%)
	Male	17,004 (54.8%)	34,815 (50.2%)
Ethnicity	Black	8,363 (27%)	15,923 (22.9%)
	Hispanic	20,941 (67.5%)	47,984 (69.1%)
	Other	828 (2.7%)	1,835 (2.6%)
	White	888 (2.9%)	3,654 (5.3%)

Table Three disaggregates the percent of program and comparison students by grade-levels, low socio-economic status, special education, and limited English proficiency indicators. The percentage of students for all three indicators are consistently higher for students enrolled in DCoL programs. This shows that **in all three academic years, the concentration of low SES, SPED, and LEP students enrolled in DCoL programs was higher than the comparison group.**

Table Three. *Percent of sample students in demographic groups; by school year and group*

		2016-2017		2017-2018		2018-2019	
		DCoL	**Non-DCoL**	**DCoL**	**Non-DCoL**	**DCoL**	**Non-DCoL**
Grade*	Elementary	32.6%	22.7%	32%	19.6%	26.7%	17.1%
	Middle	22%	19.7%	23.1%	18%	24%	16.4%
	High	17.9%	25.7%	28.6 %	19.7%	30.3%	17.2%
Low SES	No	13.8%	20.6%	20.1%	24.2%	19.8%	21.0%
	Yes	86.2%	79.4%	79.9%	75.8%	80.2%	79.0%
SPED	No	91.5%	92.5%	89.7%	91.6%	87.4%	90.6%
	Yes	8.5%	7.5%	10.3%	8.4%	12.6%	9.4%
LEP	No	51.0%	59.1%	52.0%	57.1%	52.1%	57.7%
	Yes	49.0%	40.9%	48.0%	42.9%	47.9%	42.3%

**%'s of the grade levels does not add to 100% because of removed 3rd and lower graders for each specific year.*

Description of Achievement of DCoL Students & Non-DCoL Students

Before Summer Programing (Baseline Description)

Figures One through Four provide a visual representation the "pre-test" values for all outcomes explored in the analyses. It is clear from these figures that **students that participate in DCoL programs are generally under-performing compared to the whole comparison group across all measures of achievement prior to summer programming. This is evidence that the DCoL system is reaching the students that it can most benefit, and is not reaching a "high-performing" population of Dallas youth.** Therefore, in order to estimate baseline equivalence and ensure that observed effects are attributable to programming and not to "pre-existing" differences between these two groups of students, the weighting procedures used in the comparison analyses will correct these differences between the groups prior to estimating DCoL impact.

Figure One. *Average school attendance rates in the year prior to beginning summer programming*

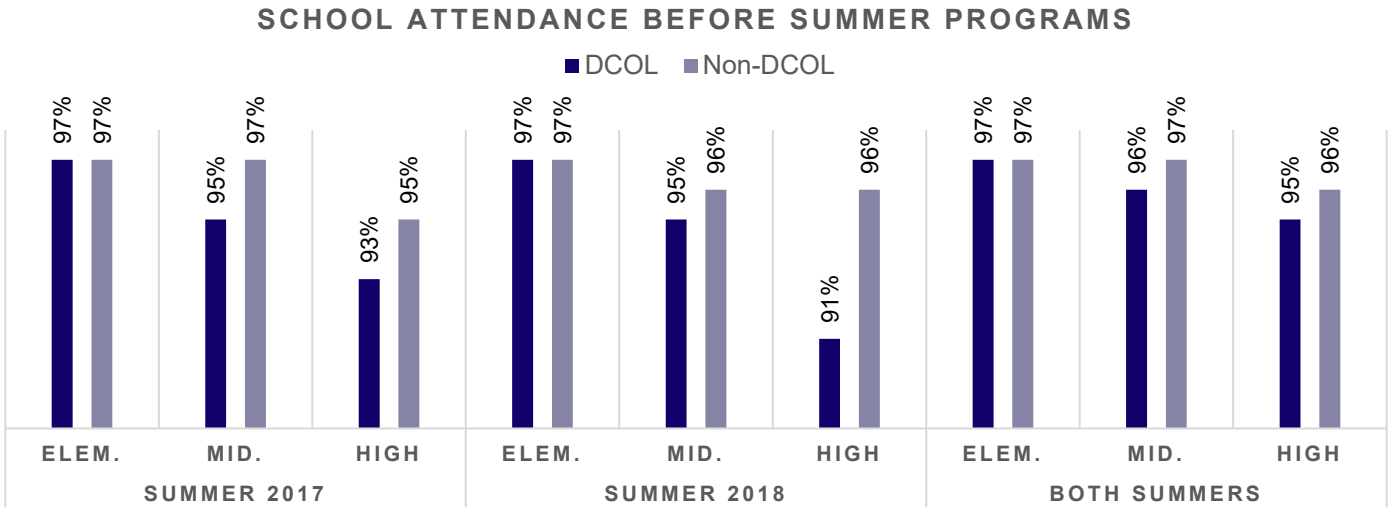


Figure Two. *Average beginning of year GPA in the year prior to beginning summer programming*

