

City Study 2021:

AUSTIN

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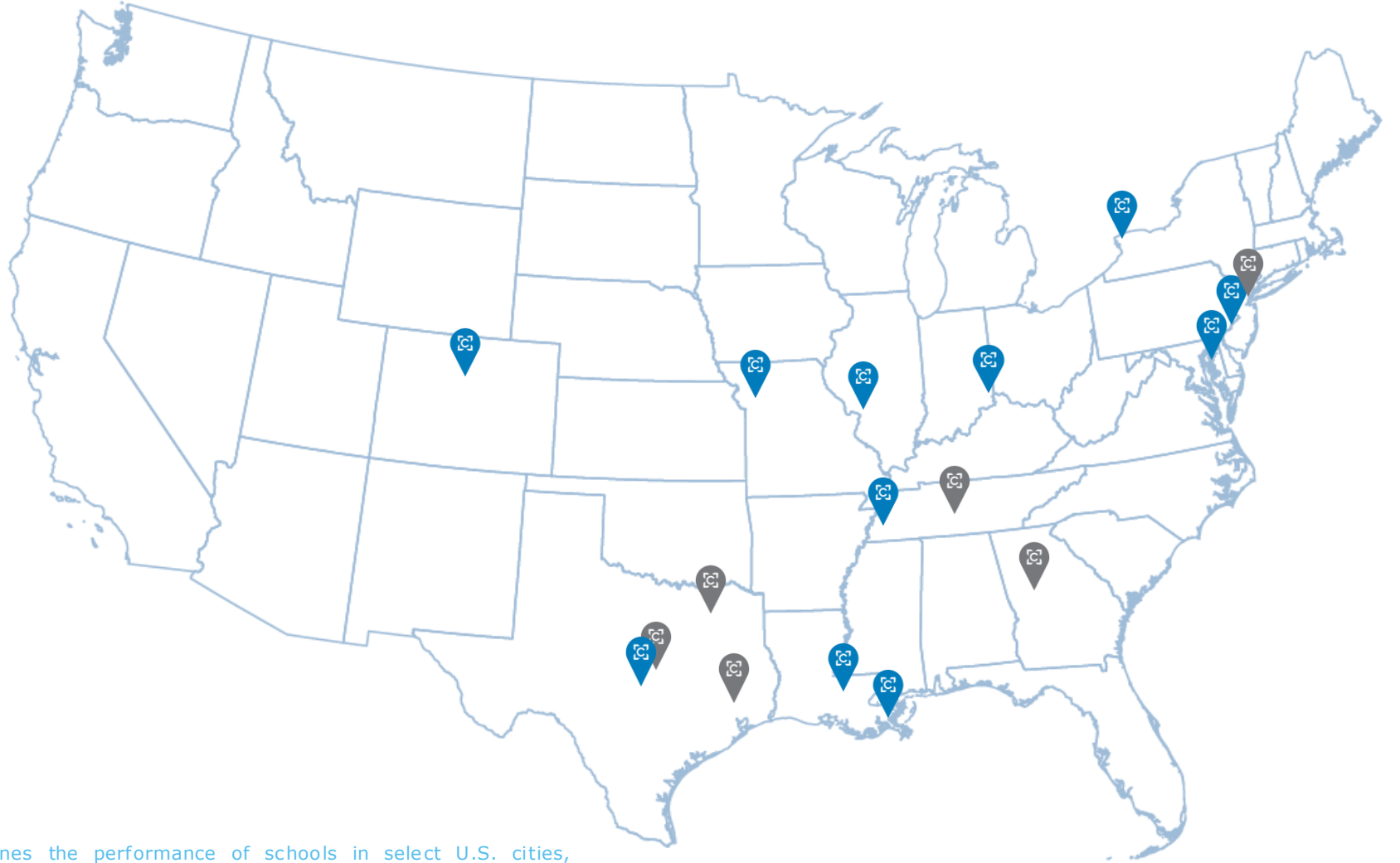


○ REPORT OVERVIEW

01



About The City Studies Project



The City Studies project examines the performance of schools in select U.S. cities, including Austin. We study the academic progress of students as the measure of school performance.

 Cohort 1

 Cohort 2





Sectors of Schools

COMMUNITIES MAY HAVE UP TO THREE SECTORS OF SCHOOLS



CHARTER SCHOOLS

Public schools operated independently from the traditional school district, with autonomy in adapting school designs and held accountable for education results.



Charter Management Organizations (CMOs)

Organizations holding the charter and overseeing the operation of at least three charter schools.



Independent Charter Schools

Organizations holding the charter and overseeing the operation of a single or two charter schools.

There are only two independent charter schools with student growth scores in Austin during the span of this study; we redact the results for this type due to the small number of the schools.



SELECTIVE MAGNET SCHOOLS

District-run schools with focused themes and academically selective admission.

There are only two selective magnet schools with student growth scores in Austin during the span of this study; we redact the results for this type due to the small number of the schools.



OTHER DISTRICT-RUN SCHOOLS

Public schools not belonging to any of above two types.



Research Question and Analyses

IN THIS REPORT WE EXAMINE ACADEMIC PERFORMANCE IN Austin USING DATA FROM THE SCHOOL YEARS 2014-15 THROUGH 2017-18. THERE ARE THREE LEVELS OF ANALYSIS.

01

Overall performance in Austin schools over three years.

02

Performance for Austin charter schools and the other public schools in Austin over three years.

03

Performance in the 2017-2018 school year by school type, race, poverty status, English language learner (ELL) status, special education status and gender.

WE MAKE TWO SETS OF COMPARISONS.

- The performance of Austin students is benchmarked against the state average performance, accounting for student characteristics.
- The performance of charter school students within Austin are then compared to that of similar traditional public school (district school) students within Austin.



○ Measure of Academic Performance

ACHIEVEMENT VS. GROWTH

Achievement scores capture what a student knows at a point in time. They are influenced by students' prior conditions in addition to schools' contributions.

Growth scores indicate how much progress a student makes from one year to the next. Growth scores allow us to zero in on the contributions of schools separately from other factors that affect point-in-time scores.

IN THIS STUDY WE MEASURE ACADEMIC PERFORMANCE AS HOW MUCH GROWTH STUDENTS MAKE FROM ONE YEAR TO THE NEXT

We analyze student growth in standard deviation units so that the results can be assessed for statistical differences. The full set of findings appear in the Appendix.

In the following graphs of findings, we transform growth from standard deviation units into days of learning based on a typical 180-day school year.





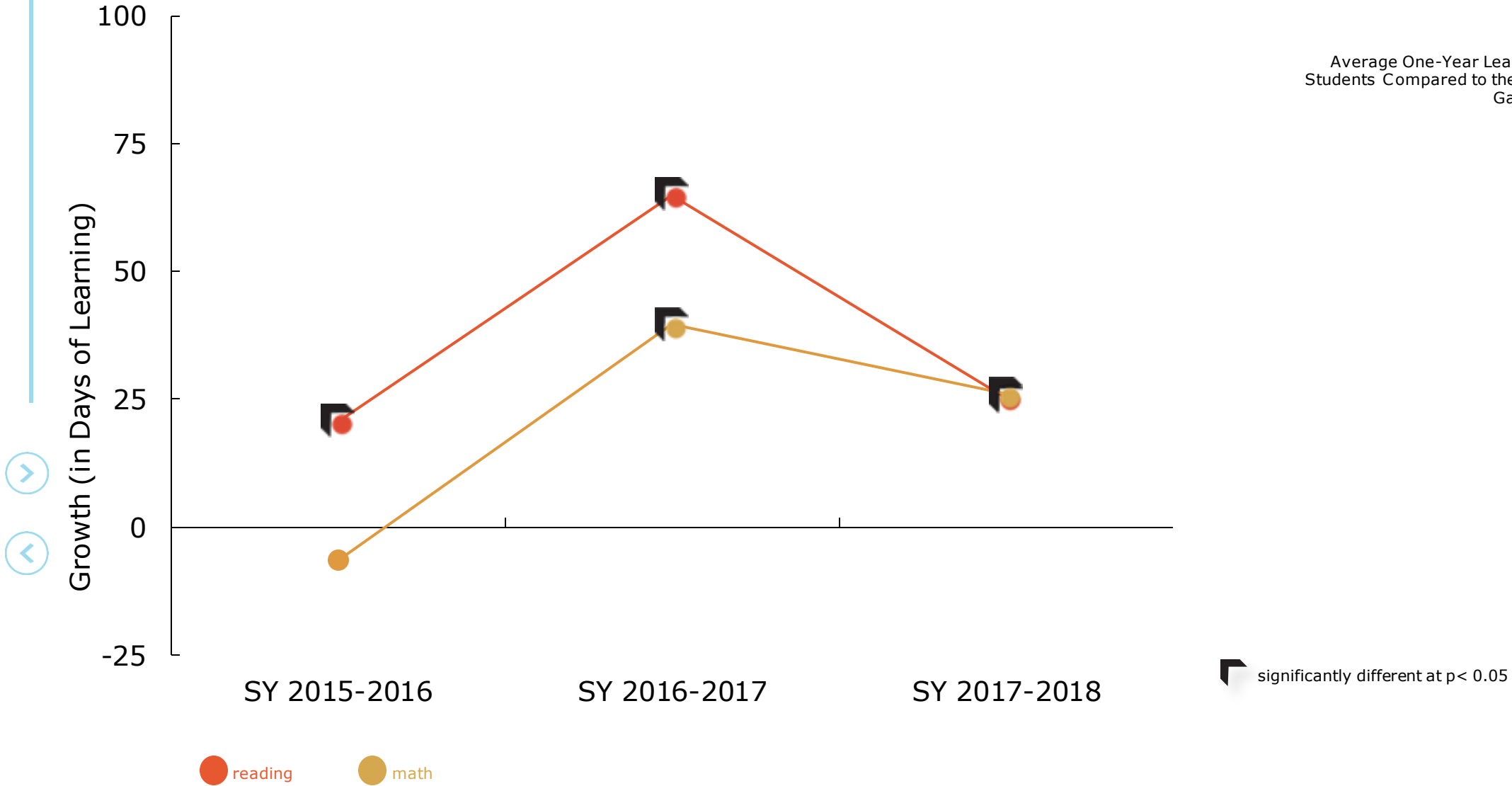
○ RESEARCH FINDINGS

02



Research Findings > Overall Austin Results > Reading & Math

Average One-Year Learning Gains for All Austin Students Compared to the State Average Learning Gains, by Year and Subject

