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As a Matter of Fact:

The National Charter School Study III 2023

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Executive Summary

Authors
Margaret E. Raymond, Ph.D.
James L. Woodworth, Ph.D., Lead Analyst- 31 State Study
Won Fy Lee, Ph.D., Lead Analyst- CMO Study
Sally Bachofer, Ed.M.

Contributors
Meghan E. Cotter Mazzola, M.S.
William D. Snow
Tzvetelina Sabkova, M.A.

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Center for Research on Education Outcomes
Stanford University
Stanford, CA
https://credo.stanford.edu

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Acknowledgments

CREDO gratefully acknowledges the support of the state education agencies that contributed their data to this partnership. Our data access partnerships form the foundation of CREDO's work, without which studies like this would be impossible. We strive daily to justify the confidence placed in us.

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- The research presented here utilizes SLDS Data from the Idaho State Board of Education (SBOE) and the Idaho State Department of Education. Any research errors are the sole responsibility of the author(s).
- This research result used data structured and maintained by the MERI-Michigan Education Data Center (MEDC). MEDC data is modified for analysis purposes using rules governed by MEDC and is not identical to data collected and maintained by the Michigan Department of Education (MDE) and/or Michigan's Center for Educational Performance and Information (CEPI). Results, information and opinions solely represent the analysis, information and opinions of the author(s) and are not endorsed by, or reflect the views or positions of, grantors, MDE and CEPI or any employee thereof.
- Data for this report was provided by the Missouri Department of Elementary and Secondary Education.
- 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, or the State of Texas.

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Project Description

As a Matter of Fact: The National Charter School Study III 2023 (NCSSIII) is the third national study by CREDO evaluating the academic progress of students enrolled in charter schools in the United States. The current report presents findings from 2014 to 2019, which yields four periods of year-to-year student growth as measured by state achievement tests. It includes data from 29 states plus Washington, D.C., and New York City, which for convenience we report as 31 states. In addition, because we have used a common methodology across the three studies, we can combine results into trends to support insights of the performance of students enrolled in charter schools over the past 15 years.

To organize the extensive body of this current research effort, CREDO separated the analysis into two parts and produced two reports: (1) Charter School Performance in 31 States (CSP31) and (2) Charter Management Organization 2023 (CMO23). CSP31 examines the performance of the full set of charter school students and schools, while CMO23 analyzes the difference in academic growth between students attending charter schools associated with charter management organizations (CMOs) and those attending stand-alone charter schools (SCS).[1] We present this combined Executive Summary for both reports as well as common Summary of Findings, Conclusions and Implications to ensure we present the fullest picture of performance in charter schools.

Our work deliberately focuses on a specific outcome: the annual progress that students make over an academic year. In this report, we look at students in charter schools compared to the experience they would have had in the traditional public schools (TPS) they would otherwise have attended. One notable limitation of this approach is that we have limited line of sight "under the hood" and into the role that localized environmental, regulatory and organizational factors play on individual school performance. Our contribution to the K-12 education research and practice landscape is to test fundamental questions of the effectiveness of charter schools and highlight outcomes and trends rooted in academic progress.

A study of the academic impacts of charter schools on their students is timely. Insights about the educational effectiveness of schools, school operators, K-12 academic programs and education policy are valuable today more than ever. The 2022 results from the National Assessment of Educational Progress removed any ambiguity about student learning after the COVID-19 pandemic. As a country, student academic performance has regressed by two decades in math and fallen steeply in reading, with the most severe performance declines found among minority, poverty and special needs populations that were already struggling before the pandemic. The need for evidence-backed approaches to sustained academic success for students transcends demographic, economic and political divides. As school and district leaders, policy makers, teachers, families and philanthropists build and implement plans to address pandemic-accelerated declines in student learning, they need analysis of school and system achievement presented here to guide and support their efforts.

1 The CMO study does not include Idaho, Maryland, and Ohio.

Methodology

This research depends on data-sharing partnership agreements with state education agencies. One common requirement across all agreements is that the processing, analysis and security of the student-level data must meet the Federal Education Rights and Privacy Act (FERPA) requirements. This study complies with FERPA regulations as interpreted by each state providing data.

Using both student and school level data, our resulting data set included 81 percent of tested public school students in the United States, making it one of the largest data sets of student-level observations created to date. We used this information to create a matched student data set with over 6,500,000 student-level observations from over 1,853,000 charter students and a matched comparison group.

To create rigorous tests of our research questions, we need to compare charter school students' experience with an alternative, in this case the learning that occurs in nearby TPS. We match each charter student whose records appear in the data with records of traditional public school students with identical traits and aligned prior test scores who enrolled in schools that the charter student would have attended if not at their charter school. This approach, the Virtual Control Record protocol, creates a "virtual twin" to a charter school student. For research purposes, the virtual twin differs from the charter student only in the school attended.

This study approach mirrors the one used in the 2009 and 2013 studies. The only change to the method was to rematch the charter school students to a new set of TPS students each year.[2] The data collected for this study consisted of student-level demographics, school enrollment and achievement test scores in reading/English language arts (ELA) and math To assure accurate estimates of charter school impacts, we use statistical methods to control for differences in student demographics and eligibility for categorical program support such as free or reduced-price lunch eligibility and special education. In this way, we have created the analysis so that differences in the academic growth between the two groups are a function of which schools they attended.

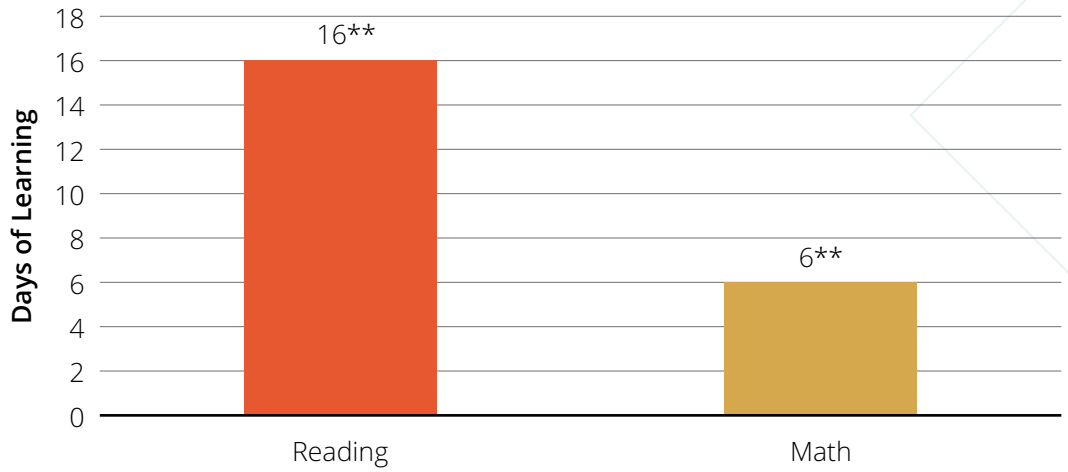
In these 2023 studies, we present our findings about learning outcomes measured in days of learning. The measure uses a benchmark of learning: the average student in TPS will obtain a year's learning in a year's time. Computationally, the benchmark student attends school for 180 days in a year and advances their learning by 180 days. If another student makes more (or less) progress in the same period of time, we present that as additional (or fewer) days of learning.

2 This change meets the new standards of the What Works Clearinghouse at the National Center for Education Evaluation.

Summary of Findings

Looking at year-to-year academic progress from 2015 to 2019, **the typical charter school student in our national sample had reading and math gains that outpaced their peers in the traditional public schools (TPS) they otherwise would have attended.** We report these differences as marginal days of additional (or fewer) days of learning on a learning benchmark of 180 days of learning each school year for matched TPS students. In math, charter school students, on average, advanced their learning by an additional six days in a year's time, and in reading added 16 days of learning.

Figure 1: Annual Academic Growth of Charter School Students, Reading and Math



** Significant at $p \leq 0.01$
Figure above originally appears as Figure 1.7 in CSP31.

These average effects are across all students, all schools, for all time periods. There is considerable variation around these averages and this variation forms the foundation for additional analyses and findings in our two papers.

This growth represents accelerated learning gains for tens of thousands of students across the country. Each student and each school is a proof point that shows that it is possible to change the trajectory of learning for students at scale, and it is possible to dramatically accelerate growth for students who have traditionally been underserved by traditional school systems.

Do All Students Benefit?

When we probe these results to determine if all students benefit, we find positive results are not only present in the aggregate, but also across student race/ethnicity groups:

- **Black and Hispanic students** in charter schools advance more than their TPS peers by large margins in both math and reading.
- **Multiracial, Native American, and White students** in charter schools show equivalent progress to their TPS peers in reading, but had weaker growth than their TPS peers in math.
- **Asian students** in charter schools showed similar growth to their TPS peers.

When we examined academic growth for special populations of students, we found that, compared with their TPS peers:

- Charter school **students in poverty** had stronger growth
- **English-language learner students** attending charter schools had stronger growth
- **Students receiving special education services** had significantly weaker growth in both math and reading on average, though CMO-affiliated students with Special Education needs have learning on par with their TPS Special Education peers.

In the past, a common claim asserted that positive academic results in charter schools arise from advantages that their students bring to their schooling. In some cases the claim focused on students having more motivated parents. Another version suggests targeting behavior on the part of the school results in a student body that is better prepared academically, a practice commonly referred to as "cherry picking" or "cream skimming". If true, the students in charter schools would show higher academic achievement at the point of enrollment. In multiple analyses, we do not see significant evidence of an undue advantage to charter schools. In fact, we find the opposite is true: charter schools enroll students who are disproportionately lower achieving than the students in their former TPS.

Where Is Positive Academic Growth Happening?

Deeper into our analysis, we examine *where student learning gains are occurring*, and find that positive and strong effects exist in charter schools that vary widely by location and configuration.

- **States** – 18 states in the NCSS3 study produced significantly stronger growth for students enrolled in their charter schools when compared with their TPS peers; in 12 states, growth was similar to TPS peers. Students attending charter schools had weaker reading growth than their TPS peers in only one state, Oregon. In 12 states, charter school students had significantly stronger growth in math than their peers in TPS. In 16 states, math growth was similar between charter students and their TPS peers. Only three states showed weaker growth for charter students compared to their peers.
- **Locale** – compared to their TPS peers, urban charter school students had 29 additional days of growth per year in reading and 28 additional days of growth in math, both of which were significant. Suburban charter school students also had stronger growth in reading (+14 days) and in math (+3 days). Rural students enrolled in charter schools had the equivalent of five additional days of learning in reading,

but 10 days less growth in math than their TPS peers. These results are strongly hampered by the performance of virtual charter schools; despite having only six percent of charter school students enrolled, their impact on student progress of 58 fewer days of learning in reading and 124 fewer days in math has damaging consequences for students and exerts a outsized drag on overall national results.

- **Grade configuration** – charter schools serving elementary, middle, and high school students had statistically positive growth in both reading and math. Results for multilevel charter schools were negative in math and similar to the TPS comparison groups in reading. Seeing growth in all grade spans helps us understand that trends in the national aggregate performance are not concentrated in particular grades.
- **Continuous Enrollment** – charter students overcome an initial learning dip associated with a school change, and by their fourth year in their charter school, they show 45 days stronger growth in reading than their TPS peers and 39 additional days of learning per year in math. The longer a student stays enrolled in a charter school, the better the student's academic outcomes are.
- **School Management** – students who attend a charter school that is part of a charter management organization (CMO) experience significantly accelerated growth compared to students enrolled in stand-alone charter schools (SCS). Even so, CMO schools and SCS provide stronger learning than TPS in reading, and CMOs do so in math. CMO-affiliated students advanced by 27 additional days in reading and 23 more days in math over TPS, both of which are statistically significant. Stand-alone charter schools still grew significantly more than TPS in reading by 10 additional days of learning, but were no different in math. Given that SCS serve two-thirds of all students enrolled in charter schools, soft math performance in these schools taints the otherwise decisive results in other parts of the study.