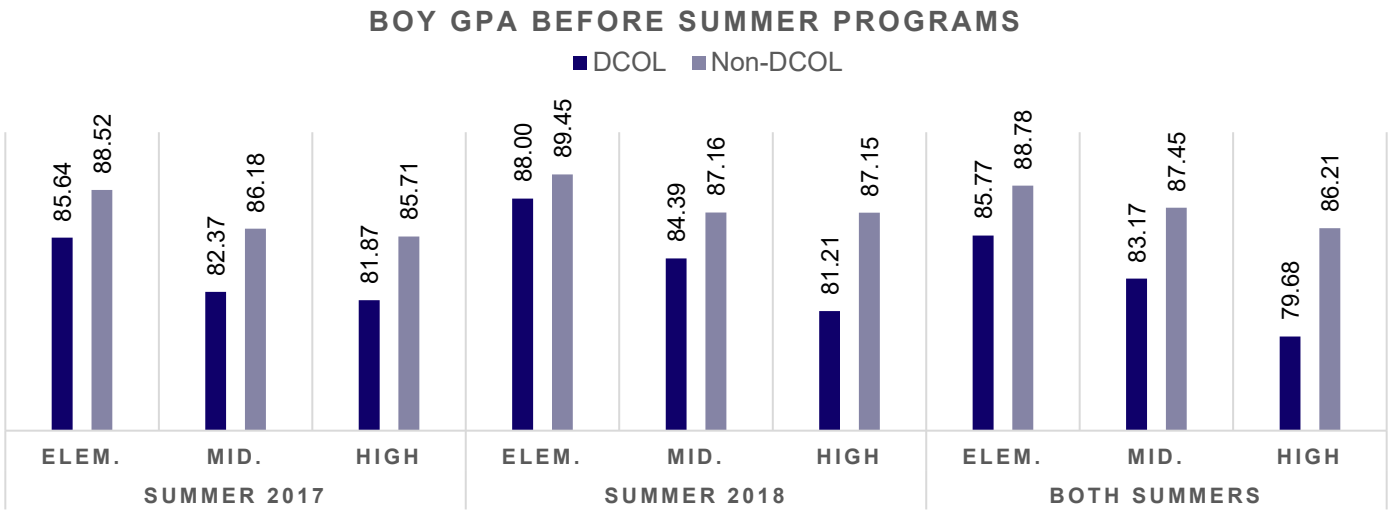


Figure Three. *Percent of students meeting STAAR standards in the year prior to beginning summer programming*