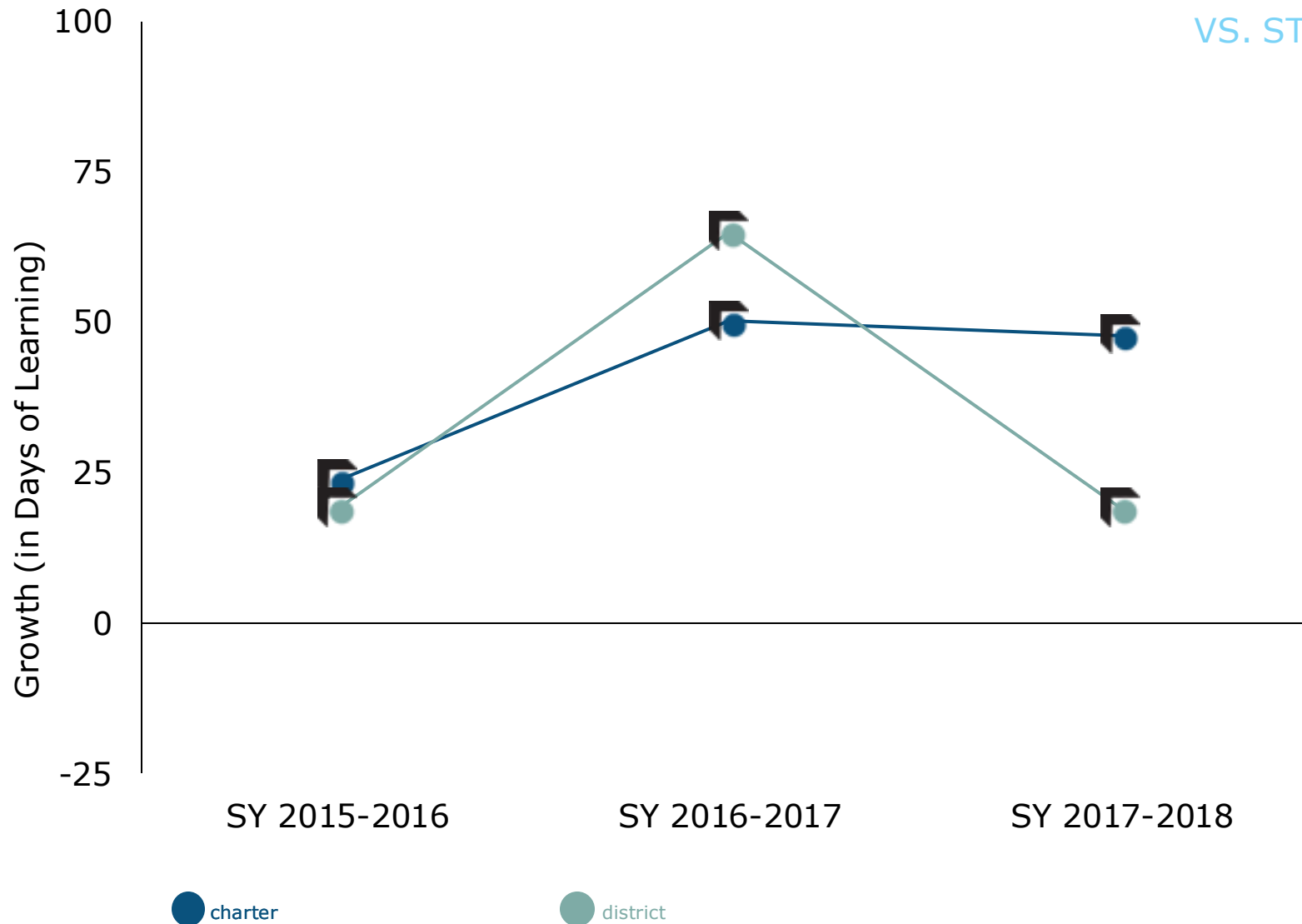


Research Findings > Sector Analysis

> Reading

VS. STATE & COMPARISON WITHIN AUSTIN

Learning Gains in Reading for Students in Austin
Charter Schools and Austin District Schools Compared
to the State Average Learning Gains, by Year



Tests of Differences			
Reading	'15-'16	'16-'17	'17-'18
Charter vs. District			↙

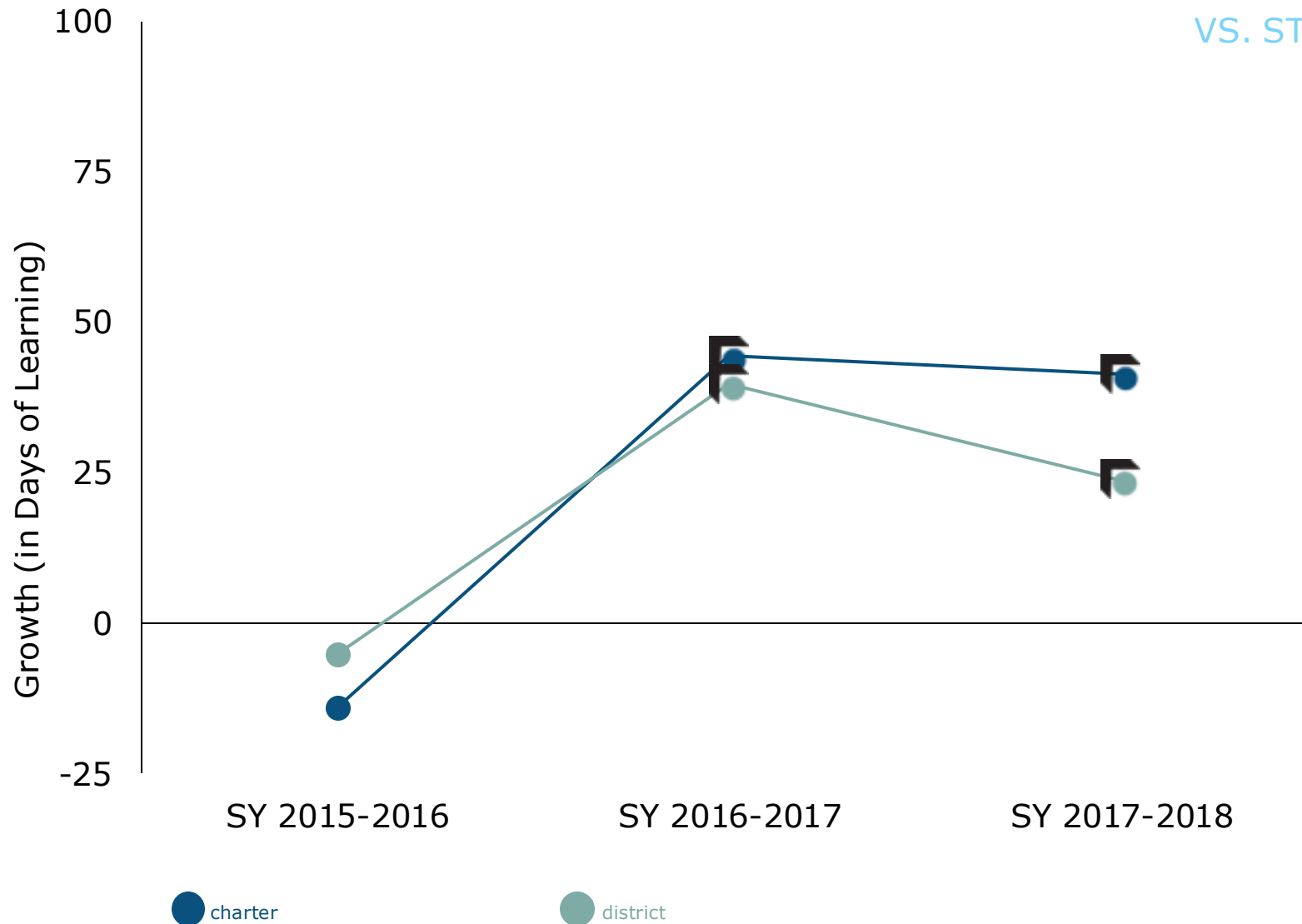
↙ significantly different at $p < 0.05$

Research Findings > Sector Analysis

> Math

VS. STATE & COMPARISON WITHIN AUSTIN

Learning Gains in Math for Students in Austin Charter Schools and Austin District Schools Compared to the State Average Learning Gains, by Year



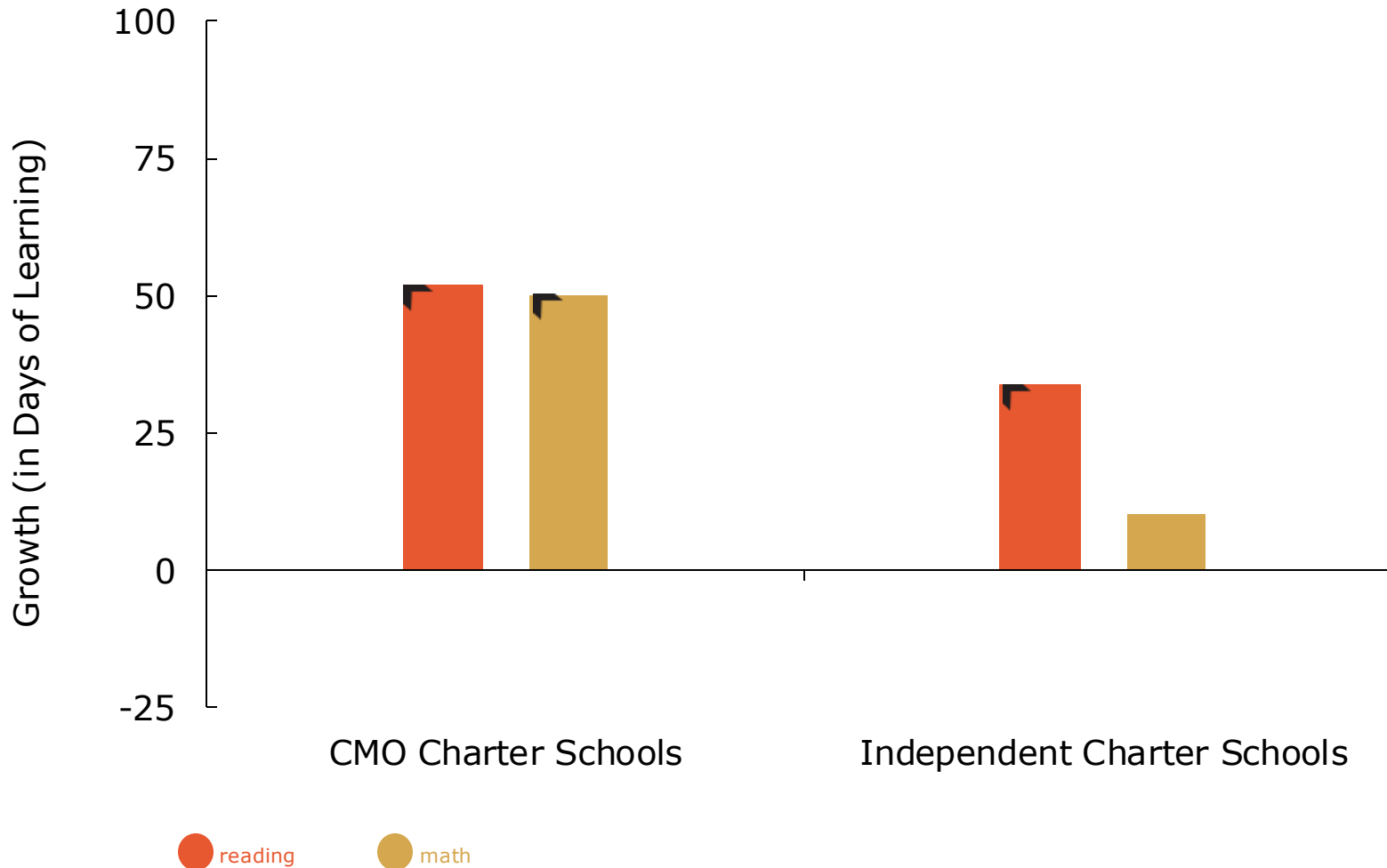
Tests of Differences			
Math	'15-'16	'16-'17	'17-'18
Charter vs. District			

significantly different at $p < 0.05$

Research Findings > Charter Subsector Analysis

> vs. state & comparison within Austin

Relative Learning Gains for Students in Austin CMO-Affiliated Charter Schools and Independent Austin Charter Schools Compared to the State Average Learning Gains, by Subject