Figure 2: Annual Academic Growth of Charter School Students by Charter School Type, Reading and Math

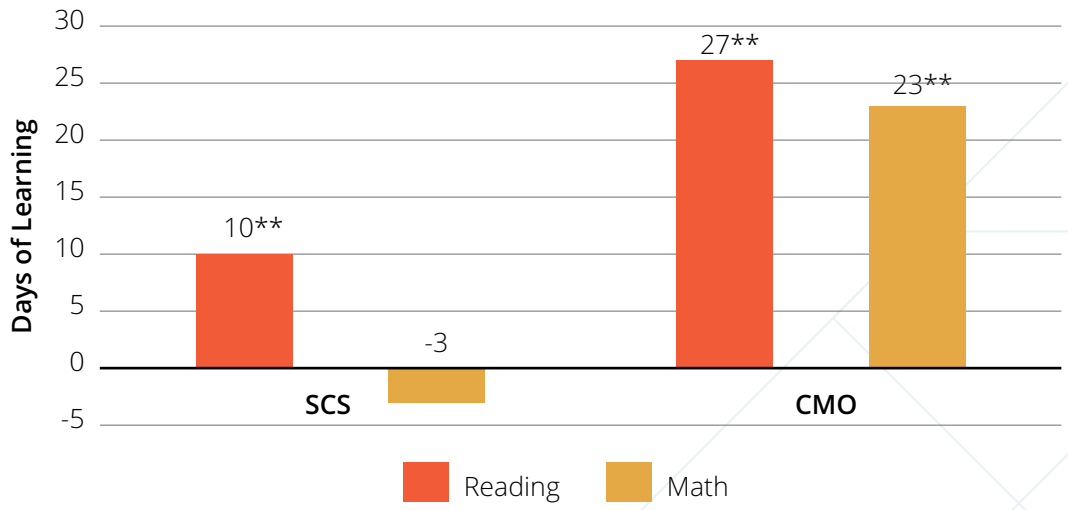


Figure above originally appears as Figure 2.4 in CMO23.

What Can We Learn from CMOs?

Comprising one-quarter of the schools, but serving 37 percent of students in our national data set, Charter Management Organizations (CMOs) are producing much of the learning gains we observed for charter school students.

As with our national top-line results, we find robust results for CMOs when we grouped their students by race/ethnicity, special populations, where the CMOs are located, grade spans of the schools in the network and how long a student enrolls in the school. As with all schools, there is a range of performance for CMOs, and we share their student impacts in Appendix A.

Our analysis uncovered additional ways that CMOs are returning more positive, and often gap-busting, results:

- **New CMOs and new schools in existing CMOs** open with strong results, in both cases delivering stronger average gains for their students than their local TPS. The student gains in new CMOs are not as strong initially as their older CMO peers. New schools started by mature CMOs deliver positive gains in their early years that were none the less smaller than the older CMO schools.
- **Size or age of a CMO does not relate to their quality**, which means some CMOs are growing poorly performing networks of schools.
- **Clustering of CMOs' schools within a single state** returns significantly more days of learning for their students than in CMOs that operate schools in more than one state.
- **CMOs that took on "turn-around" schools**, absorbing those schools into their portfolios, positively impacted results for students who remained enrolled in the turn-around school. In addition, the balance of the CMO portfolio did not experience a downturn in student learning.
- **The Charter School Growth Fund** serves as a case study of charter school growth accelerators. CMOs that the Growth Fund chooses to support have dramatically larger pre-funding learning gains than other CMOs. The schools that existed at the time of selection remain strong. New CMO schools also open with dramatically larger learning gains in both subjects judged against their TPS comparisons.
- **Excellence at Scale** puts dozens of CMOs at the forefront of efforts to provide education that is both equitable and effective in moving student achievement to give their students full preparation for their next steps.

Variations in Charter School Performance

In our reports, we analyze school-level performance, in addition to student-level performance, continuing to report on growth as the outcome variable. Not every charter school provides quality academic programming or an effective learning environment for students. Across all charter schools in our study, 36 percent have greater growth, 47 percent have equivalent growth and 17 percent have lower growth relative to their local TPS. CMO-affiliated charter schools display stronger performance, with 43 percent having greater growth, 42 percent having equivalent growth, and 15 percent having lower growth in comparison to their local TPS. Stand-alone charter schools have slightly more moderate results.

Figure 3: Academic Growth of Charter Schools Compared to Their Local TPS, Reading

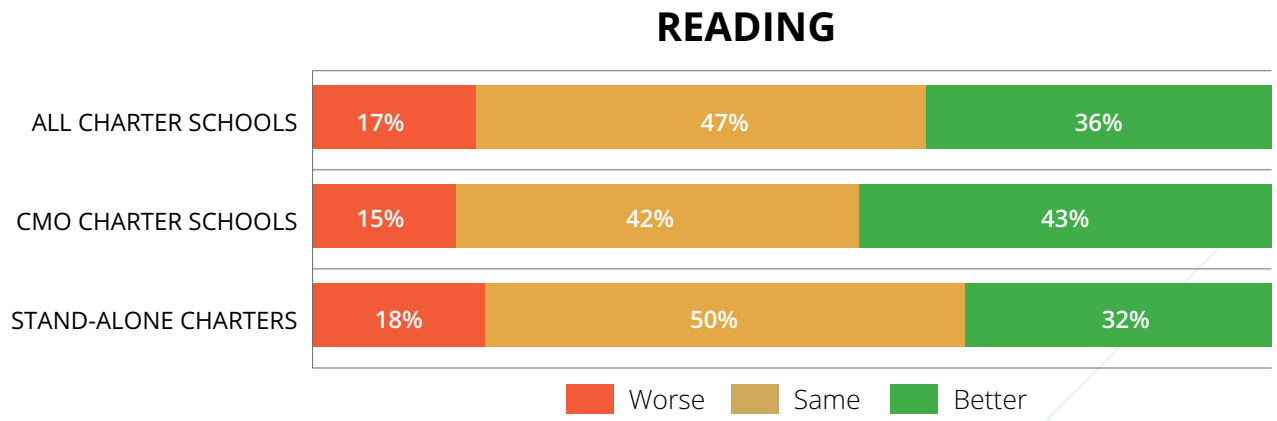


Figure above draws from Figure 1.22 in CSP31, and Figure 36 in CMO23.

In math, more charter schools have weaker results than they do in reading, as presented in the figure below. As the share of charter schools with growth greater than their TPS peers is comparable with the same growth in reading across all categories, the driver of the overall weaker performance in math is the greater percentage of charter schools (all, CMO-affiliated and stand-alone charter schools) that perform worse than their TPS peers. Stand-alone charter schools have the largest share of schools with lower growth in math in comparison to their local TPS.

Figure 4: Academic Growth of Charter Schools Compared to Their Local TPS, Math

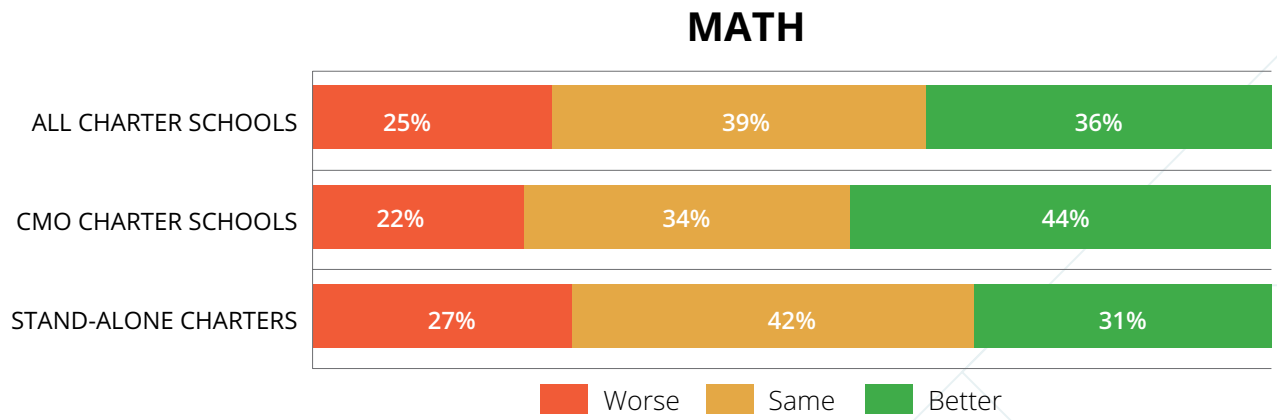


Figure above draws from Figure 1.22 in CSP31, and Figure 37 in CMO23.

These encouraging results require a note of caution. Since the reference point in these comparisons is the growth that equivalent students in the local TPS realize, this comparison does not reveal if the difference is modest or large, nor does it indicate where in the range of absolute achievement the difference occurs. Positive differences at the lowest levels of achievement may not be sufficient to move students ahead fast enough to reach long-term outcomes such as academic proficiency or post-secondary readiness. Similarly, a charter school may post growth results that are considered outsized for any school but still lag behind

the community schools in achievement. Simultaneous consideration of student academic growth and achievement is the only way to get the complete picture of charter school performance.

Charter School Growth and Achievement

Student academic growth measures how much students advance their learning in a year's time, and student achievement measures the stock of their knowledge at the end of the year. We believe it is critical to examine both growth and achievement in order to understand how well schools prepare students for next steps in school and life. We map each school's average growth and average achievement against the the growth of matched TPS students and average state performance. Examining both measurements for all schools in our national data set during the most recent growth period, we present findings in four basic categories of school performance:

- **High Growth—High Achievement:** schools that exceed the growth of their local options and whose students are above the state average in overall achievement
- **High Growth—Low Achievement:** schools that exceed the growth of their local options but with overall student achievement below the state average
- **Low Growth—High Achievement:** schools whose students exceed the state average on achievement but do not advance as much yearly as their comparisons
- **Low Growth—Low Achievement:** schools with lower academic growth than their local alternatives and whose students' achievement is lower than the state average at the end of a school year.

NOTE TO READERS:

The thumbnail table below presents the total proportion of students in each major quadrant in Figure 5. These values appear on the study website as a layer of the chart—the user can see the quadrant totals and then drill down to see the inner-quadrant values.

11.4	31.7
26.3	30.9

Figure 5: Academic Growth and Achievement 2015 to 2018, Reading

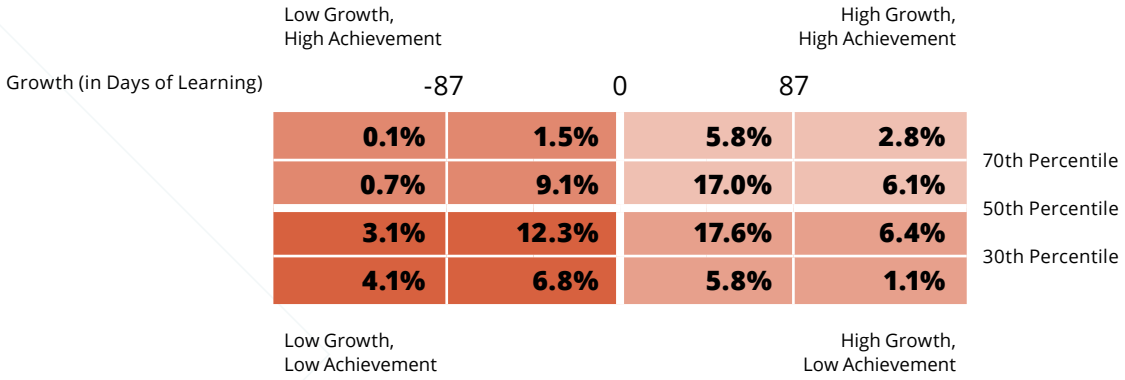


Figure above originally appears as Figure 1.25 in CSP31.

Schools that have average student achievement above the state average (above the 50th percentile) are presented in the top half of the figure. In reading, 43 percent of all schools have average performance in the upper half in their respective states, with a majority of those high achievement schools also having stronger growth than their local TPS. Zeroing in on the low-growth/low-achievement quadrant, 207 schools (4.1 percent) in our study have lower academic growth than their local alternatives and have student achievement that is below the 30th percentile of state achievement at the end of the school year.

NOTE TO READERS:

The thumbnail table below presents the total proportion of students in each major quadrant in Figure 6. These values appear on the study website as a layer of the chart—the user can see the quadrant totals and then drill down to see the inner-quadrant values.