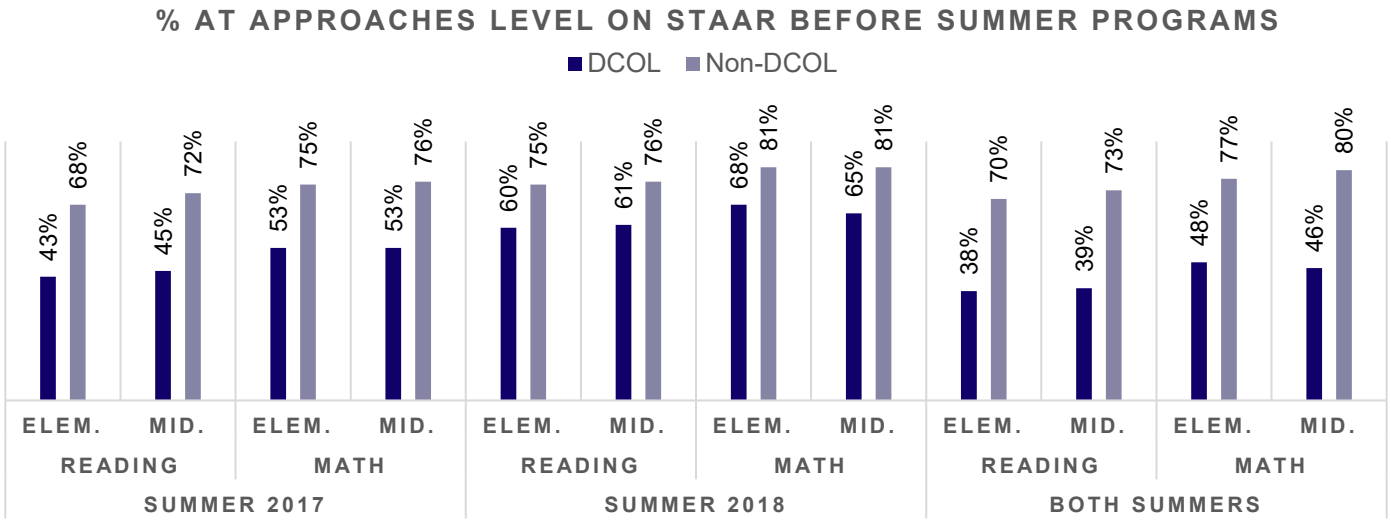
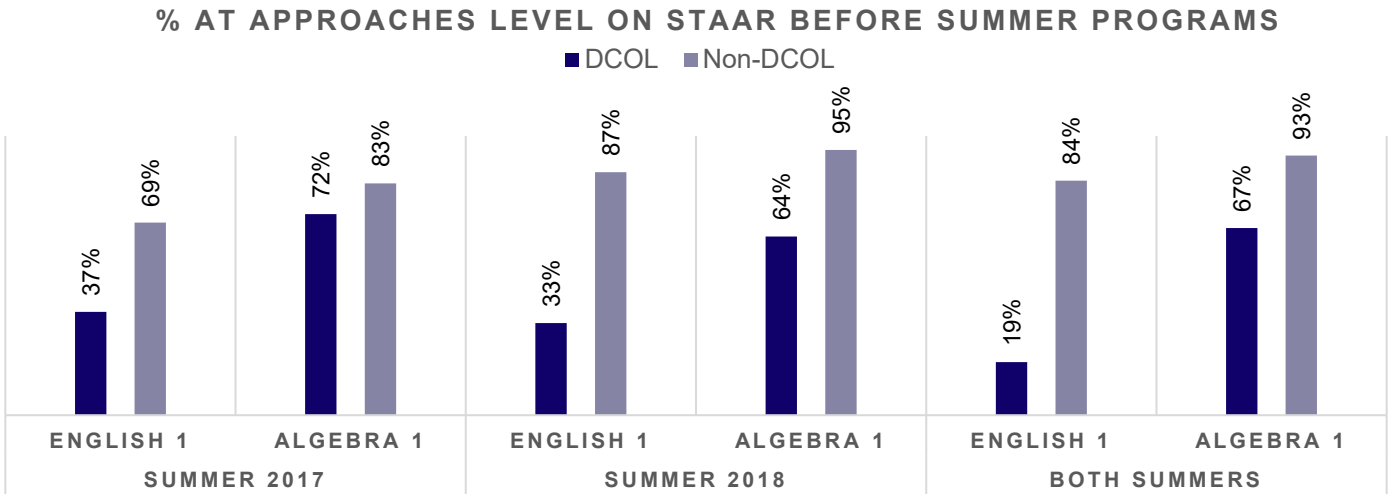


Figure Four. *Percent of students meeting STAAR EOC standards in the year prior to beginning summer programming*



Methods and Findings

CORE completed 2 types of analyses. A total of 382 individual logistic regression models were used to estimate the effect of program dosage. These analyses included students that participated in DCoL only and was intended to explore how student outcomes were associated with each increased day of summer learning dosage. A total of 340 individual propensity score matching analyses were conducted to compare students that participated in DCoL programming with students with no documented program dosage.

The Effect of Program Dosage on Student Outcomes

The first set of analyses focuses only on students who attended summer programming within the DCoL system. CORE modeled the effect of program dosage (the total number of the days attended) on student outcomes after summer programming.

The analyses for all 5 outcomes were each completed for 10 specific samples of students. The purpose of this design is to understand how the effect of summer program dosage uniquely affects specific groups of students.

Summary of Associations between Program Dosage and Outcomes

Among all 382 analyses, 73% resulted in a positive association between dosage and outcomes; 22% of all analyses resulted in a statistically significant positive association between dosage and outcomes (i.e., a result that outcomes improve as dosage increases).

A critical finding was that **most positive and statistically meaningful associations between program dosage and outcomes were observed for the group of DCoL students that had participated in programming across *both* summers**.