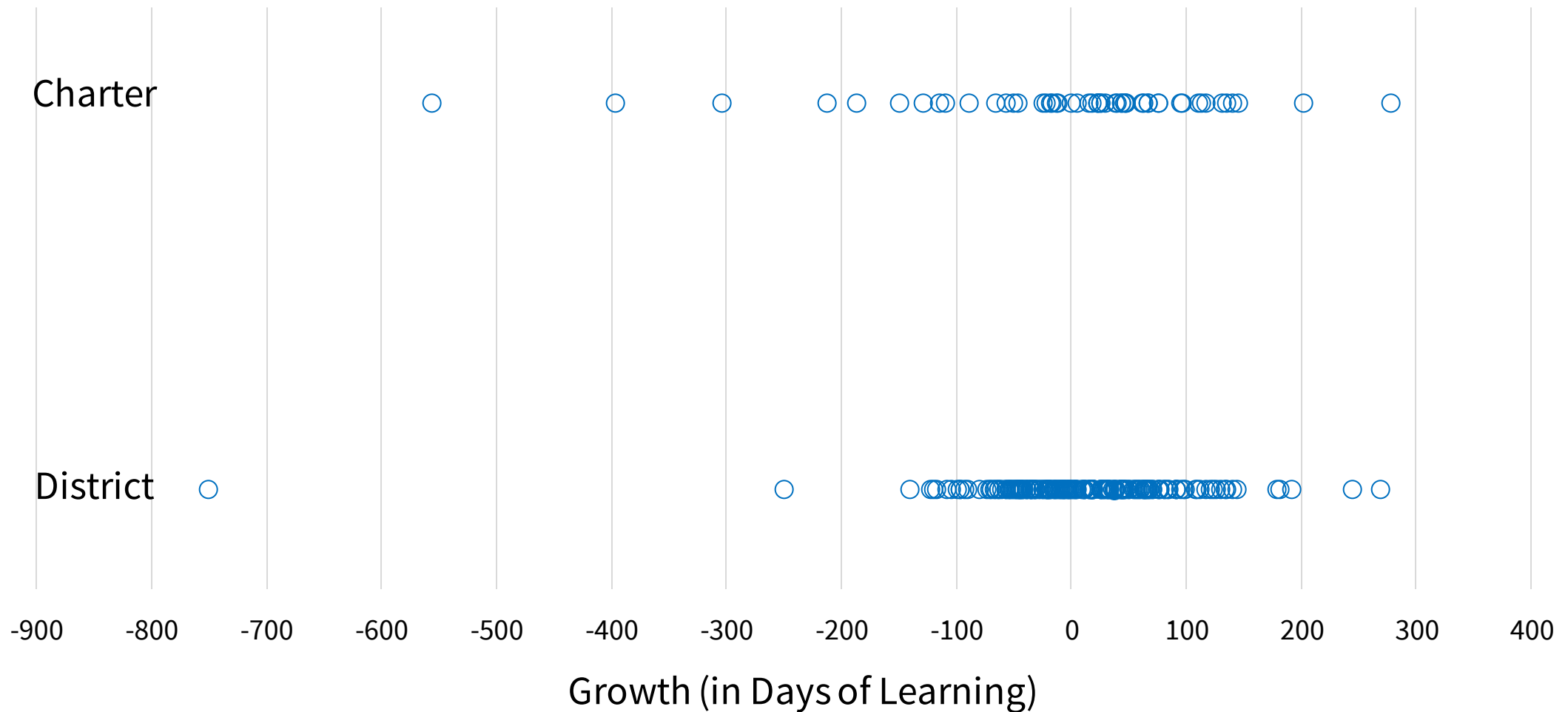
Tests of Differences

Reading sig
CMOs vs Independent Charter Schools

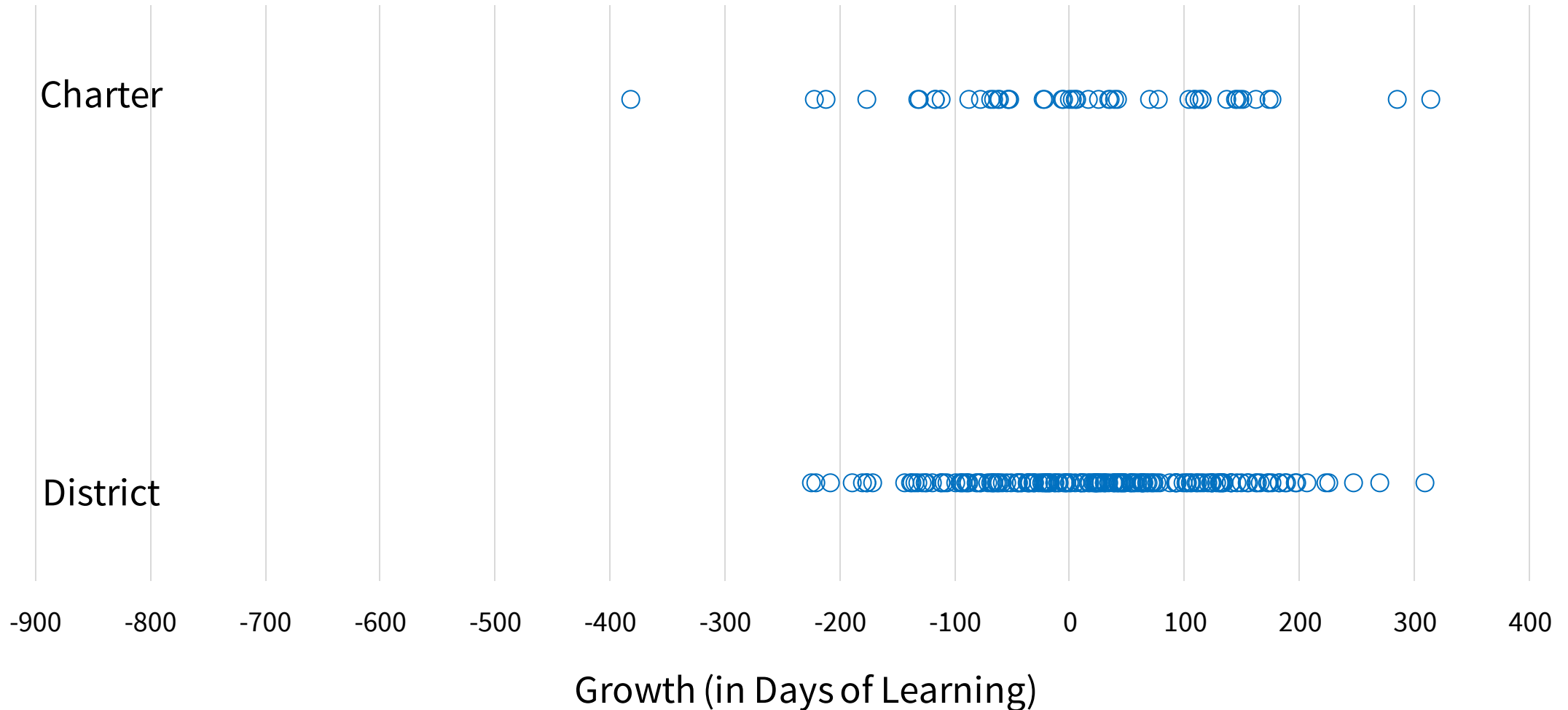
Math
CMOs vs Independent Charter Schools

↙ significantly different at $p < 0.05$

Research Findings > School-Level Performance by Sector > Reading



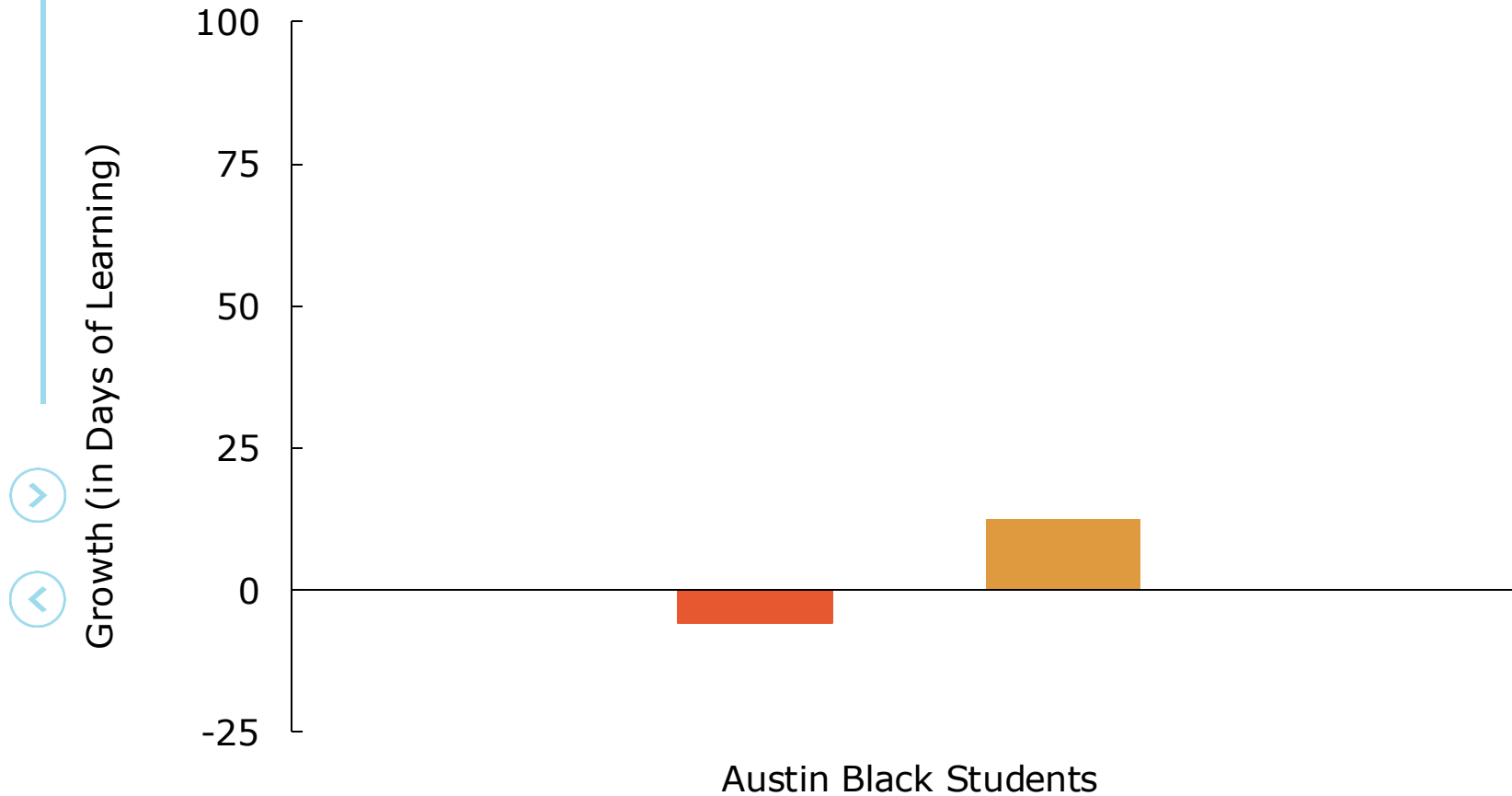
Research Findings > School-Level Performance by Sector > Math



Research Findings > Student Subgroup Analysis > Black Students

ALL VS. STATE

Learning Gains for All Austin Black Students
Compared to the Average Learning Gains of Black
Students Statewide, by Subject



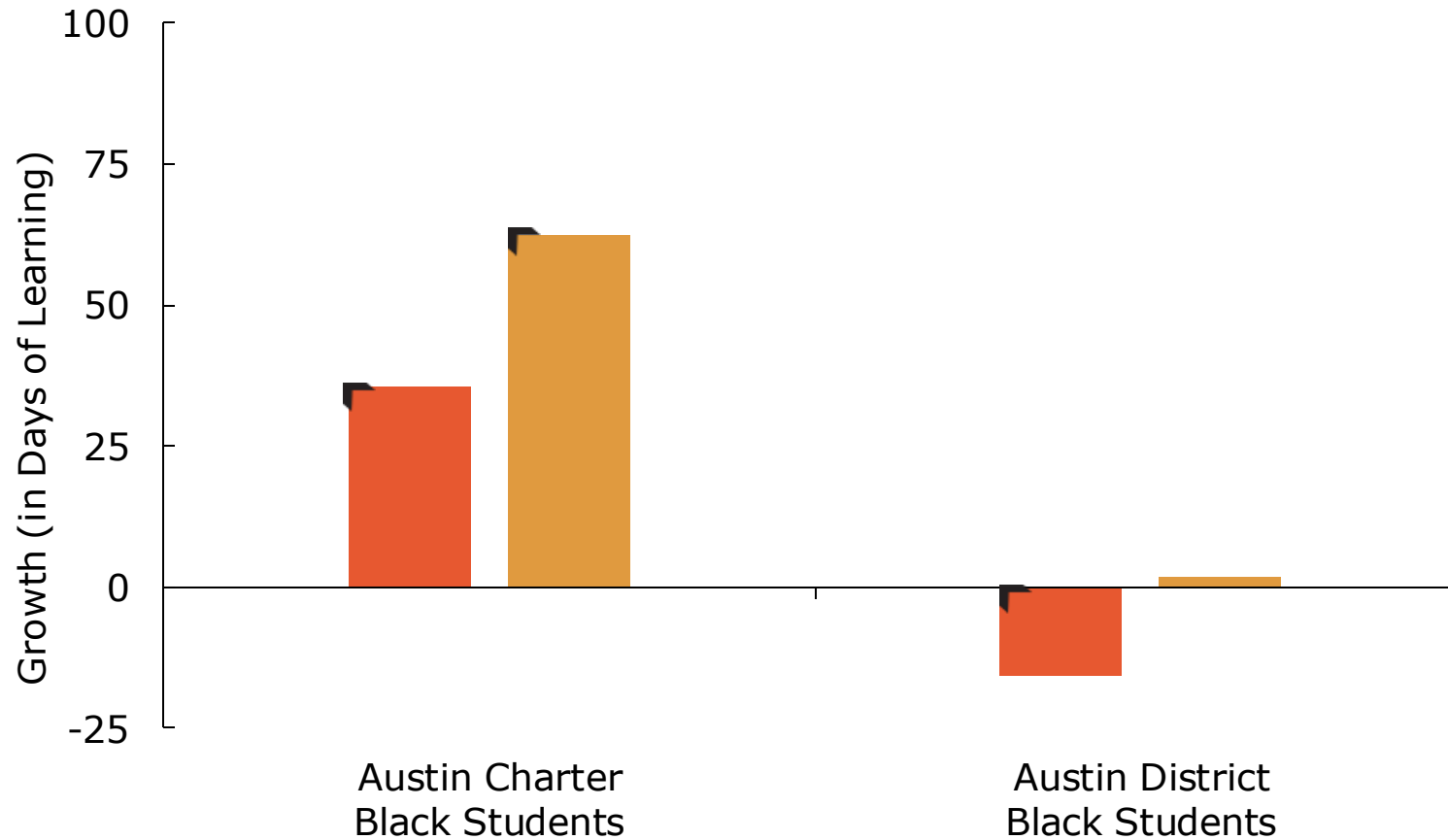
significantly different at $p < 0.05$

reading math

Research Findings > Student Subgroup Analysis > Black Students

VS. STATE BY SECTOR & COMPARISON WITHIN AUSTIN

Learning Gains for Black Students in Austin Charter Schools and Black Students in Austin District Schools Compared to the Average Learning Gains of Black Students Statewide, by Subject