11.8	28.2
33.8	26.4

Figure 6: Academic Growth and Achievement 2015 to 2018, Math

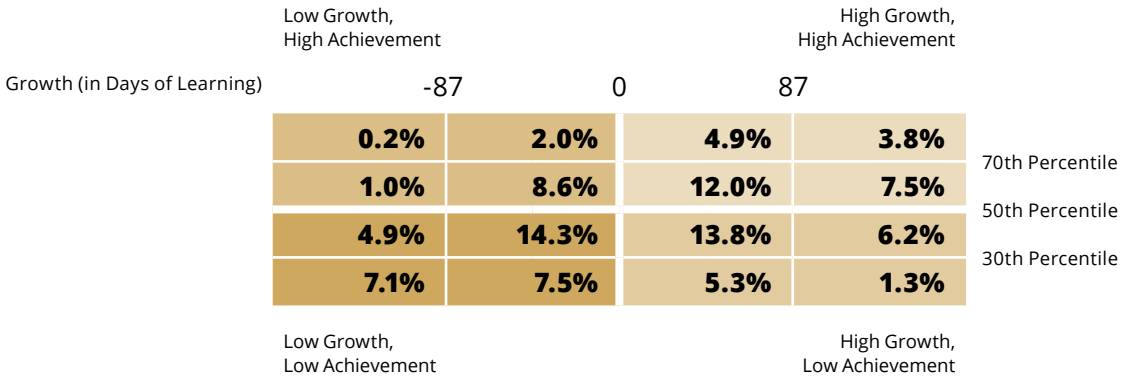


Figure above originally appears as Figure 1.26 in CSP31.

In math, above average achievement exists in 40 percent of charter schools, while 60 percent of schools have achievement that is lower than their state averages. Twenty-eight percent of schools in the data set are high-growth/high-achievement schools, returning great gains for their students. Zeroing in again on the low-growth/low-achievement quadrant, 348 schools (7.1 percent) have lower academic growth than their local alternatives and have student achievement that is below the 30th percentile of state achievement at the end of the school year.

The number of schools in the low-growth/low-achievement quadrant, though smaller in reading than in math, remains a key concern.

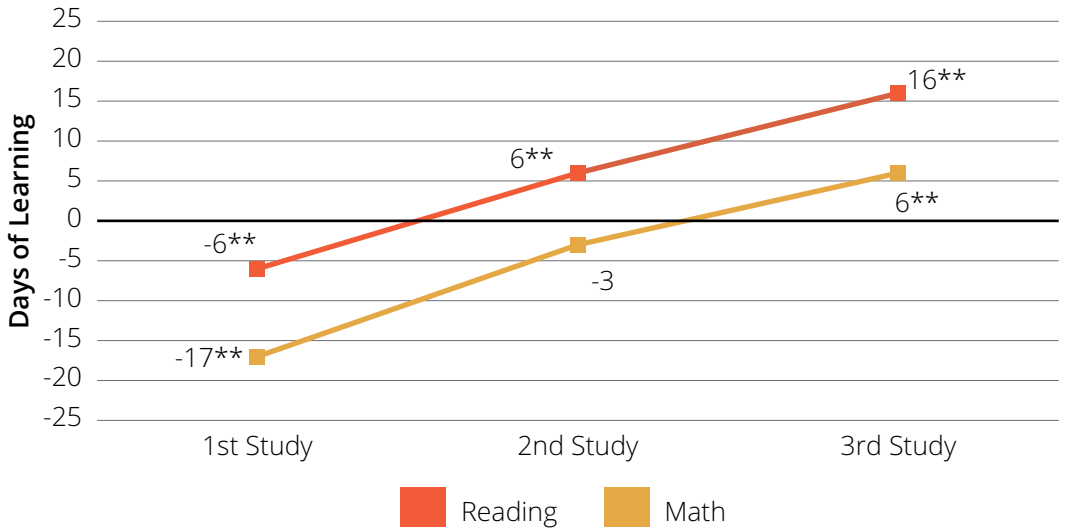
Exceptional Performance in Charter Schools

Perhaps the most revealing finding of our study is that more than 1,000 schools have eliminated learning disparities for their students and moved their achievement ahead of their respective state's average performance. We refer to these schools as "gap-busting" charter schools. They provide strong empirical proof that high-quality, high-equality education is possible anywhere. More critically, we found that dozens of CMOs have created these results across their portfolios, demonstrating the ability to scale equitable education that can change lives.

Evidence of Improvement over Time

Findings from this study take on even more weight when considered in the historical context of the 15 years of CREDO studies on student academic progress in charter schools. Between the 2009 and 2023 studies, against a backdrop of flat performance for the nation as a whole, the trend of learning gains for students enrolled in charter schools is both large and positive.

Figure 7: Annual Academic Growth of Charter School Students across Three National Studies



** Significant at $p \leq 0.01$
Figure above originally appears as Figure 1.8 in CSP31.

Conclusions

The outcomes of these studies are largely positive and support several conclusions about the current landscape of charter schools across America. Perhaps more importantly, the opportunity to position these findings in the larger body of research leads to a number of implications about the fundamental policies and practices of charter schooling at a more global level.

1. In both reading and math, charter schools provide students with stronger learning compared with the learning in the traditional public schools that are otherwise available to them.

Across the broad range of charter schools, the evidence suggests that they are a robust education option under many conditions. Whether stand-alone or networked, charter schools operate by law mainly on their own, making decisions they expect will serve their students well. According to our latest findings, the autonomy given to them usually yields positive results. The majority of charter schools provide better year-to-year outcomes for students compared to their traditional public-school options. Most of these schools perform better to such a degree that the difference is statistically significant.

The results stand up to deeper investigation. Charter schools produce superior student gains despite enrolling a more challenging student population than their adjacent TPS. They move Black and Hispanic students and students in poverty ahead in their learning faster than if they enrolled in their local TPS. They are more successful than the local public school alternatives across most grade spans and community settings. These results show that charter schools use their flexibility to be responsive to the local needs of their communities.

These findings generalize into lessons for policy leaders, educators, and funders. Knowing that the average student in the average charter school can outperform their TPS peers raises important questions about the priority placed on student outcomes in education decisions in many communities.

2. Some charter schools provide less student learning than their local district schools, although a larger proportion delivers better learning outcomes. The latter group includes over 1,000 charter schools managing staffing and resources to deliver superior academic results that eliminate the learning gap across student groups.

Vital lessons also come from the distribution of school performance around the average. Over the past 30 years, small, large, urban, rural, networked or stand-alone charter schools, autonomous and independent of each other, have arrived at their own solutions for giving their students stronger learning experiences. The discretion that charter schools enjoy does not guarantee that each school or every charter network realizes strong student outcomes. Our study illuminated the range of learning across schools.

Despite declining shares, there remain a concerning number of charter schools with weaker student outcomes. While lower-performing schools make up a larger share of stand-alone charter schools, CMOs and networks also have a substantial share that produces low gains for their students. This study has profound implications for charter schools and charter networks that do not support student learning. Charter boards and authorizers are the accountability side of the charter school equation. They evaluate school performance and, if necessary, dictate remedies. As our analysis shows, disturbing numbers of charter schools and networks have low learning levels. There are brick-and-mortar, online, networked, and stand-alone charter schools with sub-par results.

The number of school closures we observed in the years of this study was small compared to the counts of schools with the lowest student growth and academic achievement. Since primary and secondary education is essential to the social contract, providing a foundation for future opportunities, the claim of "choice" cannot justify derailing students' preparation. Especially in the post-COVID era, the need for charter boards and authorizers to address under-performance in their schools has never been more critical.

Closure is not the sole remedy. As we learned from our special investigation, the "takeover" of underperforming schools by strong CMOs led to improved student learning for the students who remained enrolled before and after the transfer. The gains did not adversely affect student academic progress in the rest of the CMOs' schools. This policy tool may have broader utility than previously realized.

At the high end of the performance range, good news exists in the growing share of schools outpacing learning in their local TPS. In both subjects and for both CMO and stand-alone schools, larger shares are "better than" and a smaller share is "weaker than" compared to earlier work.

The real surprise of the study is the number of charter schools that have achieved educational equity for their students: we call them "gap-busting" schools. Ensuring equivalent yearly growth across student groups has two critical consequences. First, ensuring minority and poverty students learn on par with or better than their White peers interrupts or reduces the achievement gap. It happens regularly in a large swath of charter schools. More critically, there is strong evidence that these gap-busting schools can be scaled. Added to the traditional district schools that achieve similar results, this is the life-transforming education that so many students need. Second, these schools deliver hundreds of independent proof points that learning gaps between student groups are not structural or inevitable; better results are possible.

Charter schools function as a portfolio, and their varied impacts on student learning are expected. Charter school boards and authorizers are responsible for ensuring students perform well. Evidence shows that the charter school enterprise benefits students, and its positive outliers (e.g., gap busters) can pressure the rest of the system.

The near-term implication for charter school boards and authorizers is two-pronged. Addressing chronic and/or severe underperformance is necessary and imperative in the current education climate. Identifying high-impact exemplars for probationary charter schools to study and emulate is possible. Transfer of sub-par schools to higher-performing operators could be part of a larger incentive for growth and replication. At the same time, authorizers might consider longer charter terms for charter schools that consistently demonstrate outstanding student learning success.

Education leaders and policy makers need to understand that in efforts to improve, some failure is inevitable. Any subsequent failure to address the poor performance compounds the damage. It also blocks constructive learning for the future. Strong examples of authorizing exist and should be emulated.

Leadership and responsibility demand embracing practices and policies that lead to better results for students, not maintaining the status quo.

3. The larger scale of Charter Management Organizations does not guarantee high performance—but on balance, it helps.

When taken as a whole, schools managed by Charter Management Organizations and charter networks bring a greater learning benefit to students compared to stand-alone charter schools. Despite the differences, both groups of charter schools have had larger student success than traditional public schools with respect to reading. We note, however, that math gains in stand-alone charter schools were equivalent to TPS learning.

Our analysis highlights attributes of higher-performing CMOs and networks that could be useful in future discussions. Size or age of the CMO does not relate to student learning: at every increment of CMO age

or portfolio size, we see high- and low-impact CMOs and networks. This further supports earlier CREDO research that showed that CMOs only replicate the quality they already have. The implications of replicating schools with weak results is clear. The big upside is the ability of dozens of CMOs to scale their gap-busting performance. Additionally, CMOs that concentrate their operations within a single state have stronger gains than multistate CMOs, though both groups do well by their students.

Programs of external funding and support to CMOs to grow their networks, represented here by the Charter School Growth Fund, focus on some of the stronger CMOs and networks in our study. After high-performing CMOs receive endorsement, the learning of students in those CMO schools rises in reading but holds steady in math.

The majority of new CMO schools are no better or worse than the parent organization has already produced, so decisions to approve applications by CMOs to open new schools must consider the contributions to student learning of schools in the existing portfolio.

CMO growth accelerators help augment board and authorizer reviews through their extensive selection process; the growth of their grant-receiving CMOs maintains the strong student learning that led to their selection. The expansion of these high-quality schools and networks benefits more students and communities.

4. Charter schools and networks improve over time, as do the systems that oversee them.

Insights about improvement in schools and networks stem from this study and CREDO's prior multistate studies.

In the years of this study, student growth in charter schools was the strongest observed in any of CREDO's multistate studies. Added to the results from the previous two studies, a strong trend of improvement becomes clear. We see substantial increases in student learning in CMOs in both tested subjects and in reading for stand-alone charter schools. Even the finding of no difference in math learning in stand-alone charter schools vis a vis TPS, a decline from the 2017 study results, still marks an improvement from the statistically significant negative results in the first CMO vs. stand-alone comparisons in 2013.

A better understanding of the improvement in the sector comes from two different findings. The first is that the largest share of improvement comes from existing charter schools. Compared to the National Assessment of Education Progress (NAEP) trend, evidence of schools getting better over time is welcome news.

Second, new schools opened with stronger results than at any time in the past. Growth in the number of CMOs since the last study plays a role. Many stand-alone charter schools also pushed their results upward. Strengthening authorizer standards and practices, a drive that took root in the 2010s, also sets a higher bar that resulted in better schools opening.

Finding ways to improve student academic outcomes is an ambition shared by policy and community leaders, educators, funders and parents. Charter school results show that change for the better is possible in the larger education system. The key to improvement lies outside any particular school or network model, though many are worthy of emulation. It is simply not possible to drive single solutions through the diverse landscape that is U.S. public education. Lessons from the charter school experience and results may be helpful in charting a future course in public education.

Implications

The **charter school policy framework** sets the conditions for charter schools' growing positive outcomes. It is the fundamental common denominator in every case, and its role is powerful.