These outcomes, for students that had programs across *both summers*, are *most consistently positive and statistically significant* for:

- Students *attending programs in zip codes with high program access and attendance* (92% of analyses for this group)
- Students that are *not LEP* (92% of analyses for this group)
- Students that are *African American* (83% of analyses for this group)
- Students that are *Hispanic* (67% of analyses for this group)

Overall, when examining findings across all sub-samples and outcomes for students that had programing *both summers*, the *strongest single findings* were observed for:

- LEP students: attendance for middle school, STAAR reading for elementary, and Algebra 1 for high school.
- Students in zip codes with high program access and attendance: English 1 for high school
- African American students: Algebra 1 for high school

These final bullet points are not generalizable to these groups of students overall. Rather, they highlight particularly noteworthy effects observed for specific groups of students on a few specific outcomes.

Table Four. *Findings of dosage analyses by sub-sample group; students that attended 2 summers*

	Attendance			BOY GPA			EOC Alg1	EOC Eng1	STAAR Math		STAAR Rdg	
	elem	high	mid	elem	high	mid	high	high	elem	mid	elem	mid
Overall	✓	✓*	✓*	✓*	×*	✓*	✓*	✓*	✓*	✓*	✓*	✓*
African Amer.	✓	✓	✓*	✓*	✓	✓*	✓*	✓*	✓*	✓*	✓*	✓*
Hispanic	✓	✓	✓*	✓*	✓	✓*	✓*	✓*	✓*	✓*	✓*	✓*
Other eth	n/a	✓*	✓	✓	✓	✓*	✓*	✓*	✓	✓	×	✓*
White	×	✓	n/a	✓*	✓	✓	n/a	✓	n/a	✓	n/a	✓
Dosage <30	✓	×*	✓	✓*	×*	✓*	×	×	✓*	✓*	✓*	✓*
Dosage 30+	✓	✓	✓	✓*	✓	✓*	✓	✓*	✓	✓	✓	✓*
High att zips	✓	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*
Low att zips	✓	✓	✓	✓	✓	✓	×	✓	×	×	✓	✓
LEP	✓	✓	✓*	✓*	✓	✓*	✓*	✓*	✓	✓	✓*	✓*
Non-LEP	✓	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*

✓ *indicates a positive association with summer program dosage*
× *indicates a negative association with summer program dosage*
* *indciates that the association is statistically signficant at p<.05.*

Outcomes for DCoL Students Compared to Matched Non-DCoL Students

Propensity Score Matching (PSM) analyses aimed to balance the background variables of DCoL and non-DCoL students before comparing their outcomes. This helps ensure that any differences we see between the two groups in outcomes can be attributed to the program we are studying[2].

The legend in Table Five describes the color codes for the summary figure. The usage of 30 days to split the analyses is based on a practical interpretation of 30 days equaling about 6 weeks of summer programming; *this is not an empirically derived dosage threshold.*

When comparing only students with at least 30 days of programming to a matched comparison group, the impacts of summer programs become clear. As seen in Figure Five, DCoL students are often more likely to outperform matched comparison students only when they have had at least 30 days of programming across a single summer or two summers.

These comparison analyses findings confirm the conclusions taken from the dosage analyses described previously – every day of program dosage matters and after about 30 days of summer programming (across two summers or within a single summer), results are more consistently positive in favor of DCoL participation.

[2] A technical report detailing the propensity score methods and procedures, including detailed statistical output of all analyses is available upon request. Please email dfarmer@smu.edu.