Tests of Differences

Reading sig
Charter Black vs. District Black

Math
Charter Black vs. District Black

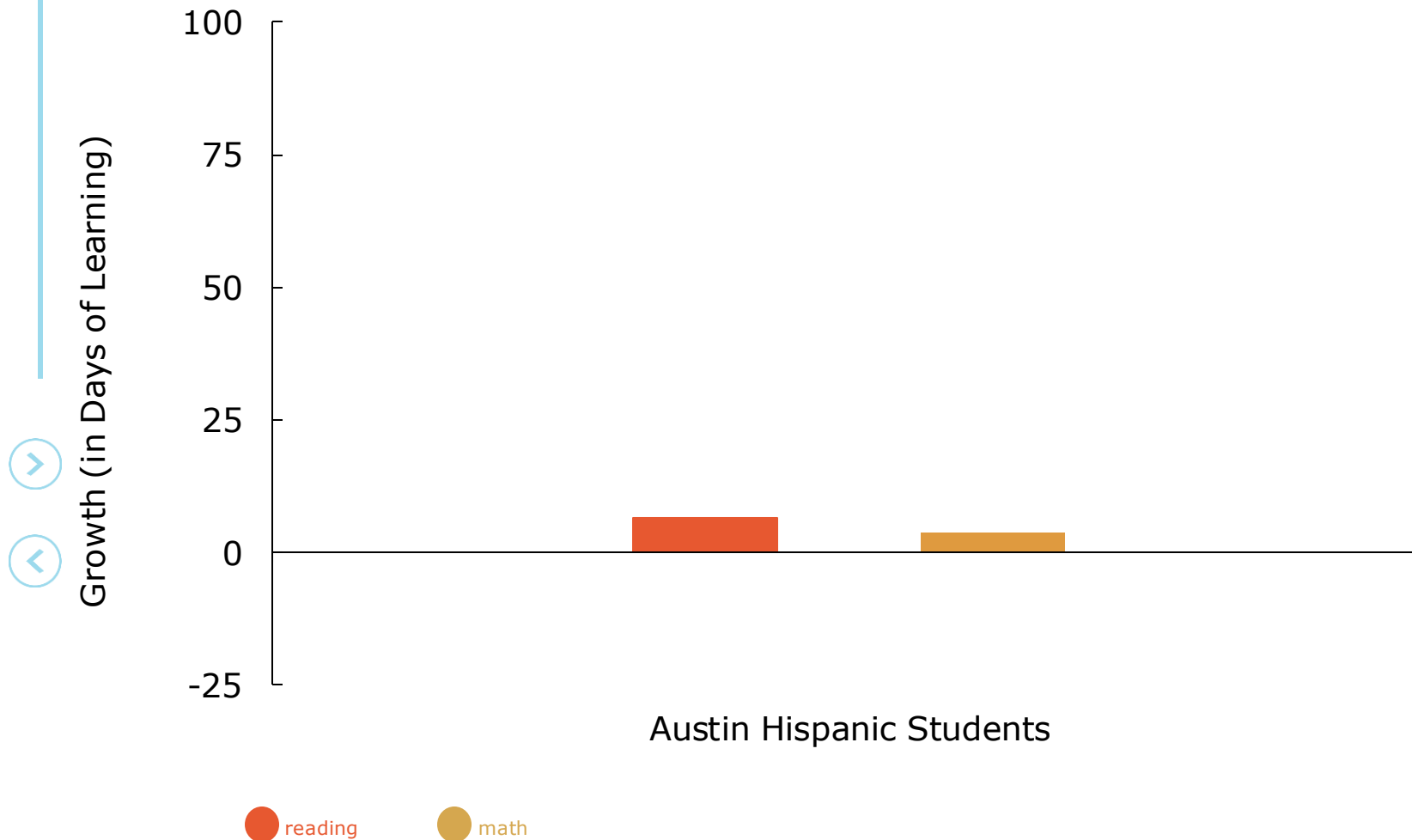
significantly different at $p < 0.05$

reading math

Research Findings > Student Subgroup Analysis > Hispanic Students

ALL VS. STATE

Learning Gains for All Austin Hispanic Students
Compared to the Average Learning Gains of Hispanic
Students Statewide, by Subject

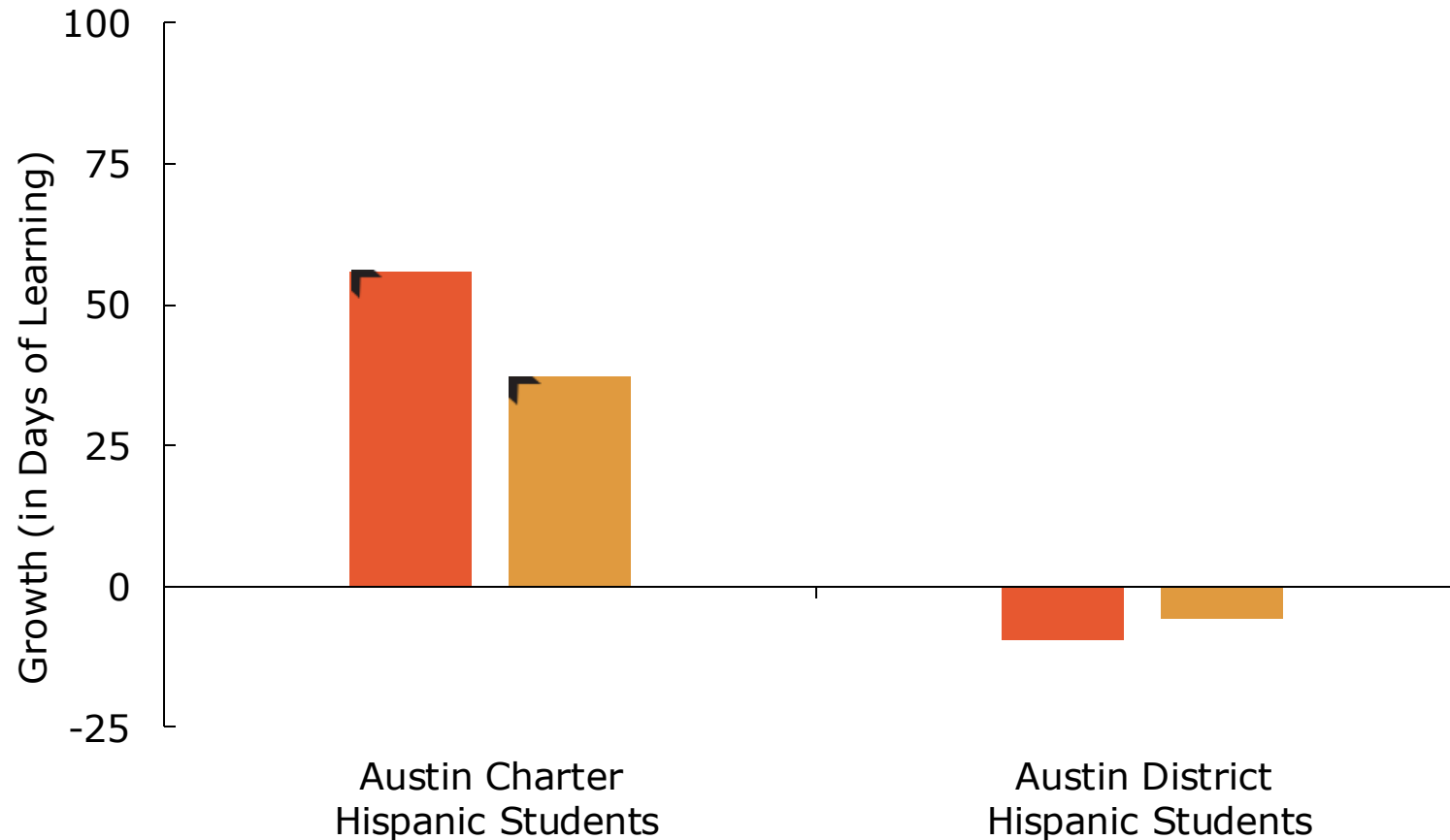


significantly different at $p < 0.05$

Research Findings > Student Subgroup Analysis > Hispanic Students

VS. STATE BY SECTOR & COMPARISON WITHIN AUSTIN

Learning Gains for Hispanic Students in Austin Charter Schools and Hispanic Students in Austin District Schools Compared to the Average Learning Gains of Hispanic Students Statewide, by Subject



Tests of Differences

Reading sig
Charter Hispanic vs. District Hispanic

Math
Charter Hispanic vs. District Hispanic

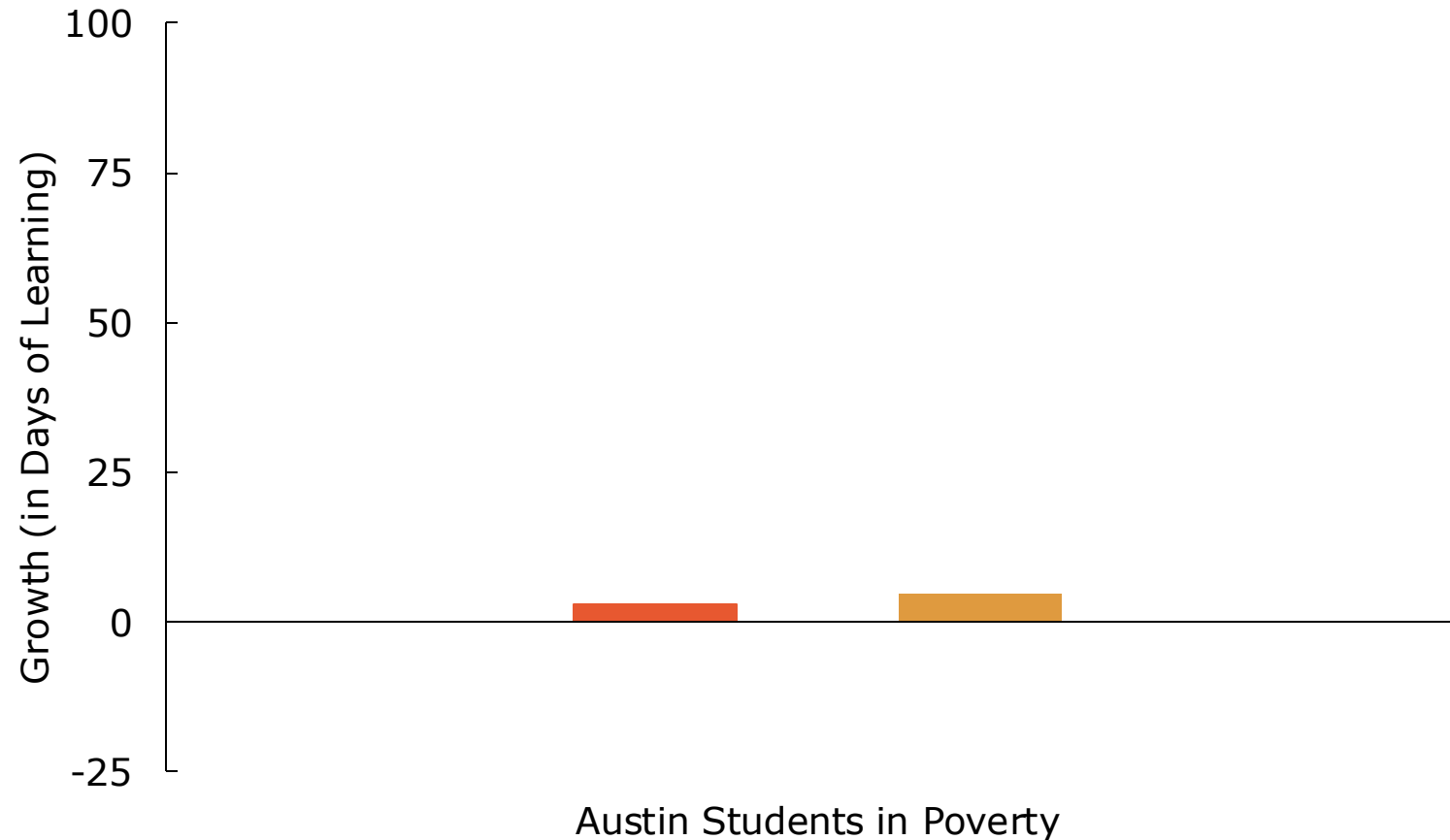
significantly different at $p < 0.05$

● reading ● math

Research Findings > Student Subgroup Analysis > Students in Poverty

ALL VS. STATE

Learning Gains for All Austin Students in Poverty
Compared to the Average Learning Gains of Students
in Poverty Statewide, by Subject