The framework offers a divergent approach from the conventional strategy for public schools. The "flexibility for accountability" construct is not just a catchphrase. It is a distinctly different mode of operation. The "loose-tight" parameters of the framework create incentives to which schools and networks respond. The incentives find positive support in this study's findings and the broader trends. While our study design cannot make causal claims (because randomly assigning schools to the traditional or charter school approach has yet to happen), it can deliver a plausible argument of the value of the policy based on available evidence.

On the "loose" side of the approach, the framework establishes a **policy of possibility** where educators, leaders and boards of directors have the discretion to build and deliver curriculum and instruction that meets high standards for learning and is responsive to local needs.

According to this study, there are a lot of positive possibilities. The process has led to many successful schools nationwide, often with meaningful innovations. The diversity of schools illuminates an important feature of the framework: success is attainable via **many paths**. Over time, many have sought and gained permission to expand and then shown the ability to create strong student learning at scale.

Students in these schools, especially minority students and those in poverty, make larger advances than in local public schools. Beyond the benefits for their students, successful charter schools deliver **critical proof points** of ways to improve outcomes for students. In the current regulatory climate, it is difficult to imagine how similar efforts could become conventional among traditional public schools.

Beyond flexibility in school design, school teams have the leeway to tinker with their operations. The results show that existing charter schools have improved over time. The proportion of charter schools with superior results is on the rise. The share that lags behind the local TPS alternatives is also shrinking. This means schools and networks use their discretion and autonomy to foster a **standing capacity to adapt over time.**[3]

Accordingly, the framework also aims to be "tight" at key points as schools open and mature. Authorizers are expected to behave as **governors of quality**. They set the bar to receive initial permission to operate, which exerts quality and safety controls at the outset. Others have documented stronger standards among authorizers in the review and approval of new applications (Mumma & West, 2018). The findings of stronger new schools in this study compared to earlier results attest to the effort and to the CMO replications and new charter schools that meet the higher bar.

Authorizing is a delicate job that requires resources, expertise and substantial political acumen and courage. There is growing attention to authorizers adopting rigorous standards and practices and using a variety of performance data to evaluate schools that apply for renewal (NACSA, 2016).

3 We saw that capacity in stark terms when we examined how charter schools in three states responded to the COVID-instigated school closure orders (CREDO, 2022). Rapid transformation into remote instructional mode; acquisition and distribution of food, technology, or internet access; and strengthening of personal supports were widespread. Return to in-person instruction in the fall of 2020 was nearly universal. These points rest admittedly on smaller bases of qualitative evidence, but they provide human dimensions to the point that the present quantitative analysis illuminates nationally. See also: Boast et al. (2020); Henderson et al. (2021); Childs et al. (2022).

Poorly performing charter schools are often ignored. A number of these schools were observed during this study window. There is data to assess policy leaders and authorizers to hold them accountable for protecting children's futures. As tough as closing schools is, the disservice of not closing poorly performing schools has large and lingering ripple effects.

Our results show that the framework of charter schools helps current students and strengthens public education overall. We contend these incentives have broader applicability in public schools and see signs of their spread. Collaborations between charter schools and local district schools have grown over time. Some states, including Kentucky and Maine, have adopted policies to give educators freedom in adjusting instruction and boosting performance. However, uptake is slow.

In the year 2023, the importance of strong academic achievement among America's students has never been greater. The students hit hardest by school closures during the coronavirus pandemic are precisely those whom this research illuminates as being able to benefit the most from charter schools. In this study thousands of charter schools have proved that we can do better for our students. The current number of students benefiting from these schools is 3.7 million, but the number could drastically increase if more schools agreed to the same arrangement. Whether it be termed "charter school" or something else, the deduction from this data is that when both sides of the equation—flexibility and accountability—are working together for more schools, more students' academic results will improve.

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As a Matter of Fact:

The National Charter School Study III 2023

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Volume 1 Charter School Performance in 31 States

Authors
Margaret E. Raymond, Ph.D.
James L. Woodworth, Ph.D., Lead Analyst- 31 State Study
Won Fy Lee, Ph.D., Lead Analyst- CMO Study
Sally Bachofer, Ed.M.

Contributors
Meghan E. Cotter Mazzola, M.S.
William D. Snow
Tzvetelina Sabkova, M.A.

credo

Center for Research on Education Outcomes
Stanford University
Stanford, CA
https://credo.stanford.edu

CREDO, the Center for Research on Education Outcomes at Stanford University, was established to improve empirical evidence about education reform and student performance at the primary and secondary levels. CREDO at Stanford University supports education organizations and policy makers in using reliable research and program evaluation to assess the performance of education initiatives. CREDO's valuable insight helps educators and policy makers to strengthen their focus on the results of innovative programs, curricula, policies and accountability practices.

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The research presented here uses confidential data from state departments of education. The views expressed herein do not necessarily represent the positions or policies of the organizations noted above. No official endorsement of any product, commodity, service or enterprise mentioned in this publication is intended or should be inferred. In addition:

- The research presented here utilizes SLDS Data from the Idaho State Board of Education (SBOE) and the Idaho State Department of Education. Any research errors are the sole responsibility of the author(s).
- This research result used data structured and maintained by the MERI-Michigan Education Data Center (MEDC). MEDC data is modified for analysis purposes using rules governed by MEDC and is not identical to data collected and maintained by the Michigan Department of Education (MDE) and/or Michigan's Center for Educational Performance and Information (CEPI). Results, information and opinions solely represent the analysis, information and opinions of the author(s) and are not endorsed by, or reflect the views or positions of, grantors, MDE and CEPI or any employee thereof.
- Data for this report was provided by the Missouri Department of Elementary and Secondary Education.
- 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, or the State of Texas.

The analysis and conclusions contained herein are exclusively those of the authors and are not endorsed by any of CREDO's supporting organizations, their governing boards, or the state governments, state education departments or school districts that participated in this study. All errors are attributable to the authors.

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1.1 Introduction

The year 1992—the year that City Academy Charter School opened in St. Paul, Minnesota—was over 30 years ago. The fundamental bargain of public charter schools—"flexibility for accountability"—took root in the school's first charter and in the more than 7,800 public charter schools that came after. With over 3.7 million students currently enrolled in charter schools in 43 states and the District of Columbia, charter schools represent the largest experiment in public school innovation in the nation's history.

The current study is the third multistate study of charter school effectiveness—the first was released in 2009 and the second in 2013. It adds to a large slate of charter school research[1] released by CREDO in 2006. This study covers the education experience of 2,080,913 unique students enrolled in charter schools in 31 states from 2014-15 to 2018-19. As our work in this area uses the same peer-reviewed research design and analytic approaches, the results across studies provide the basis for examining charter school performance trends since 2006.

CREDO's work joins a body of research on the subject (Booker et al., 2009; Mead et al., 2015). Our unique contribution lies in the scope of the effort: CREDO uses longitudinal student-level information derived from state administrative data from 29 states plus the District of Columbia and New York City.[2] In our research, we include 94 percent of the nation's charter school students in tested grades. We use a detailed matching method to ensure that our analytic comparisons to students in district schools are as precise as the data allows. Consequently, our findings carry strong levels of reliability and validity.

A study of the academic impacts of charter schools on their students is timely. Insights about the educational effectiveness of schools, school operators, K-12 academic programs and education policy are valuable today more than ever. The 2022 results from the National Assessment of Educational Progress removed any ambiguity about student learning after the COVID-19 pandemic. As a country, student academic performance has regressed by two decades in math and fallen steeply in reading, with the most severe performance declines found among minority, poverty and special needs populations that were already struggling before the pandemic. The need for evidence-backed approaches to sustained academic success for students transcends demographic, economic and political divides. As school and district leaders, policy makers, teachers, families, and philanthropists build and implement plans to address pandemic-accelerated declines in student learning, they need the analysis of school and system achievement presented here to guide and support their efforts.

1 Center for Research on Education Outcomes, http://credo.stanford.edu.

2 We refer to these 31 jurisdictions as "states" to maintain consistency with previous studies. New York City data is not included in New York results. The two groups are mutually exclusive for this study.

A Brief Primer on Charter Schools in the United States

Enabling legislation allows charter school founders and operators to design and tailor organizational structures, staffing and instructional approaches to provide their students with an alternative to local district schools. They pursue different missions such as STEAM, college prep, social justice or new technologies. They can be small or large; they can operate as single schools or in school networks. Some charter schools outsource some or all of their operations to outside vendors. Some charter schools mirror traditional public school (TPS) grade level or grade band configurations, and others serve students K-12 in one school. Some charter schools own and operate their facilities, and some are tenants of local school districts or rent space from commercial landlords.

Charter schools operate under governing boards separate from local district school boards. Following the "flexibility for accountability" construct, in exchange for discretion in school design and operation, charter schools must undergo periodic accountability reviews to remain open and in good standing. These accountability reviews weigh the schools' operational and fiscal health and student academic performance.

Thirty-seven states allow multiple schools to be held and operated under a common management structure known as charter networks or charter management organizations (CMOs). This option has increased the number of available charter school seats, yet it raises questions of scalability and quality. This study examines these questions and the performance of charter schools and charter networks against the legislative and regulatory incentives in place.

The Structure of the National Charter School Study III Report

We report four sets of findings, summarized below. The first three are included in this volume, *Charter School Performance in 31 States (CSP31). The fourth is presented in Volume 2, Charter Management Organizations 2023 (CMO23).*

Aggregate Charter Student Academic Progress

The first set of findings focuses on student performance in all charter schools included in the study. Looking at year-to-year academic progress from 2015 to 2019, **tested students enrolled in all charter schools in the 31 states had reading and math gains that outpaced their peers in the TPS that charter school students otherwise would have attended.** We report these differences as marginal days of additional (or fewer) days of learning on a learning benchmark of 180 days each school year. In math, charter school students, on average, were found to advance their learning by an additional six days in a year. For reading, on average, their learning added 16 days of learning.

In the past, a common claim asserted that positive academic results in charter schools arise from advantages that their students bring to their schooling. In some cases the claim focused on students having more motivated parents. Another version suggests targeting behavior on the part of the school results in a student body that is better prepared academically, a practice commonly referred to as "cherry picking" or "cream skimming." If true, the students in charter schools would show higher academic achievement at the point of enrollment. In multiple analyses, we do not see significant evidence of an undue advantage to charter schools. In fact, we find the opposite is true: charter schools enroll students who are disproportionately lower achieving than the students in their former TPS.

The current results are larger than what we reported in the second national study, which were larger than the first national study. The three studies taken together produce a solid positive trend over the 15 school years between 2004 and 2019. Notably, the upward trend was due to existing charter schools improving over time, not an influx of higher-performing new schools.

Academic Progress for Student Groups in Charter Schools

The second set of findings addresses how consistent the results are for all students. We again report these differences as marginal days of additional (or fewer) days of learning on a benchmark of 180 days of learning in a single school year. We found important differences in the amount of learning for different groupings of students enrolled in charter schools in our study.

Consistent with our earlier studies, we found significant variations in charter student learning when we examined results for students in different racial/ethnic groups. In math performance, Asian/Pacific Islander students in charter schools realized more than a year of academic progress in a school year. In contrast, Black, Hispanic, White and Native American students have academic gains that fall short of a year's progress in a year. In reading performance, Asian/Pacific Islander students made gains well above the benchmark 180 days of learning, while White and Hispanic students were closer to the benchmark of one year of growth in a year. Black and Native American students fell considerably short of the 180 days of learning mark.

Despite overall low growth, Black and Hispanic students in charter schools fared better when compared with the learning gains of their TPS peers. White, Native American and multiracial students had smaller learning gains than their TPS comparisons.

Charter school students in poverty and their TPS counterparts fell short of the learning of their non-poverty peers. Despite this, charter students in poverty had stronger growth, equal to 17 additional days of learning in math and 23 additional days of learning in reading, than their TPS peers in poverty. Likewise, English-language learner (ELL) students who attended charter schools also had stronger growth in math (eight days) and reading (six days) than their TPS peers but were still left considerably behind non-ELL students. Students receiving special education services had significantly weaker growth in both math and reading than their TPS peers. Specifically, they grew 14 fewer days in math and 13 fewer in reading.