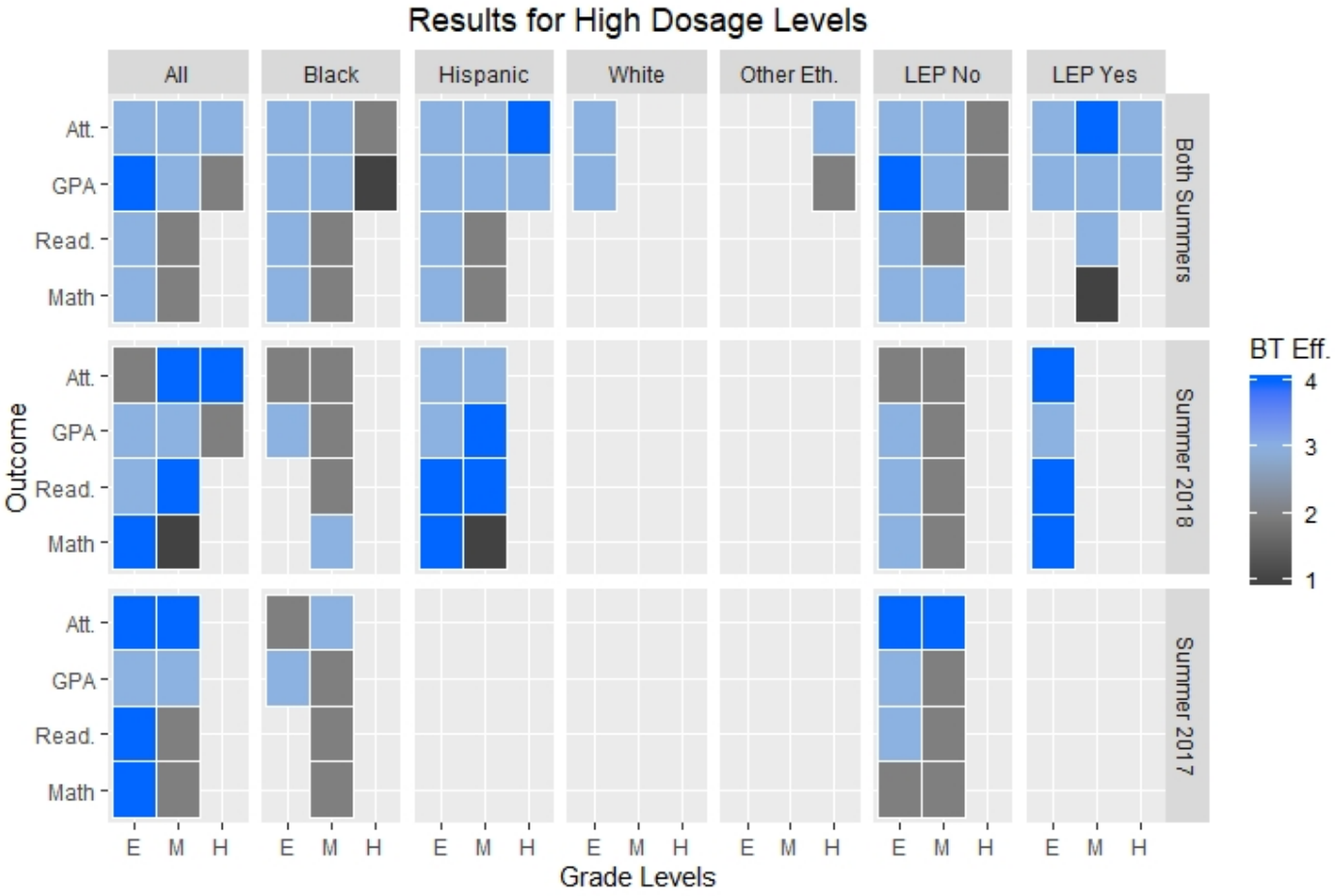
Guide for reading Figure Five

These heat maps describe the result of all individual propensity score matching analyses. Each cell describes the result for an analysis, and the guides to the left, right, top and bottom of the grid describe the specific conditions of that individual cell.

***Table Nine**. Key to interpret the comparison analyses summary in Figures Seven & Eight*

Finding category	Students of DCoL Group are more likely to be successful in the target outcome.	Result is statistically significant
4	yes	yes
3	yes	no
2	no	no
1	no	yes

***Figure Five.** Summary of PSM comparison analyses for DCoL students with dosage of 30 days+*



Limitations and Conclusions

There are three main limitations that are critical to note when considering the implications of the findings in this report.

First is the reliability and validity of the dosage variable. As noted, there is no way to be sure exactly how many days of programming each student attended each summer. For DCoL students specifically, the number of days of programming is taken from attendance data provided by hundreds of summer

programs. Therefore, it is reasonable to assume that there are days of dosage that are not captured in this data.

Second, DCoL only captures individual student program attendance data from approximately 30-35% of all summer programs. Therefore, it is clear that there are not only days of programming not being accounted for all participants, but there are also likely sizable groups of students attending summer programs that are not being accounted for. Nevertheless, the available DCoL sample does represent a large sample of summer programing across the city of Dallas and these analyses represent a reasonable estimate of the effects of summer programs.

Third, when interpreting the effect of a single experience of a student, two summers in this case, it is critical to consider other experiences that meaningfully contribute to student achievement. Other critical factors related to schools, teacher, families, and even neighborhoods contribute meaningful influence on student outcomes; this influence is critical cannot be discounted. These analyses do not control for those critical factors, so the findings should be interpreted cautiously.