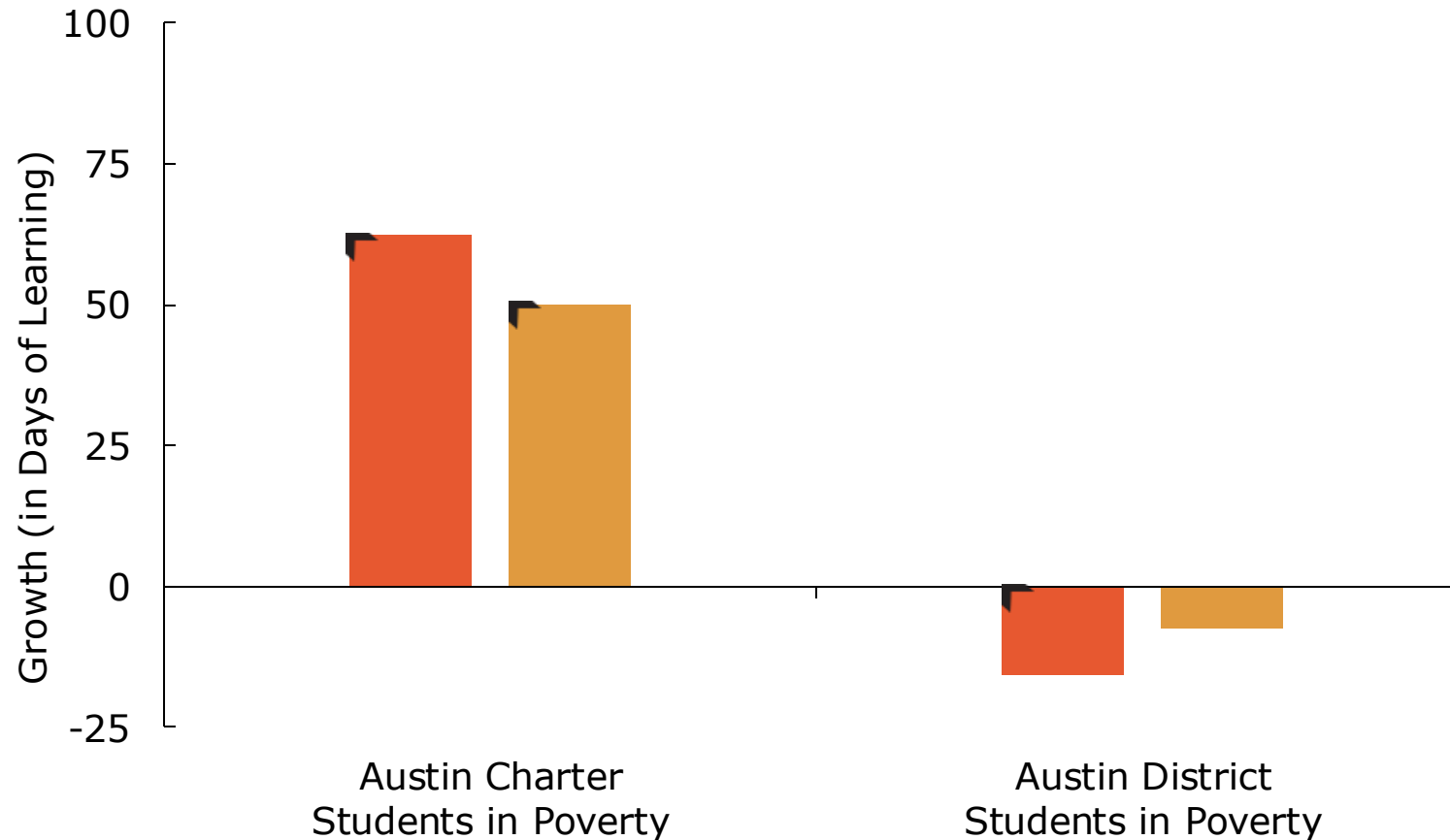
significantly different at $p < 0.05$

reading math

Research Findings > Student Subgroup Analysis > Students in Poverty

VS. STATE BY SECTOR & COMPARISON WITHIN AUSTIN

Learning Gains for Austin Charter School Students in Poverty and Austin District School Students in Poverty Compared to the Average Learning Gains of Students in Poverty Statewide, by Subject



Tests of Differences

Reading sig
Charter Poverty vs. District Poverty

Math
Charter Poverty vs. District Poverty

significantly different at $p < 0.05$

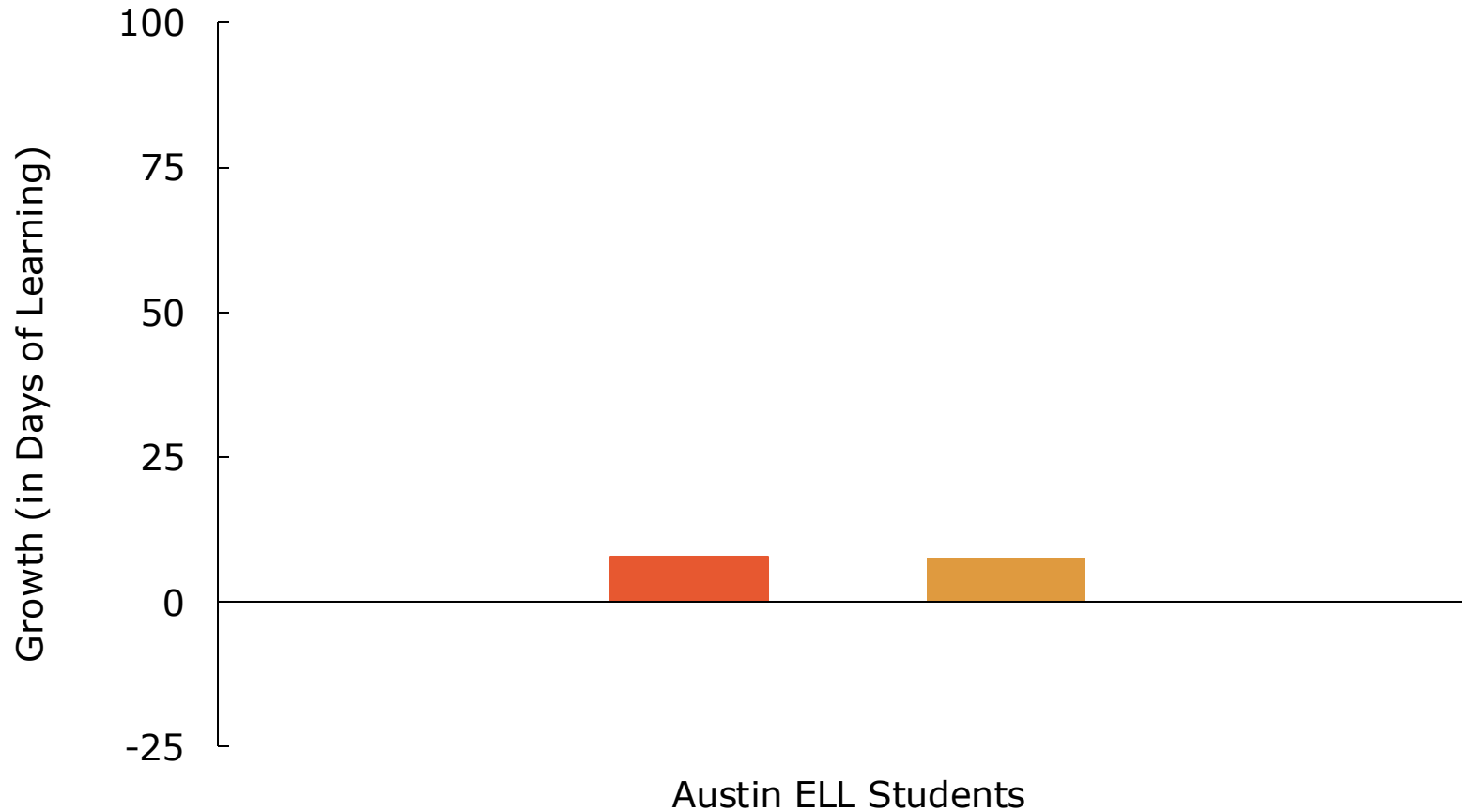
● reading ● math

Research Findings > Student Subgroup Analysis

> ELL Students

ALL VS. STATE

Learning Gains for All ELL Students in Austin
Compared to the Average Learning Gains of ELL
Students Statewide, by Subject



significantly different at $p < 0.05$

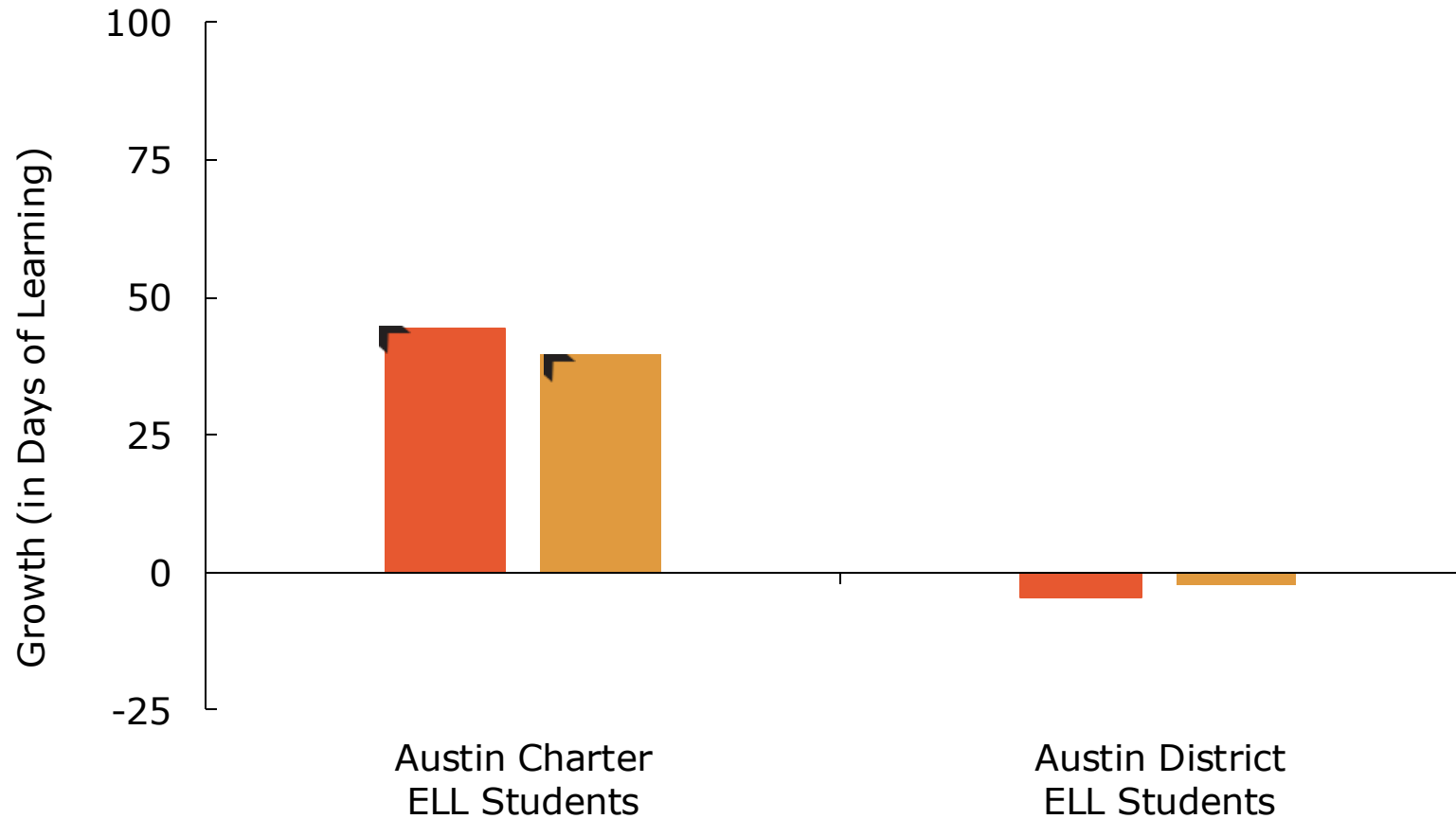
reading math

Research Findings > Student Subgroup Analysis

> ELL Students

VS. STATE BY SECTOR & COMPARISON WITHIN AUSTIN

Learning Gains for ELL Students in Austin Charter Schools and ELL Students in Austin District Schools Compared to the Average Learning Gains of ELL Students Statewide, by Subject