Student Academic Progress in Different School Settings

As the conversation about public education focuses on schools as units of analysis, the third set of conclusions refers to the effects of charter school students' learning when different school characteristics are considered. Across the sample of 6,802 charter schools in math, 36 percent had overall learning gains that were statistically significantly larger than the local TPS alternatives. One quarter posted statistically significantly smaller results, and 39 percent had gains equivalent to their local peer schools. In reading, the results were stronger: 36 percent had statistically significantly larger learning results, 47 percent posted gains on par with their TPS peers, and 17 percent had statistically significantly smaller results. At both ends of performance, these results improve on earlier results from the last national study—a greater share of charter schools is stronger than the local option and a smaller percentage is worse.

The performance of charter schools in different types of communities continues in earlier patterns. As seen in earlier national studies, students in urban charter schools outpace their TPS peers and post larger gains than their charter school peers in suburban, town or rural settings.

The academic performance of students enrolled in virtual charter schools compares poorly to the 180-day learning standard in TPS and the performance of students enrolled in brick-and-mortar charter schools. Students in virtual schools had 124 fewer days of learning in math and 60 fewer days in reading against our 180-days of learning benchmark. By contrast, students in brick-and-mortar charter schools posted 21 additional days of learning in reading and 14 extra days in math.

The findings show important differences for charter schools when grouped by the state in which they operate. Ten states/regions had learning gains in reading and math that were statistically significantly larger than the TPS students: Colorado, Illinois, Massachusetts, Michigan, Missouri, New Jersey, New York City, Upstate New York, Rhode Island and Tennessee. Seven states posted better gains in reading: Arizona, California, Florida, Idaho, Minnesota, North Carolina and Texas. Only Oregon saw the reverse: charter school learning was statistically significantly smaller in both subjects. Ohio and South Carolina had negative and significant learning advances in math.

The Role of Charter Management Organizations in Student Academic Progress

We extensively investigated student progress according to the type of charter school they attended. When the results were grouped by independently operated charter schools (stand-alone charter schools, or SCS) versus those in Charter Management Organizations (CMOs or networks), students in schools run by CMOs had stronger results than their stand-alone student counterparts. While both sets of schools are stronger than their TPS peers, the CMO learning gains are substantially stronger and carry the overall results of the study despite having only a third of the schools.

We expanded our typical format for sharing results with this study. We moved all results into a web-based interactive data set at ncss3.stanford.edu. No individual student data or identifiable small group information is included in the graphics and other data visualizations. All the results from this study on the website mirror the document's findings.

1.2 Methods and Data

Methodology

Since the 2009 study, *Multiple Choice: Charter School Performance in 16 States*, CREDO has refined our matching and analysis techniques and expanded our data collection. This chapter provides a nontechnical overview of the data sources and analytic methods used in the current study. The chapter presents general descriptions of the data sources used in the recent study and explanations of how the study was organized and executed.

The Technical Appendix to this report and the Technical Appendix of the 2013 National Charter School Study II (Cremata et al., 2013) includes greater scientific detail on these topics. Table 1.1 represents the states included in each study and the years of data included in each study.

Table 1.1: States Participating in Each CREDO National Charter School Study (NCSS)

	NCSS I - 2009	NCSS II-2013	NCSS III-2023
First School Year of Data	2000-01	2006-07	2014-15
Last School Year of Data	2007-08	2010-11	2018-19
States Included in Each Study	Arkansas	Arkansas	Arkansas
	Arizona	Arizona	Arizona
	California	California	California
	Colorado (Denver)	Colorado	Colorado
	District of Columbia	District of Columbia	District of Columbia
	Florida	Florida	Florida
	Georgia	Georgia	
			Idaho
	Illinois (Chicago)	Illinois	Illinois
		Indiana	Indiana
	Louisiana	Louisiana	Louisiana
	Massachusetts	Massachusetts	Massachusetts
			Maryland
		Michigan	Michigan
	Minnesota	Minnesota	Minnesota
	Missouri	Missouri	Missouri
		Nevada	Nevada
			New Jersey
	New Mexico	New Mexico	New Mexico
		New York	New York
		New York City	New York City
	North Carolina	North Carolina	North Carolina
	Ohio	Ohio	Ohio
		Oregon	Oregon
		Pennsylvania	Pennsylvania
		Rhode Island	Rhode Island
			South Carolina
		Tennessee	Tennessee
	Texas	Texas	Texas
		Utah	Utah
			Washington
			Wisconsin

For this study, CREDO partnered with education departments in 31 jurisdictions to use their student and school level data. **The resulting data set included 81 percent of tested public school students in the United States, making it one of the largest data sets of student-level observations created to date.** We used this information to create a matched student data set with over 6,500,000 student-level observations from over 1,853,000 charter students and a matched comparison group.

Our partnerships with the 31 individual states depend on negotiated data-sharing agreements. One common requirement across all agreements is that the processing, analysis and security of the student-level data must meet the Federal Education Rights and Privacy Act (FERPA) requirements. This study complies with FERPA regulations as interpreted by each state providing data.

No single study can provide the definitive analysis on a topic as broad as the effectiveness of charter schools. A solid body of evidence emerges only by accumulating evidence from multiple studies. With this expansion and update to CREDO's earlier works, we add to the growing array of studies about charter schools and their impact on students' academic outcomes. In doing so, we strived to create a study that was both as rigorous and as balanced as possible.

Consolidating Student Data from Multiple States

This study is built on a methodology similar to the one used in the 2009 study. The only change to the method was to rematch the charter school students to a new set of TPS students each year. [3] The data collected for this study consisted of student-level demographics, school enrollment and achievement test scores in reading/English language arts (ELA) and math. Since No Child Left Behind's implementation, reading and math tests have been given consistently across grades 3–8. However, testing could be more consistent across other grades.

Many states had early elementary or high school testing. High school testing often took the form of an end-of-course (EOC) exam, which was tied to course enrollment rather than a student's grade. These EOC tests differed by state in several ways that could impact growth estimates. These variations included the grade in which the EOC exam was given, the number of times a student is allowed to take the EOC exam, and the time gap between the EOC tested grade and the previously tested grade. All of these factors had to be considered when constructing our data set.

Growth is the change in each student's score from one school year to the next. For each two-year series of individual student achievement data, we calculated a measure of academic growth. We could compute complete growth data from the 2013–14 school year through the 2017–18 school year. Two states are missing one year of data. Nevada is missing growth data from 2016–17 to 2017–18. Tennessee is missing data for 2015–16. Thus, the first period of growth for Tennessee was measured from 2014–15 to 2016–17.

Additional details about creating the study data set for the 31 states in this study are available in the Technical Appendix.

3 This change was implemented to meet the new standards of the What Works Clearinghouse at the National Center for Education Evaluation.

Selection of Comparison Observations

As in previous CREDO studies, this study employed the virtual control record (VCR) method of analysis developed by CREDO (Davis & Raymond, 2012). The VCR approach creates a "virtual twin" for each charter student who is represented in the data. In theory, this virtual twin would only differ from the charter student in that the charter student attended a charter school and the twin attended a TPS. The VCR matching protocol has been assessed against other possible study designs and judged to be reliable and valuable by peer reviewers (Egalite & Ackerman, 2015).[4]

Using the VCR approach, a "virtual twin" was constructed for each charter student by drawing on the available records of traditional public school (TPS) students with identical traits and aligned prior test scores who were enrolled in TPS that the charter students would have likely attended if they were not in their charter school.[5]

Factors included in the matching criteria were:

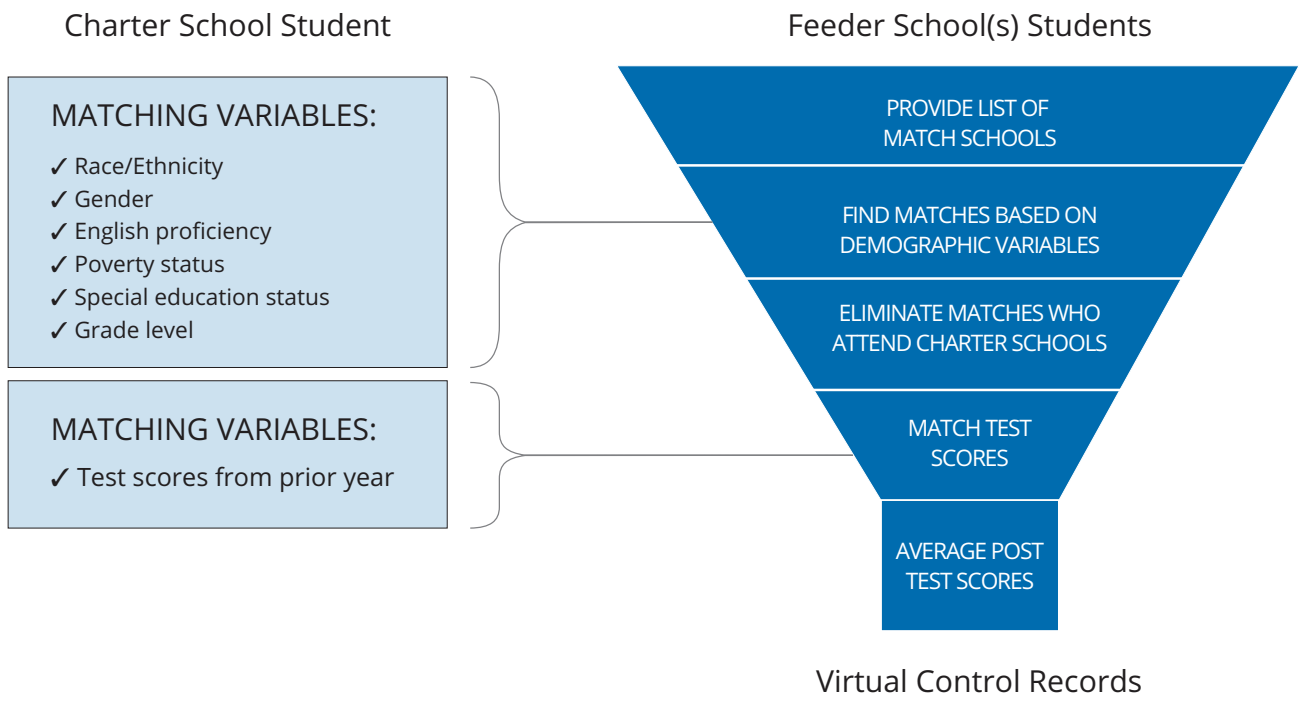
- Grade level
- Gender
- Race/ethnicity
- Free or reduced-price lunch eligibility
- English-language learner status
- Special education status
- Prior test score on state achievement tests

Figure 1.1 shows the matching process used by CREDO to create the virtual twins linked to each charter school student. In the first step, CREDO identifies all TPS students who enrolled in a given charter school. These schools are referred to as "feeder schools" for that charter. Each charter school has a unique feeder school list for each year of data. Students attending a charter school that is also a feeder school are eliminated from the match pool for each charter student to ensure VCRs consist entirely of TPS students. The feeder school method provides a strong counterfactual as residential school assignment commonly used to place students in TPS has been shown to group demographically and socioeconomically similar students into schools. This practice increases the likelihood that students assigned to similar schools have similar backgrounds, knowledge of school choice programs and school choice options. Once a school is identified as a feeder school for a particular charter, all the students in that TPS become potential matches for students in the charter school. All of the student records from all of a charter's feeder schools were pooled: this became the source of records for creating the virtual twin match.

4 Details of these assessments of the VCR method are presented in the Technical Appendix of the 2013 National Charter School Study, https://credo.stanford.edu/wp-content/uploads/2021/08/ncss2013_technical_appendix.pdf

5 The majority of VCRs included only test scores which were exact matches. Non-exact matches must be within 0.1 standard deviations to be included as part of a VCR.

Figure 1.1: CREDO Virtual Control Record (VCR) Methodology



The VCR matching method eliminates any of the remaining TPS students whose demographic characteristics do not match exactly and who did not have an identical or similar prior test score. As part of the match process, we also drop any students who enrolled in a charter school in subsequent years from the TPS match pool.

Using the records of TPS students at feeder schools in the year prior to the first year of growth, CREDO randomly selects up to seven TPS students with identical values on the matching variables in Figure 1.1, including aligned prior test scores. Students with similar test scores were used only when there were not enough TPS students with exact test score matches. The values for the selected TPS students are then averaged to create values for the virtual twin. As all other observable characteristics are identical, the only characteristic that differs between the charter student and their VCR is attendance in a charter school. Thus, we concluded that any differences in the post-test scores are primarily attributable to charter school attendance (Unlu et al., 2021). The matching process was conducted separately for reading and math. Table 1.2 below displays the proportion of charter students in each racial/ethnic group for whom CREDO was able to create a VCR.