Appendix A. Output Tables for Dosage Effect Analyses

The tables in this appendix describe the statistical output for all dosage analyses (overall group, group with more than 30 days of dosage, and the group with dosage lower than 30 days). For the BOY GPA outcomes, the raw effect (Dos. Eff. column) can directly be interpreted as the amount of increase in the BOY GPA by 1-day increase in the dosage, controlling for the previous year's GPA. For all other outcomes, the dosage effect was estimated from a logistic regression model. Therefore, the amount of change in the odds ratio (Odds Dif. column) can be directly interpreted as the amount of increase/decrease in the odds of being successful by 1-day increase in the dosage (approaching for Reading, Math, English 1, & Algebra, having attendance more than 90% for Attendance, and having a higher GPA than the typical group value) in the model's outcome by controlling for previous year's performance.

For all model results, the first thing that needs to be examined is the statistical significance (Sig. column). Mentioned interpretations should be made for statistically significant analysis results, which were colored in green or red. Green colored results indicate a significant positive effect of dosage on the outcome, whereas the red colored results indicate a significant negative effect. It is important to note and consider sample sizes when making interpretations. Results for the extremely low sample sizes should be cautiously interpreted, even though the effect was found to be statistically significant.

1. DOSAGE EFFECT ANALYSES FOR AFRICAN AMERICAN STUDENTS (NO LEP BREAKDOWN NO DOSAGE LIMIT)

BOY GPA:

DCoL Group	Grade	Valid N	Dos. Eff.	p	Sig.
Summer 2017	Elementary	498	**-0.006**	0.691	No
	Middle	344	**-0.034**	0.115	No
	High	101	**0.011**	0.833	No
Summer 2018	Elementary	403	**0.031**	0.060	No
	Middle	271	**0.019**	0.575	No
	High	847	**-0.076**	0.077	No
Both Summers	Elementary	320	**0.027**	0.008	Yes
	Middle	403	**0.051**	0.000	Yes
	High	689	**0.010**	0.662	No

Attendance:

DCoL Group	Grade	Valid N	Dos. Eff.	p	Sig.	Odds Dif.
Summer 2017	Elementary	570	-0.003	0.791	No	**-0.3%**
	Middle	397	0.002	0.886	No	**0.2%**
	High	116	-0.018	0.502	No	**-1.8%**
Summer 2018	Elementary	404	0.001	0.950	No	**0.1%**
	Middle	278	-0.008	0.594	No	**-0.8%**
	High	836	-0.006	0.593	No	**-0.6%**
Both Summers	Elementary	430	0.006	0.464	No	**0.6%**
	Middle	409	0.014	0.043	Yes	**1.4%**
	High	677	0.008	0.178	No	**0.8%**

STAAR Reading:

DCoL Group	Grade	Valid N	Dos. Eff.	p	Sig.	Odds Dif.
Summer 2017	Elementary	365	0.019	0.142	No	**1.9%**
	Middle	354	0.009	0.384	No	**0.9%**
Summer 2018	Elementary	266	0.028	0.022	Yes	**2.8%**
	Middle	264	-0.001	0.961	No	**-0.1%**
Both Summers	Elementary	187	0.025	0.019	Yes	**2.6%**

	Middle	404	0.016	0.001	Yes	**1.6%**

STAAR Math:

DCoL Group	Grade	Valid N	Dos. Eff.	p	Sig.	Odds Dif.
Summer 2017	Elementary	365	-0.018	0.196	No	**-1.8%**
	Middle	354	0.002	0.857	No	**0.2%**
Summer 2018	Elementary	266	0.019	0.160	No	**1.9%**
	Middle	263	0.021	0.062	No	**2.1%**
Both Summers	Elementary	187	0.028	0.022	Yes	**2.8%**
	Middle	405	0.013	0.004	Yes	**1.3%**

STAAR Eng1 & Alg1:

DCoL Group	Outcome	Valid N	Dos. Eff.	p	Sig.	Odds Dif.
Summer 2017	English 1	51	0.152	0.065	No	**16.5%**
	Algebra 1	30	No convergence			
Summer 2018	English 1	431	0.010	0.467	No	**1.0%**
	Algebra 1	171	-0.014	0.497	No	**-1.3%**
Both Summers	English 1	452	0.035	0.000	Yes	**3.6%**
	Algebra 1	192	0.040	0.001	Yes	**4.0%**

2. DOSAGE EFFECT ANALYSES FOR HISPANIC STUDENTS (NO LEP BREAKDOWN NO DOSAGE LIMIT)

BOY GPA:

DCoL Group	Grade	Valid N	Dos. Eff.	p	Sig.
Summer 2017	Elementary	1,885	**0.011**	0.333	No
	Middle	649	**0.039**	0.039	Yes
	High	104	**0.013**	0.649	No
Summer 2018	Elementary	1,434	**0.012**	0.169	No
	Middle	579	**0.032**	0.198	No
	High	2,364	**-0.001**	0.987	No
Both Summers	Elementary	980	**0.024**	0.000	Yes
	Middle	696	**0.084**	0.000	Yes
	High	2,087	**0.040**	0.063	No

Attendance:

DCoL Group	Grade	Valid N	Dos. Eff.	p	Sig.	Odds Dif.
Summer 2017	Elementary	1,979	0.046	0.252	No	**4.8%**
	Middle	674	0.039	0.347	No	**4.0%**
	High	108	0.021	0.428	No	**2.1%**
Summer 2018	Elementary	1,441	-0.006	0.713	No	**-0.6%**
	Middle	587	0.019	0.232	No	**1.9%**
	High	2,335	-0.012	0.228	No	**-1.2%**
Both Summers	Elementary	1,309	0.005	0.694	No	**0.5%**
	Middle	719	0.041	0.002	Yes	**4.2%**
	High	2,084	0.003	0.554	No	**0.3%**

STAAR Reading:

DCoL Group	Grade	Valid N	Dos. Eff.	p	Sig.	Odds Dif.
Summer 2017	Elementary	1,402	0.005	0.669	No	**0.5%**
	Middle	657	-0.001	0.942	No	**-0.1%**
Summer 2018	Elementary	1,014	0.006	0.448	No	**0.6%**
	Middle	573	0.022	0.012	Yes	**2.2%**

Both Summers	Elementary	539	0.045	0.003	Yes	**4.6%**
	Middle	703	0.031	0.000	Yes	**3.1%**

STAAR Math:

DCoL Group	Grade	Valid N	Dos. Eff.	p	Sig.	Odds Dif.
Summer 2017	Elementary	1,402	0.012	0.484	No	**1.2%**
	Middle	657	0.023	0.043	Yes	**2.3%**
Summer 2018	Elementary	1,014	0.005	0.646	No	**0.5%**
	Middle	573	-0.014	0.029	Yes	**-1.4%**
Both Summers	Elementary	539	0.027	0.082	No	**2.7%**
	Middle	702	0.015	0.001	Yes	**1.5%**

STAAR Eng1 & Alg1:

DCoL Group	Outcome	Valid N	Dos. Eff.	p	Sig.	Odds Dif.
Summer 2017	English 1	42	0.027	0.459	No	**2.7%**
	Algebra 1	32	0.023	0.591	No	**2.4%**
Summer 2018	English 1	995	-0.017	0.259	No	**-1.7%**
	Algebra 1	397	-0.046	0.034	Yes	**-4.5%**
Both Summers	English 1	1,399	0.033	0.000	Yes	**3.4%**
	Algebra 1	463	0.028	0.023	Yes	**2.8%**

3. DOSAGE EFFECT ANALYSES FOR "OTHER ETHNICIT" STUDENTS (NO LEP BREAKDOWN NO DOSAGE LIMIT)

BOY GPA:

DCoL Group	Grade	Valid N	Dos. Eff.	p	Sig.
Summer 2017	Elementary	53	**0.027**	0.399	No
	Middle	31	**0.056**	0.295	No
	High	15	**-0.030**	0.850	No
Summer 2018	Elementary	66	**0.047**	0.135	No
	Middle	39	**0.033**	0.614	No
	High	57	**-0.005**	0.977	No
Both Summers	Elementary	31	**0.018**	0.438	No
	Middle	43	**0.048**	0.017	Yes
	High	91	**0.024**	0.415	No

Attendance:

DCoL Group	Grade	Valid N	Dos. Eff.	p	Sig.	Odds Dif.
Summer 2017	Elementary	56	0.128	0.575	No	**13.7%**
	Middle	33	0.069	0.275	No	**7.2%**
	High	No sample data				
Summer 2018	Elementary	65	0.000	1.000	No	**0.0%**
	Middle	39	0.001	0.980	No	**0.1%**
	High	58	0.090	0.396	No	**9.4%**
Both Summers	Elementary	38	No convergence			
	Middle	44	0.000	1.000	No	**0.0%**
	High	93	0.060	0.046	Yes	**6.2%**

STAAR Reading:

DCoL Group	Grade	Valid N	Dos. Eff.	p	Sig.	Odds Dif.
Summer 2017	Elementary	35	No convergence			
	Middle	29	-0.028	0.304	No	**-2.8%**
Summer 2018	Elementary	46	0.027	0.537	No	**2.7%**

	Middle	37	-0.261	0.073	No	**-23.0%**
Both Summers	Elementary	14	-0.083	0.526	No	**-7.9%**
	Middle	44	0.032	0.041	Yes	**3.3%**

STAAR Math:

DCoL Group	Grade	Valid N	Dos. Eff.	p	Sig.	Odds Dif.
Summer 2017	Elementary	35	-0.129	0.785	No	**-12.1%**
	Middle	29	-0.003	0.883	No	**-0.3%**
Summer 2018	Elementary	46	0.054	0.512	No	**5.6%**
	Middle	37	0.055	0.240	No	**5.7%**
Both Summers	Elementary	14	0.000	1.000	No	**0.0%**
	Middle	44	0.008	0.323	No	**0.8%**

STAAR Eng1 & Alg1:

DCoL Group	Outcome	Valid N	Dos. Eff.	p	Sig.	Odds Dif.
Summer 2017	English 1	6	No convergence			
	Algebra 1	5	No convergence			
Summer 2018	English 1	26	0.011	0.876	No	**1.1%**
	Algebra 1	6	0.030	0.808	No	**3.0%**
Both Summers	English 1	52	0.046	0.003	Yes	**4.8%**
	Algebra 1	22	0.054	0.045	Yes	**5.5%**

4. DOSAGE EFFECT ANALYSES FOR WHITE STUDENTS (NO LEP BREAKDOWN NO DOSAGE LIMIT)

BOY GPA:

DCoL Group	Grade	Valid N	Dos. Eff.	p	Sig.
Summer 2017	Elementary	66	**0.070**	0.045	Yes
	Middle	45	**-0.075**	0.175	No
	High	6	**0.274**	0.407	No
Summer 2018	Elementary	95	**0.040**	0.053	No
	Middle	18	**-0.010**	0.893	No
	High	60	**0.183**	0.634	No
Both Summers	Elementary	48	**0.027**	0.022	Yes
	Middle	31	**0.046**	0.082	No
	High	45	**0.036**	0.315	No

Attendance:

DCoL Group	Grade	Valid N	Dos. Eff.	p	Sig.	Odds Dif.
Summer 2017	Elementary	74	0.054	0.436	No	**5.5%**
	Middle	48	-0.060	0.129	No	**-5.8%**
	High	6	0.000	1.000	No	**0.0%**
Summer 2018	Elementary	93	-0.054	0.275	No	**-5.3%**
	Middle	20	-0.010	0.766	No	**-0.9%**
	High	57	0.030	0.803	No	**3.0%**
Both Summers	Elementary	70	-2.294	0.998	No	**-89.9%**
	Middle	No sample data				
	High	46	0.009	0.545	No	**0.9%**

STAAR Reading:

DCoL Group	Grade	Valid N	Dos. Eff.	p	Sig.	Odds Dif.
Summer 2017	Elementary	42	-0.144	0.197	No	**-13.4%**
	Middle	41	-0.107	0.088	No	**-10.1%**
Summer 2018	Elementary	52	0.032	0.541	No	**3.3%**

	Middle	20	0.275	0.391	No	**31.6%**
Both Summers	Elementary	21	No convergence			
	Middle	32	0.002	0.837	No	**0.2%**

STAAR Math:

DCoL Group	Grade	Valid N	Dos. Eff.	p	Sig.	Odds Dif.
Summer 2017	Elementary	42	-0.114	0.042	Yes	**-10.8%**
	Middle	41	-0.119	0.041	Yes	**-11.2%**
Summer 2018	Elementary	52	0.032	0.667	No	**3.3%**
	Middle	20	0.011	0.807	No	**1.1%**
Both Summers	Elementary	21	No convergence			
	Middle	32	0.003	0.757	No	**0.3%**

STAAR Eng1 & Alg1:

DCoL Group	Outcome	Valid N	Dos. Eff.	p	Sig.	Odds Dif.
Summer 2017	English 1	2	No convergence			
	Algebra 1	2	0.000	1.000	No	**0.0%**
Summer 2018	English 1	16	-0.400	0.253	No	**-33.0%**
	Algebra 1	6	No convergence			
Both Summers	English 1	26	0.026	0.390	No	**2.6%**
	Algebra 1	8	No convergence			