Tests of Differences

Subject	Comparison	Significance
Reading	Charter ELL vs. District ELL	sig
	Charter ELL vs. State ELL	
Math	Charter ELL vs. District ELL	sig
	Charter ELL vs. State ELL	

↳ significantly different at $p < 0.05$

● reading

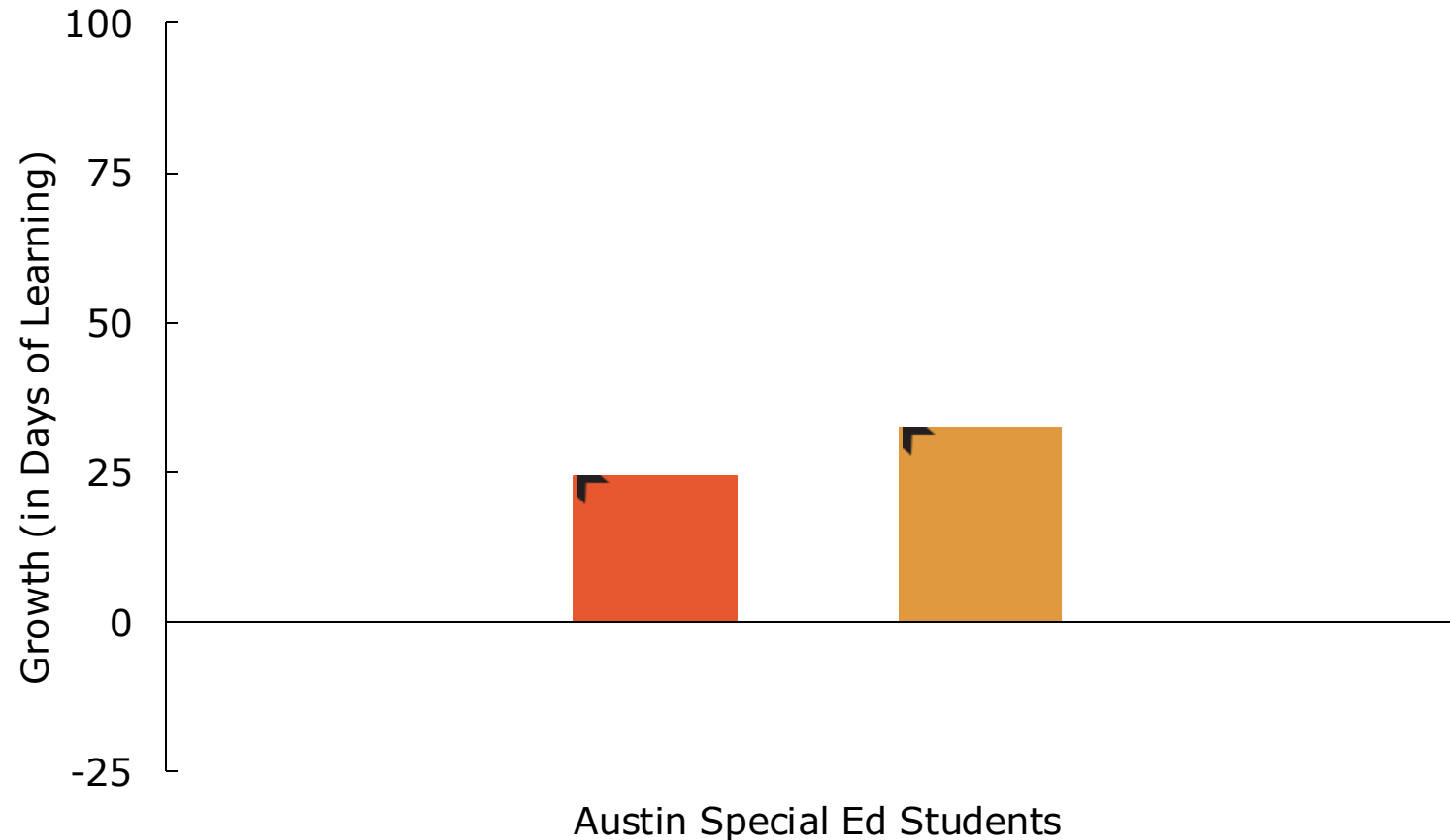
● math

§ Redacted to comply with the state's suppression rule of small sample size.

Research Findings > Student Subgroup Analysis > Special Ed Students

ALL VS. STATE

Learning Gains for All Austin Students in Special Education Compared to the Average Learning Gains of Students in Special Education Statewide, by Subject



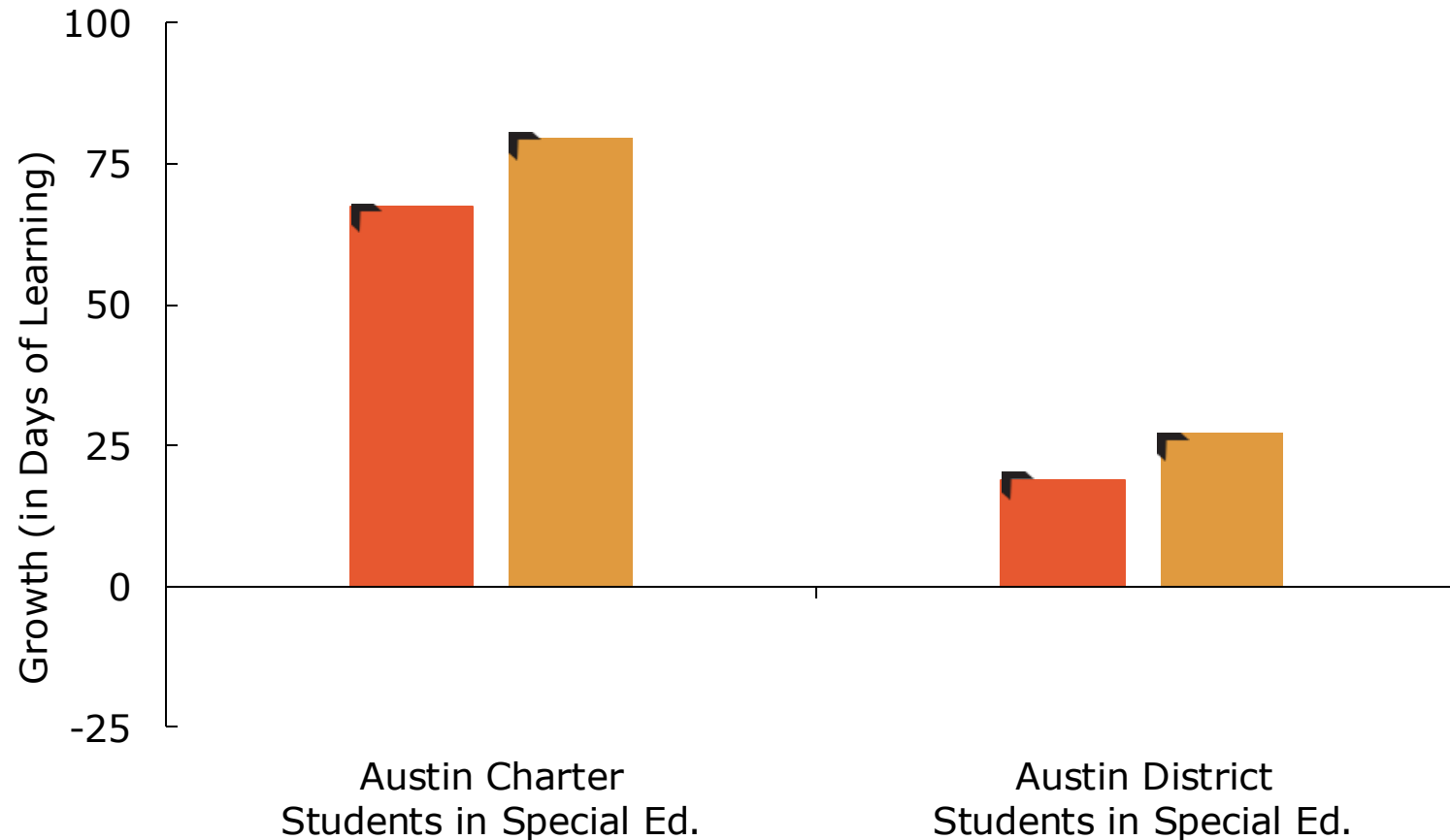
significantly different at $p < 0.05$

reading math

Research Findings > Student Subgroup Analysis > Special Ed Students

VS. STATE BY SECTOR & COMPARISON WITHIN AUSTIN

Learning Gains for Austin Charter School Students in Special Ed. and Austin District School Students in Special Ed. Compared to the Average Learning Gains of Students in Special Ed. Statewide, by Subject