Student Match Rates

CREDO's VCR matching method resulted in 81.2 percent of the charter students from participating states being matched with TPS students to create VCRs. This match rate provided a data set with 3,669,446 matched charter student-by-year records. The match rates vary by the race and ethnicity of the students; smaller race/ethnic groups had lower match rates.[6] With CREDO's strict standards to create the VCRs, smaller race/ethnic groups have fewer identical students to match with the charter students. Table 1.2 provides the match rates for each race/ethnicity and shows each group's share of the data set. Racial/ethnic group match rates at the state level are listed in the Technical Appendix.

Table 1.2: Match Rates by Race/Ethnic Group

Race/Ethnic Group	Group Match Rate	Proportion of Student Body in each Race/Ethnic Group in Study
White	84.4%	32.6%
Black	81.4%	25.3%
Hispanic	83.3%	36.0%
Asian/Pacific Islander	64.0%	3.6%
Native American	38.0%	0.3%
Multiracial	58.1%	2.3%

Students in poverty - commonly measured by those eligible for free or reduced-price lunches—had a slightly stronger match rate (82.3 percent) than non-poverty students (79.7 percent). Match rates for ELL students (74.9 percent) were lower than those for non-ELL students (81.7 percent).

School Match Rates

The charter school data set contained 7,288 individual schools. Almost all charter schools (98.3 percent) had at least one school match. In seven states, all the schools had a matching school. The state with the lowest rate was Washington, at 86.7 percent.

Fair Analysis of Impacts on Student Academic Progress

Most researchers agree that the best method of measuring school effectiveness is to look at schools' impact on student academic growth, independent of other possible influences. The technical term for this is "value-added" (Betts & Tang, 2008). The central idea is that schools should be judged on their direct contribution to student academic progress. This necessarily considers the students' starting scores on standardized tests and student characteristics that might influence academic performance. This approach forms the foundation of our study design.

To conduct a fair analysis, this study followed the approach of the previous CREDO studies: we looked at the academic growth of individual students as reflected in their performance on state achievement tests in both reading and math. To ensure accurate estimates of charter school enrollment on student academic growth,

6 Due to the variable distribution of students by school type and subgroup across the country, some student subgroups have low match rate in some states. Low match rates require a degree of caution in interpreting the national pooled findings as they may not fairly represent the learning of the student groups involved.

we used statistical methods to neutralize the influence of student demographics and eligibility for categorical program support, such as free or reduced-price lunch eligibility and special education. In this way, we structured the analysis so that differences in academic growth between the two groups are a function of which schools they attended.

While we went to great efforts in each state to match the charter students and their virtual twins, it is important to recognize that states differ in the location of charter schools and the students they serve. These differences mean that charter students are not likely to be representative of the state's full complement of students. These differences are described in the Student Characteristics section. Our statistical models included controls for these differences between states to consider these differences when estimating the overall impact of charter school attendance.

Basic Analytic Models

The purpose of this study is to address multiple questions. All focused around one central question, "How did the academic growth of charter school students compare to similar students who attended traditional public schools (TPS)?" By answering this foundational question, we aim to extend the pool of knowledge on charter school effectiveness and provide reliable information for policy makers.

In CSP31, we analyze charter schools' effectiveness in the 31 states with which we have data partnerships. We also discuss the performance change for the states covered in the 2009 and 2013 reports. These cross-study comparisons are included by research topic when applicable.

How We Present the Results

We present the findings in units of days of learning to make the results clearer to non-technical readers. The statistical analysis produces results denominated in standard deviations—an unfamiliar currency to the general public. The days-of-learning metric takes the statistical findings of our analysis and transforms them. It uses a protocol that was developed prior to the study and then applied here.[7] For each growth period, we identify the one-year learning growth of an exactly average TPS student in each state and grade and set that learning gain as "180 days of learning in 180 days of schooling." We then take our results, student by student, and compare their academic progress to the benchmark learning of 180 days. If a student in our study has more learning, we award him extra days of learning on top of the 180. If a student learns less than the benchmark, they are awarded negative days of learning which added to the 180 benchmark result in fewer days of learning.[8]

While transforming the statistical results into days of learning provides a more accessible measure, the days of learning are estimates and should be used as general guides (Hanushek & Rivkin, 2006). We provide the difference in growth in standard deviation units in the outputs of the statistical methods used for each analysis found in the Technical Appendix.

7 Using nationwide growth data from the National Assessment of Education Progress, the transformation involves multiplying the standard deviation units produced by our statistical analyses by 578 days. This yields 5.78 days of learning for every 0.01 standard deviation difference in our analysis. For those wanting to convert these larger counts into weeks or months: a school week consists of five days; a school month is 20 days and a quarter or nine-week term is typically 45 days.

8 The expression "additional days of learning" does not mean the students were necessarily in school for more days during the school year. It means that the additional learning that took place in charter schools during the school year was equivalent to attending school for x additional days in a TPS setting.

1.3 Descriptive Statistics

In this section of the report, we familiarize the reader with the attributes of the research data set and discuss student and school differences between charter schools and TPS. Table 1.3 describes and compares our data. We first provide information on the TPS sector as a whole. This sector represents all the TPS schools in the 31 states included in the analysis. We then look at the feeder schools. Feeders are the TPS schools that charter school students would have attended had they not enrolled in a charter school; they are a subset of the entire class of TPS. Because charter schools are not evenly scattered across all types of locations and communities, the feeder schools from which they draw their students have characteristics that are different from the class of all TPS schools (Monarrez et al., 2022).

Student Characteristics

There are also differences in the characteristics of enrolled students, even within the charter sector. The students who enroll in virtual charter schools tend to differ demographically from students enrolled in brick-and-mortar charter schools. It is important to understand how charter school students differ from the larger body of all TPS students when generalizing charter school outcomes to other student bodies with different demographics. The table below shows the student demographic characteristics for schools in the 31 states included in the study.

Table 1.3 Demographic Comparison of Students in TPS, Feeders, and Charter Schools (Brick-and-Mortar and Virtual) in 31 States, 2017–18

	All TPS	Feeders	All Charters	Brick-and-Mortar Charters	Virtual Charters
Number Schools	69,706	34,792	6,802	6,588	214
Average Enrollment	552	671	463	444	1,565
Total Enrollment	37,369,048	22,658,792	2,963,468	2,755,778	207,690
% In Poverty	51%	57%	55%	56%	44%
% ELL	11%	13%	10%	11%	2%
% SPED	13%	13%	11%	11%	14%
% White	47%	40%	32%	29%	63%
% Native American	1%	1%	1%	1%	1%
% Hispanic	30%	35%	34%	36%	15%
% Black	13%	16%	25%	26%	12%
% Asian/Pacific Islander	6%	5%	4%	4%	2%
% Multiracial	4%	4%	4%	4%	7%

Brick-and-mortar charter schools enroll a larger proportion of students living in poverty than the TPS schools in our 31-state study. Most states define a student being in poverty as a student eligible for free or reduced-price meal programs; however, some states use a state-specific metric to classify a student as

being in poverty. We treat these two methods as equally valid for these analyses. The percentage of students in poverty in charter schools is similar to those in poverty in the feeder schools that students would have attended if not enrolled in their charter schools. The percentage of charter school students in brick-and-mortar charter schools identified as English learners and students receiving special education services is comparable to that of the full set of TPS schools and feeder schools. The brick-and-mortar charter schools have twice the rate of Black student enrollment as the TPS schools and 10 percentage points higher than their feeder schools. The enrollment rate for Hispanic students in brick-and-mortar charters is similar to that in the set of feeder schools, yet lower than the overall rate for all TPS schools. These increased enrollment rates for Hispanic and Black students were offset by lower rates in brick-and-mortar charters for White students than in the feeder charters and the complete TPS set of schools.

When it comes to student profiles, virtual charter schools have different profiles from the other forms of charter schools, traditional public schools and brick-and-mortar charters. Virtual charters have a smaller percentage of students living in poverty, students identified as English learners, Hispanic students and Black students. On the other hand, they have a disproportionately high number of White students relative to the other groupings mentioned in Table 1.3.

Race/Ethnicity Composition of Matched Charter Students[9]

The data set was made up of matched charter students with at least two successive test scores who attended the public charter schools in the years under study in the included states. Therefore, the makeup of the student body for this study will differ slightly from the student body described in the overall charter landscape and the 31-state summary (see Table 1.3).

Table 1.4: Race/Ethnic Proportions for All versus Matched Students

Race/Ethnic Group	Proportion of Student Body in each Race/Ethnic Group — All Charters	Proportion of Student Body in each Race/Ethnic Group — Matched Student Data Set
White	32%	33%
Black	25%	25%
Hispanic	34%	36%
Asian/Pacific Islander	4%	4%
Native American	1%	0.3%
Multiracial	4%	2%

The largest race/ethnic group included in the study is Hispanic students, who comprise 36 percent of the matched data set. The next-largest groups are White students (32.6 percent) and Black students (25.3 percent). Asian and Pacific Islander students are 3.6 percent of the data set. Multiracial students, those of two or more races, are 2.3 percent of the students in the analyses, and Native American students make up the smallest portion, with only 0.3 percent of students identifying as Native American only.

9 Because the VCR matching protocol produces a single record (the average of up to seven TPS matched students), the demographic profiles of charter and VCR student-year records are identical.

Other Student Characteristics

For other student characteristics, 57.8 percent of students in the study are students in poverty—defined as eligible to receive free or reduced-price lunches or using their state's specific economic metric to identify students in poverty.[10] English-language learning students (ELL) made up 7.1 percent of the data set. Students receiving special education services made up 7.9 percent of the data set. Just over half (51.5 percent) of charter school students are female. The proportions of the matched student body are similar to the proportions of these special populations in the larger sample of all charter students in the 31 states.

Table 1.5: Special Population Proportions for All versus Matched Students

Special Population	Proportion of Student Body in each Special Population — All Charters	Proportion of Student Body in each Special Population — Matched Student Data Set
In Poverty	55%	58%
ELL	10%	7%
SPED	11%	8%

One in four students in the data set is a Hispanic student in poverty (26.2 percent), while 20 percent of students are Black students in poverty. Also, 6.2 percent of students in the data set are Hispanic ELL students.[11]

While the national distribution fits the expected pattern, student achievement decile patterns vary greatly by state. For example, in 2017, Pennsylvania drew a larger percentage of its charter enrollment from the lower deciles, as do Michigan and Ohio. The opposite—higher achieving students enrolling in charter schools—is found in New York City, North Carolina and Arizona. In the figure below, there are 10 boxes in each state, with the lowest box being the first decile (lowest achievement) and the highest box representing the 10th decile (highest achievement).

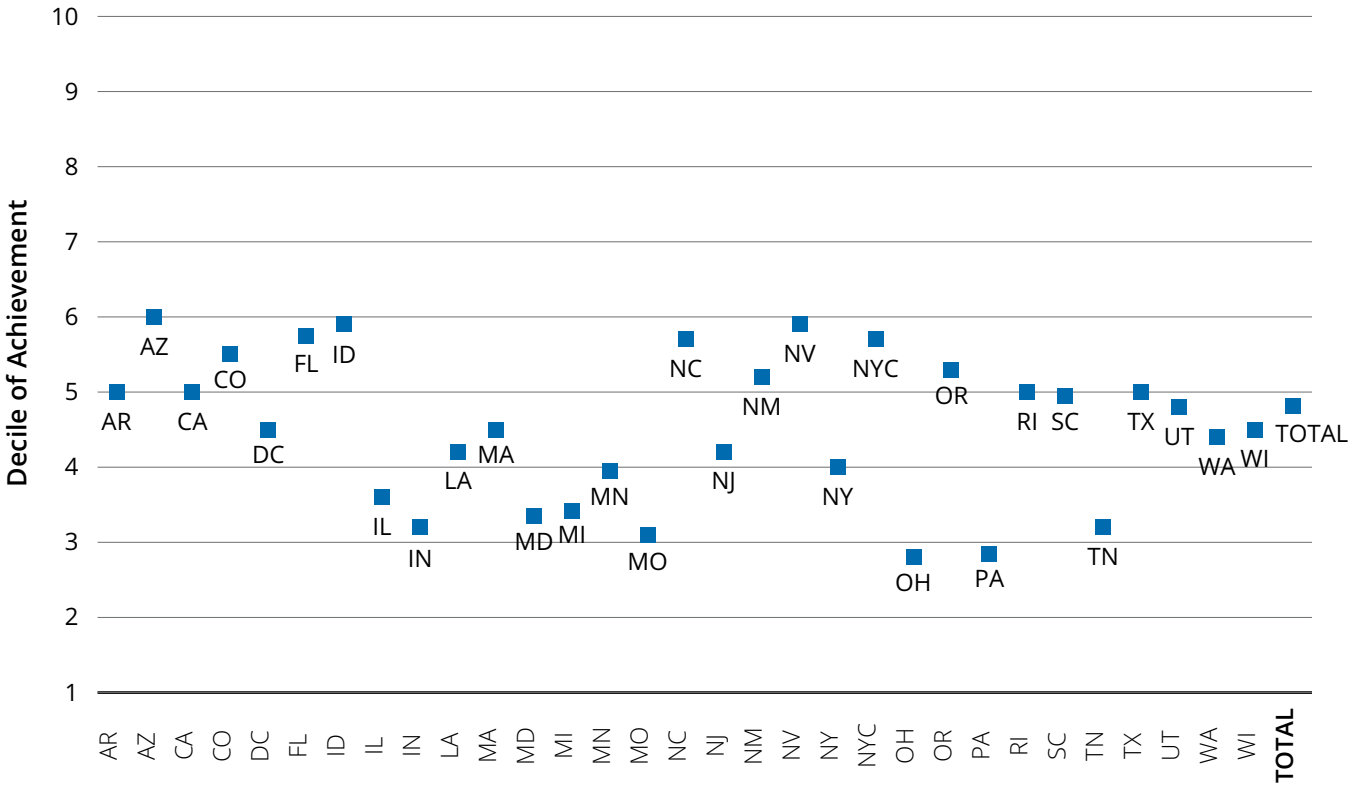
Figure 1.2 shows the within-state decile of the average achievement level for all students enrolled in charter schools by state for math. There is a wide variance in the achievement levels of charter students in different states. While some states have average charter student achievement as high as the sixth decile, which means the average charter student has achievement above the average TPS student in the state, most are in the third and fourth deciles. The average achievement scores are due to a combination of new charter students' entry-level achievement and the impact of attending charters for existing charter students.

10 CREDO acknowledges the declining usefulness of free and reduced-price lunch eligibility as an indicator of poverty. We have used a state-specific variable in states where a better metric is available. For the remaining states, free or reduced-price lunch eligibility was the best indicator available (Fazlul et al., 2023).

11 Hispanic students in poverty and Hispanic ELL students are not mutually exclusive groups. A student could be in both.

To get a better understanding of the achievement of students entering charter schools, Figure 1.2 provides the percentage of charter students in each state with student math achievement in each decile. If charter schools drew their students from the same deciles as TPS, we would expect roughly 10 percent of students to come from each decile.[12] However, the patterns in Figure 1.2 show that is not typical. Some states draw a disproportionate share of their students from the lower deciles, creating a pyramid-shaped distribution. Other states invert the pyramid by pulling more high-achieving students into charter schools than the TPS. Much of the achievement distribution of charter school enrollees has to do with where charter schools are located. In states where charter schools are located primarily in urban locations, we would expect more lower decile students to enroll in charter schools. We could expect to see a more even distribution in states where charter schools are distributed more evenly throughout the state.

Figure 1.2: Average Achievement of All Charter Students by State, Math 2017[13]



12 Decile by state percentages for charter school reading achievement are included in the Technical Appendix. The distributions support the insights gleaned from math achievement.

13 Results for Reading are available in the Technical Appendix

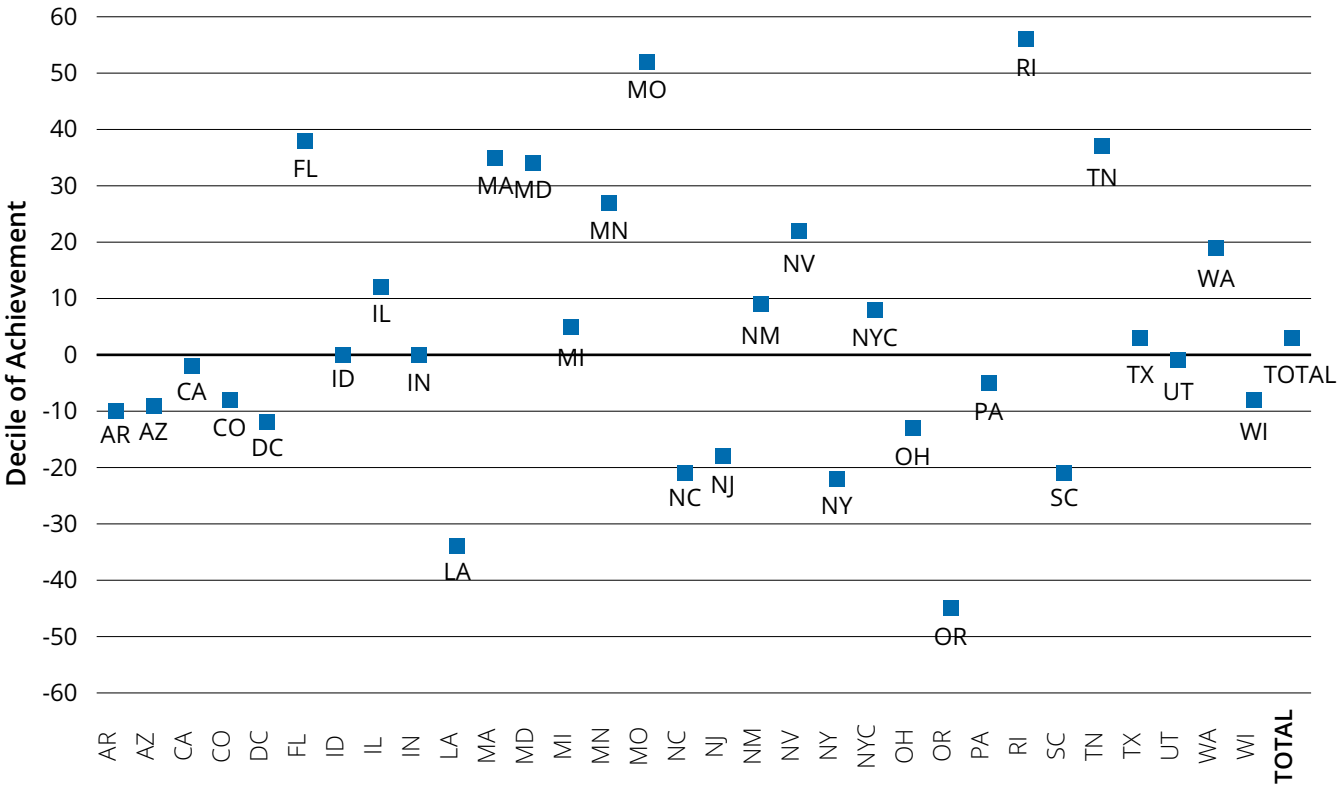
Table 1.6: Achievement Decile Distribution of Charter Enrollees by State 2017, Math

Charter Student Enrollment by Achievement Decile in 2017 (2016 for MD)

This table contains data that is available in an interactive format on the study website.

State	Decile 1	Decile 2	Decile 3	Decile 4	Decile 5	Decile 6	Decile 7	Decile 8	Decile 9	Decile 10	Total
AR	7%	12%	12%	11%	8%	12%	8%	9%	9%	11%	14,506
AZ	5%	7%	8%	9%	9%	10%	12%	13%	14%	12%	74,868
CA	8%	10%	10%	10%	10%	11%	11%	11%	11%	8%	185,840
CO	7%	9%	10%	10%	10%	10%	11%	11%	11%	10%	50,395
DC	8%	11%	13%	10%	11%	11%	11%	10%	9%	5%	7,486
FL	5%	6%	8%	10%	11%	12%	14%	13%	12%	9%	113,763
ID	6%	7%	8%	8%	9%	11%	12%	13%	15%	11%	8,329
IL	12%	17%	14%	12%	12%	10%	9%	7%	6%	2%	16,210
IN	16%	16%	14%	12%	11%	10%	8%	6%	5%	2%	10,539
LA	11%	13%	13%	12%	10%	11%	10%	8%	7%	4%	30,263
MA	9%	11%	11%	12%	11%	11%	11%	10%	8%	5%	14,962
MD	15%	16%	14%	13%	10%	9%	8%	8%	4%	2%	20,056
MI	17%	17%	14%	11%	9%	9%	8%	6%	6%	4%	44,967
MN	15%	12%	10%	11%	10%	10%	10%	9%	8%	5%	17,674
MO	14%	13%	13%	14%	12%	12%	9%	7%	3%	1%	7,386
NC	7%	7%	7%	9%	11%	11%	13%	12%	13%	10%	33,817
NJ	11%	13%	12%	12%	11%	10%	10%	9%	8%	5%	19,944
NM	7%	10%	10%	11%	10%	10%	10%	10%	10%	11%	9,133
NV	5%	8%	8%	9%	10%	10%	12%	13%	14%	12%	19,153
NY	13%	10%	12%	13%	13%	12%	11%	8%	6%	3%	8,200
NYC	4%	7%	7%	10%	11%	13%	14%	15%	12%	8%	41,627
OH	21%	20%	14%	12%	9%	8%	6%	5%	3%	2%	29,618
OR	5%	9%	10%	10%	11%	12%	12%	12%	12%	7%	7,306
PA	16%	28%	16%	11%	8%	7%	5%	4%	3%	2%	38,985
RI	7%	8%	11%	12%	11%	12%	11%	12%	9%	7%	2,157
SC	5%	14%	13%	11%	11%	10%	9%	9%	7%	10%	11,636
TN	16%	15%	14%	13%	11%	10%	8%	7%	5%	2%	19,924
TX	10%	12%	9%	8%	9%	9%	8%	12%	14%	8%	104,665
UT	11%	9%	9%	9%	10%	11%	11%	12%	11%	6%	26,108
WA	12%	11%	10%	11%	11%	11%	12%	10%	7%	4%	1,244
WI	9%	11%	11%	11%	13%	13%	11%	10%	8%	4%	15,648
	9%	11%	10%	10%	10%	10%	10%	11%	10%	7%	1,006,409

Figure 1.3: Average Academic Growth of Charter Students by State, Math 2017



Perceptions of Charter School Student Advantage

In the past, a common claim asserted that positive academic results in charter schools arise from advantages that their students bring to their schooling. The claim has taken one of two forms: a "push" on the part of parents or a "pull" on the part of charter schools. The "push" alternative posits that charter school students have parents that, by the act of enrolling their student in a charter school, reveal they value education more and/or are more motivated to pursue educational success for their children than other parents. As a result of parental investments of time and resource, their students are thought to be better prepared academically. The "pull" version suggests that charter schools signal or sift interested students to enroll more advantaged students, drawing them away from neighborhood schools. This practice commonly is referred to as "cherry picking" or "cream-skimming."

Despite different mechanisms, both versions of "charter school students are advantaged" can be tested with the same analysis. If either or both claims are true, then entering charter school students would present stronger academic preparation than the students in the feeder TPS schools. With our analysis, we advance earlier work to examininge achievement distribution for low-end and high-end differences in starting achievement (Kho et al., 2022; Zimmer et al., 2009).

We compare students who initially enrolled in a TPS and took at least one achievement test before transferring to a charter school to their peers who enroll in the TPS. We can observe the distribution of charter students' test scores across deciles of achievement and do the same for students in the feeder TPS. Taking the difference in the two percentages for each decile illuminates how equal the distributions of student achievement are in the two school settings. We conduct the analysis by subject for each state, yielding 62 tests (i.e., 31 states and 2 subjects).

Table 1.6 presents the results. For example, in Michigan, the share of students entering charter schools from the bottom three deciles of achievement is 24.4 percentage points larger than the share the feeder schools enrolled. We consider two percentage points difference for any achievement decile as natural variation.