Tests of Differences

Reading sig
Charter Sped vs. District Sped

Math
Charter Sped vs. District Sped

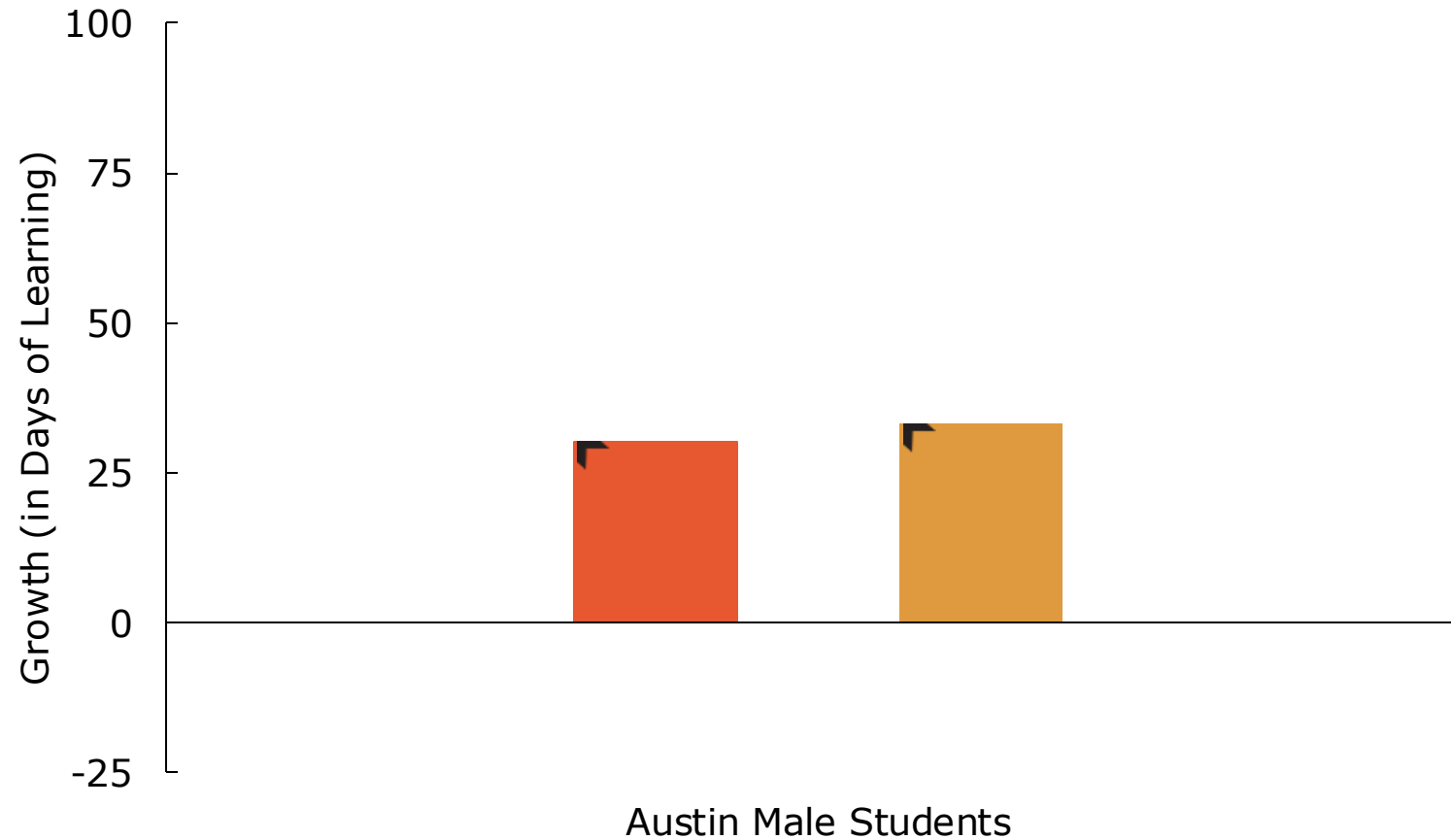
significantly different at $p < 0.05$

reading math

Research Findings > Student Subgroup Analysis > Male Students

ALL VS. STATE

Learning Gains for All Austin Male Students
Compared to the Average Learning Gains of Male
Students Statewide, by Subject



significantly different at $p < 0.05$

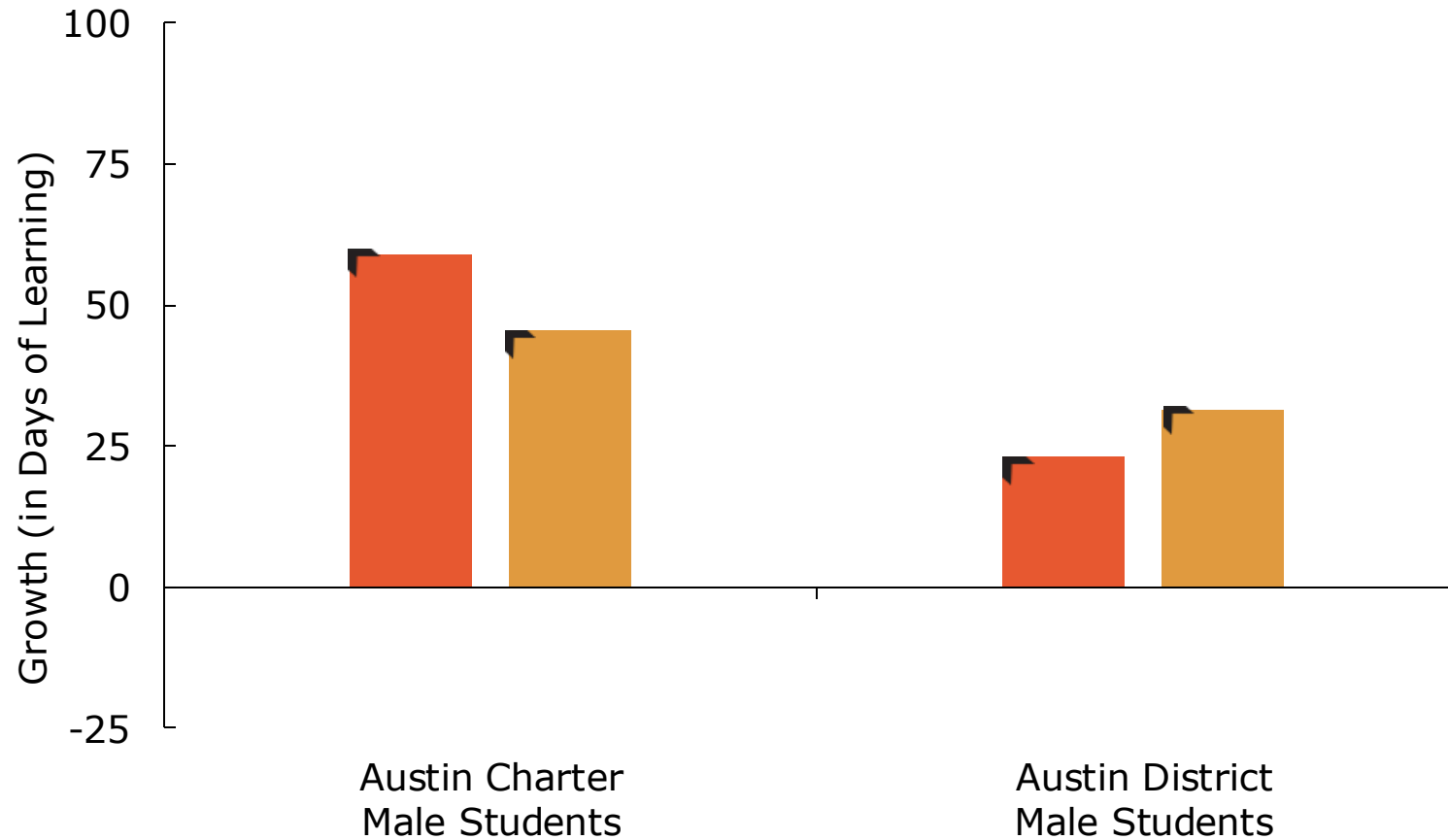
reading math

Research Findings > Student Subgroup Analysis

> Male Students

VS. STATE BY SECTOR & COMPARISON WITHIN AUSTIN

Learning Gains for Male Students in Austin Charter Schools and Male Students in Austin District Schools Compared to the Average Learning Gains of Male Students Statewide, by Subject



Tests of Differences

Reading

Charter Male vs. District Male

sig

Math

Charter Male vs. District Male

significantly different at $p < 0.05$

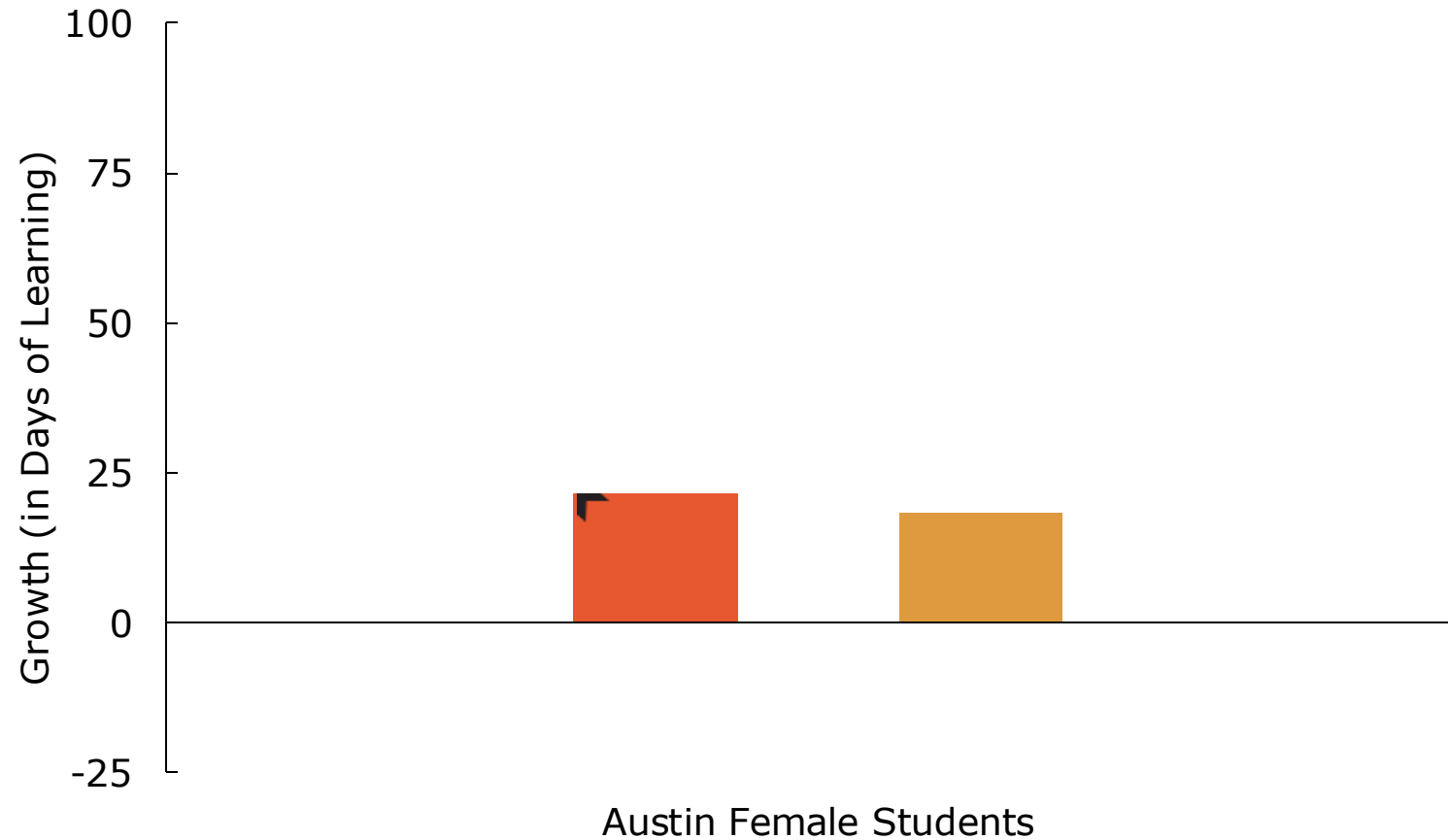
reading


math

Research Findings > Student Subgroup Analysis > Female Students

ALL VS. STATE

Learning Gains for All Austin Female Students
Compared to the Average Learning Gains of Female
Students Statewide, by Subject



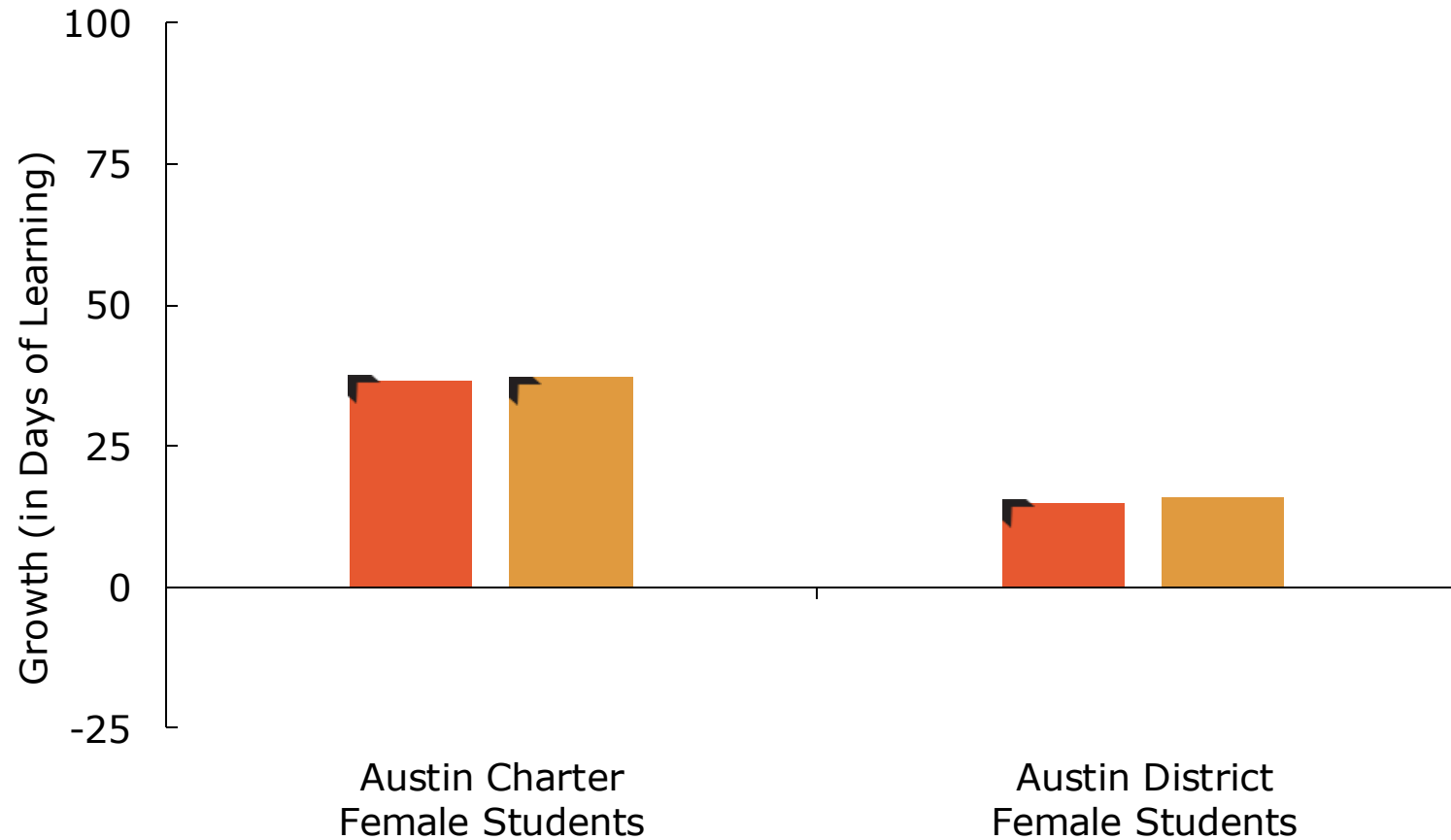
 significantly different at $p < 0.05$

 reading  math

Research Findings > Student Subgroup Analysis > Female Students

VS. STATE BY SECTOR & COMPARISON WITHIN AUSTIN

Learning Gains for Female Students in Austin Charter Schools and Female Students in Austin District Schools Compared to the Average Learning Gains of Female Students Statewide, by Subject



Tests of Differences

Reading sig
Charter Female vs. District Female

Math
Charter Female vs. District Female

significantly different at $p < 0.05$

● reading ● math

○ Summary of Findings



The summary of the findings from the analysis of Austin schools is presented [here](#).



○ APPENDIXES

03



Acknowledgments



Texas Education Agency, Texas Schools Project, and Texas Higher Education Advisory Board provided supports in the acquisition of student-level data.

Disclaimer: The conclusions of this research do not necessarily reflect the opinions or official position of the Texas Education Agency, the Texas Higher Education Coordinating Board, the Texas Workforce Commission or the State of Texas.

Types of Charter Schools

There are two types of charter schools.



CHARTER MANAGEMENT ORGANIZATIONS (CMOs)

Organizations holding the charter and overseeing the operation of at least three charter schools.



INDEPENDENT CHARTER SCHOOLS

Organization holding the charter and overseeing the operation of a single charter school. It may run the school directly or contract with an organization which provides services to one or two charter schools.



OUR ANALYSES OF AUSTIN CHARTER SCHOOLS INCLUDE A BREAKOUT OF CMOs AND INDEPENDENT CHARTERS.

- With more schools and students than a single charter school, CMOs have some operational advantages in their ability to spread administrative fixed costs, thus providing the possibility of greater efficiency. In addition, CMOs may be able to support additional programs and more robust staffing.
- Whether CMOs lead to better student outcomes is a matter of interest across the country.
- There are only two independent charter schools with student growth scores in Austin during the span of this study; we redact the results for this type due to the small number of the schools.



○ Methods



The annual academic growth of students in Austin from 2014-15 to 2017-18, overall and by sector, is benchmarked to the state average growth, accounting for student characteristics.

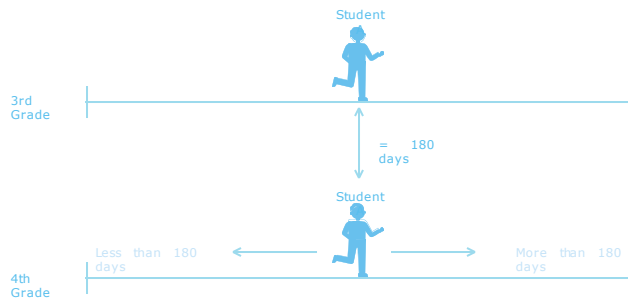
We also explore how one-year growth of Austin students for the period ending in Spring 2018 differs by school type, race, poverty status, English language learner status, special education status, and gender.



Days of Learning

CREDO USES ADVANCED TECHNOLOGY AND SOPHISTICATED STATISTICAL TOOLS TO MEASURE STUDENTS, SCHOOLS AND THE EDUCATION LANDSCAPE.

While these tools create precise and reliable answers, they are presented in technical terms that are not user-friendly to a general audience. To translate the technical results into terms that are accessible to non-technical audiences, CREDO developed Days of Learning.



01

Think about the students in your state's public schools. For many of their years of schooling, they take achievement tests to measure what they know at the end of the school year. We can identify the average score for each test each year.

02

Imagine a student who scores exactly at the average in one year, say 4th grade, and then in the following year, scores exactly at the average again on the 5th-grade test. The amount of year-to-year learning for that student show us what the average learning is for all the students who took both tests.

03

We do that calculation for every grade the state tests: 4th to 5th, 5th to 6th, and so on.

04

CREDO uses those annual measures of average learning to represent a typical year of learning, and equates that to a typical 180-day school year. We say that the student in our example has gained 180 days of learning.

05

If a student makes more progress than the average student, we take the amount of extra achievement and translate it into 180-days of learning plus "X" extra days. We are creating a measure of student learning as if the student went to school for 180 days plus X days. The size of "X" depends on how much more the student learns than the average student — if it's a lot more, then "X" will be a large number, and if it's a small amount more, "X" will be a small number.

06

The same is true for students who do not learn as much as the average student. Instead of adding to the 180-days-of-learning average, we subtract from that base to reflect the smaller-than-average advances that those students realize. In these cases, the difference leads to numbers such a "165 days of learning" or "152 days of learning". Against the average standard of 180 days, these smaller days show that students learned as if they had only attended school for 180 days minus X days during the school year.

Overall Austin Results

	READING		MATH	
	Standard Deviation	Days of Learning	Standard Deviation	Days of Learning
Austin Overall 2015-16	0.04**	20**	-0.01	-7
Austin Overall 2016-17	0.11**	64**	0.07**	39**
Austin Overall 2017-18	0.04**	25**	0.04**	25**

Significant at $p < 0.05$ *

Significant at $p < 0.01$ **



Austin School Sectors Compared to State Average

	READING		MATH	
	Standard Deviation	Days of Learning	Standard Deviation	Days of Learning
Charter Schools 2015-16	0.04*	23*	-0.02	-15
Charter Schools 2016-17	0.09**	50**	0.08*	44*
Charter Schools 2017-18	0.08**	47**	0.07**	41**
District Schools 2015-16	0.03**	18**	-0.01	-6
District Schools 2016-17	0.11**	64**	0.07**	39**
District Schools 2017-18	0.03**	18**	0.04*	23*

Significant at $p < 0.05^*$
 Significant at $p < 0.01^{**}$

Comparison of School Sectors within Austin

	READING		MATH	
	Standard Deviation	Days of Learning	Standard Deviation	Days of Learning
Charter Schools vs. District Schools 2015-16	0.01	4	-0.02	-9
Charter Schools vs. District Schools 2016-17	-0.03	-15	0.01	4
Charter Schools vs. District Schools 2017-18	0.05**	28**	0.03	17

Significant at $p < 0.05^*$

Significant at $p < 0.01^{**}$



○ Charter Subsector Analysis

	READING		MATH	
	Standard Deviation	Days of Learning	Standard Deviation	Days of Learning
Austin CMOs vs. State Average	0.09**	51**	0.09**	50**
Austin Independent Charters vs. State Average	0.06*	33*	0.02	10
Austin CMOs vs. Austin Independent Charters	0.03	18	0.07	40

Significant at $p < 0.05$ *

Significant at $p < 0.01$ **



○ Student Subgroup Analysis > Black Students

READING		MATH	
Standard Deviation	Days of Learning	Standard Deviation	Days of Learning

Compared with Statewide Average of Black Students

Austin Black Students Overall	-0.01	-6	0.02	12
Austin Charter School Black Students	0.06*	35*	0.11**	62**
Austin District School Black Students	-0.03*	-16*	0.00	1

Compared with Black Students in District Schools in Austin

Austin Charter School Black Students	0.09**	51**	0.10*	60*
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Significant at $p < 0.05^*$

Significant at $p < 0.01^{**}$



○ Student Subgroup Analysis > Hispanic Students

READING		MATH	
Standard Deviation	Days of Learning	Standard Deviation	Days of Learning

Compared with Statewide Average of Hispanic Students

Austin Hispanic Students Overall	0.01	6	0.01	3
Austin Charter School Hispanic Students	0.10**	56**	0.06*	37*
Austin District School Hispanic Students	-0.02	-10	-0.01	-6

Compared with Hispanic Students in District Schools in Austin

Austin Charter School Hispanic Students	0.11**	65**	0.07*	43*
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Significant at $p < 0.05^*$

Significant at $p < 0.01^{**}$



○ Student Subgroup Analysis > Students in Poverty

READING		MATH	
Standard Deviation	Days of Learning	Standard Deviation	Days of Learning

Compared with Statewide Average of Students in Poverty

Austin Students in Poverty Overall	0.01	2	0.01	4
Austin Charter School Students in Poverty	0.11**	62**	0.09**	50**
Austin District School Students in Poverty	-0.03**	-16**	-0.01	-8

Compared with Students in Poverty in District Schools in Austin

Austin Charter School Students in Poverty	0.13**	78**	0.10**	57**
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Significant at $p < 0.05^*$

Significant at $p < 0.01^{**}$



○ Student Subgroup Analysis > ELL Students

READING		MATH	
Standard Deviation	Days of Learning	Standard Deviation	Days of Learning

Compared with Statewide Average of ELL Students

Austin ELL Students Overall	0.01	7	0.01	7
Austin Charter School ELL Students	0.08**	44**	0.07**	39**
Austin District School ELL Students	-0.01	-5	0.00	-3

Compared with ELL Students in District Schools in Austin

Austin Charter School ELL Students	0.08**	48**	0.07*	41*
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Significant at $p < 0.05^*$

Significant at $p < 0.01^{**}$



○ Student Subgroup Analysis > Special Ed Students

READING		MATH	
Standard Deviation	Days of Learning	Standard Deviation	Days of Learning

Compared with Statewide Average of Special Ed Students

Austin Special Ed Students Overall	0.04**	24**	0.06*	32*
Austin Charter School Special Ed Students	0.11*	67*	0.14*	79*
Austin District School Special Ed Students	0.03*	18*	0.05*	27*

Compared with Special Ed Students in District Schools in Austin

Austin Charter School Special Ed Students	0.08	48	0.09	52
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Significant at $p < 0.05^*$

Significant at $p < 0.01^{**}$



○ Student Subgroup Analysis > Male Students

READING		MATH	
Standard Deviation	Days of Learning	Standard Deviation	Days of Learning

Compared with Statewide Average of Male Students

Austin Male Students Overall	0.05**	30**	0.06**	33**
Austin Charter School Male Students	0.10**	59**	0.08**	45**
Austin District School Male Students	0.04**	23**	0.05**	31**

Compared with Male Students in District Schools in Austin

Austin Charter School Male Students	0.06**	35**	0.02	14
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Significant at $p < 0.05^*$

Significant at $p < 0.01^{**}$



○ Student Subgroup Analysis > Female Students

READING		MATH	
Standard Deviation	Days of Learning	Standard Deviation	Days of Learning

Compared with Statewide Average of Female Students

Austin Female Students Overall	0.04**	21**	0.03	18
Austin Charter School Female Students	0.06**	36**	0.06*	37*
Austin District School Female Students	0.03*	14*	0.03	15

Compared with Female Students in District Schools in Austin

Austin Charter School Female Students	0.04	21	0.04	21
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Significant at $p < 0.05^*$

Significant at $p < 0.01^{**}$



THANK YOU