Table 1.6 presents reveals important results at both ends of the achievement continuum. In 17 states, charter schools enroll more students from the bottom three deciles of achievement than do their feeder schools. In many cases, the share is 10 to 20 percent larger than in feeder schools. For eight states, the differences fall in the 2-percentage margin of variation. In five states new charter school student enrollment in the lowest deciles is smaller by three to six percentage points.

At the upper end of the achievement range, in three states, the share of charter school enrollment from the top three deciles is three percent larger than their feeder schools. Six states have equivalent enrollment. In 21 states, charter schools enrolled smaller shares of top-decile students than their feeder schools, with smaller enrollments upwards of 17 percentage points.

To recap the analysis, across the 62 tests the claim charter schools are advantaged by the students they enroll was unfounded in 54. Where the distributions differered, the balance of evidence shows larger shares of students entering charter schools with achievement in the lowest deciles and smaller shares of students had prior achievement in the highest deciles than in the schools they left. In the handful of tests where the entering student distribution favors charter schools, the advantage is insubstantial. The evidence dispels claims that charter schools gain an unfair edge by enrolling "better" students.

Table 1.7: Percentage Differences between Entering Charter Students and Feeder School Students by Decile of Achievement [14]

	Achievement Group		
State	**Bottom Deciles 1- 3**	**Middle Deciles 4-7**	**Top Deciles 8 - 10**
AR	-0.36	-1.31	1.68
AZ	-1.56	1.31	0.26
CA	4.28	0.77	-5.05
CO	3.71	-0.64	-3.07
DC	8.66	0.21	-8.87
FL	-5.01	7.36	-2.33
ID	-5.13	1.94	3.17
IL	6.20	0.96	-7.16
IN	14.16	-0.50	-13.65
LA	10.29	2.34	-12.63
MA	1.42	-1.13	-0.28
MI	24.44	-7.17	-17.26
MN	13.57	-2.17	-11.42
MO	10.39	2.75	-13.13
NC	-3.04	0.49	2.54
NJ	9.60	-0.89	-8.73
NM	0.56	0.75	-1.31
NV	-3.32	3.18	0.13
NY	4.78	5.87	-10.67
NYC	-1.73	8.86	-7.13
OH	20.56	-4.62	-15.96
OR	-1.57	4.73	-3.16
PA	26.03	-8.88	-17.16
RI	-6.14	10.08	-3.92
SC	0.53	1.86	-2.40
TN	4.68	6.50	-11.19
TX	3.93	-7.25	3.32
UT	-0.69	1.41	-0.74
WA	2.64	2.92	-5.56
WI	6.47	3.06	-9.51

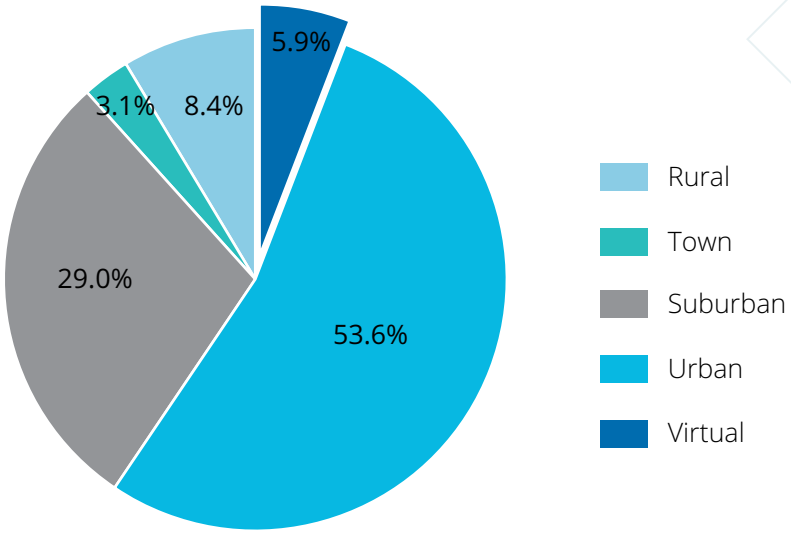
14 Full breakout by decile is included in the Technical Appendix.

School Characteristics

School Location

The majority of charter school students in the study attend charter schools located in an urban setting (53.6 percent), according to the locale designations of the National Center for Education Statistics (NCES). The study's second largest group of students is those attending a suburban charter school, at 29 percent. Rural charter school students (8.4 percent) and charter students in towns (3.1 percent) comprise the remainder of the brick-and-mortar charter school students. The remaining 5.9 percent of charter school students attend online charter schools.[15]

Figure 1.4: Percent of Charter School Student Enrollment by Location



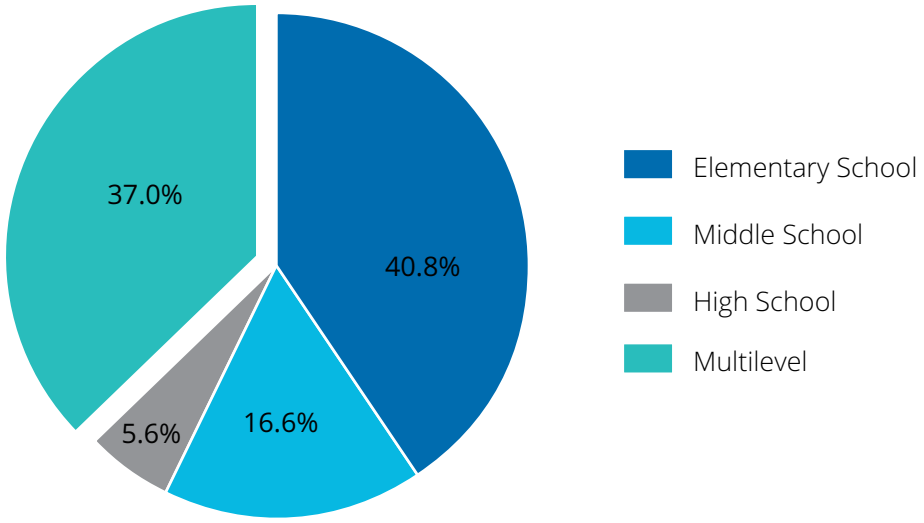
The geographic settings where charter students attend school remain relatively stable between the 2013 and the 2023 studies. The one exception is the number of rural students dropping by half, from 16 percent of the matched sample to just eight percent. Between the two studies, CREDO added the virtual category to report separately for students who attend online charter schools. In the 2013 study, students attending online schools were categorized by the location of the online schools' headquarters. Any changes in locale reporting would impact only the comparisons between locale reporting when comparing outcomes between the 2013 and 2023 studies. The larger overall and state-level comparisons will not be impacted.

15 While online charter schools are assigned an NCES locale based on the locations of their offices, for this study we group students attending an online charter into a separate "online" locale regardless of where the school's offices are physically located.

School Level/ Grade Span

We also group students into school levels based on the NCES grade-span categories: elementary, middle, high, and multilevel schools. This gives us a picture of the distribution of charter school enrollment by school configuration. The majority of charter school students in our study (40.7 percent) are enrolled in K-6 elementary schools; 16.6 percent of charter school students in our study are enrolled in stand-alone middle schools (grades 6–8); and 5.6 percent are enrolled in charter high schools (grades 9–12). Multilevel schools serve a combination of grades outside traditional school grade groupings. For example, K-8 schools, 6–12 schools or schools that enroll students in K-12. Students in these schools make up 37.1 percent of charter school students in this study.

Figure 1.5: Percent of Charter Schools by Grade Level



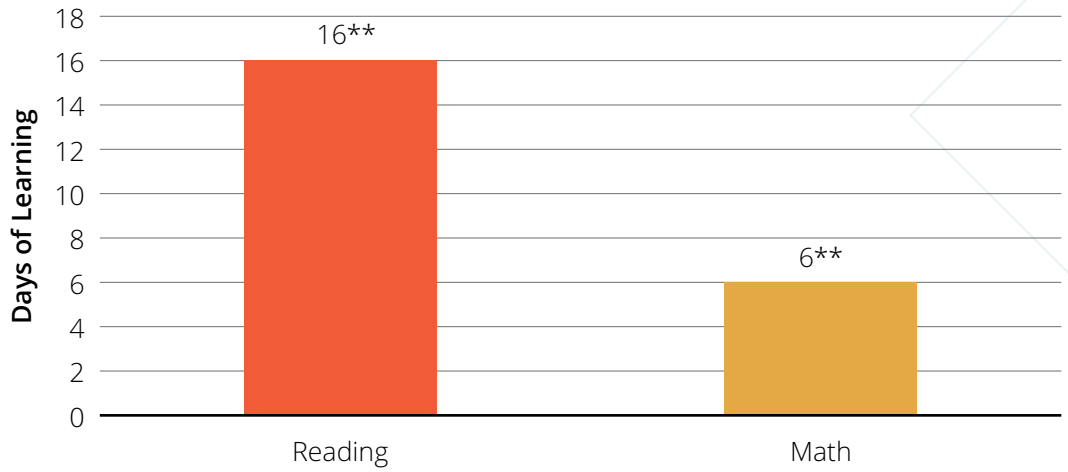
Between the 2013 and 2023 studies, the only major changes we see in locales are an eight percentage point decrease in the proportion of charter students attending high schools and a seven percent increase in the proportion of charter schools classified as multilevel schools.

1.4 Analytic Findings

Academic Growth of Charter School Students

The typical charter school student in our national sample has statistically significant positive year-over-year growth in both math and reading compared to the TPS VCRs.[16] The benefit of attending charter schools during the period of study amounts to additional days of learning equivalent to six days in math (0.011) and 16 days in reading (0.028).[17]

Figure 1.6: Annual Academic Growth of Charter School Students, Reading and Math



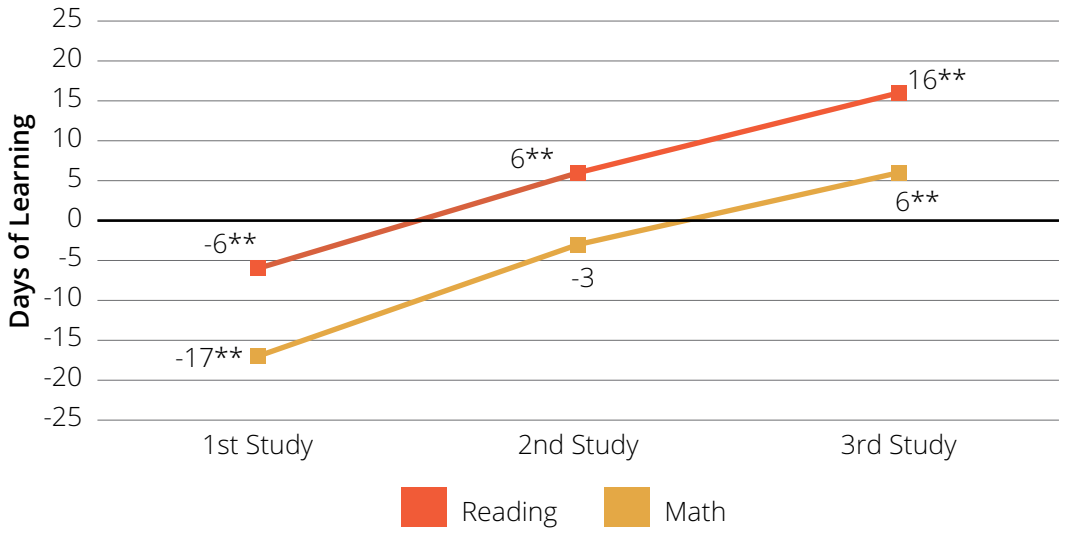
** Significant at p ≤ 0.01

This is a step forward for charter school performance over CREDO's two previous national studies. In the 2009 national study, students attending charter schools had less growth in both math (17 days less) and reading (six days less) than their TPS VCRs. In the 2013 national study, the growth of charter students was not significantly different from their TPS VCRs in math but was significantly stronger in reading (six days more).

16 Throughout this report, numbers referred to as "significant" are statistically significant at least at the 0.05 level. In graphics, a single star (*) means statistically significant at the 0.05 level; double stars (**) means statistically significant at the 0.01 level. Differences that are not statistically significant are reported as being similar.

17 As described in the Methodology section of this report, when we transform our analytic growth results from standard deviation units to days of learning, a .01 standard deviation equates to 5.78 days of learning.

Figure 1.7: Annual Academic Growth of Charter School Students across Three National Studies

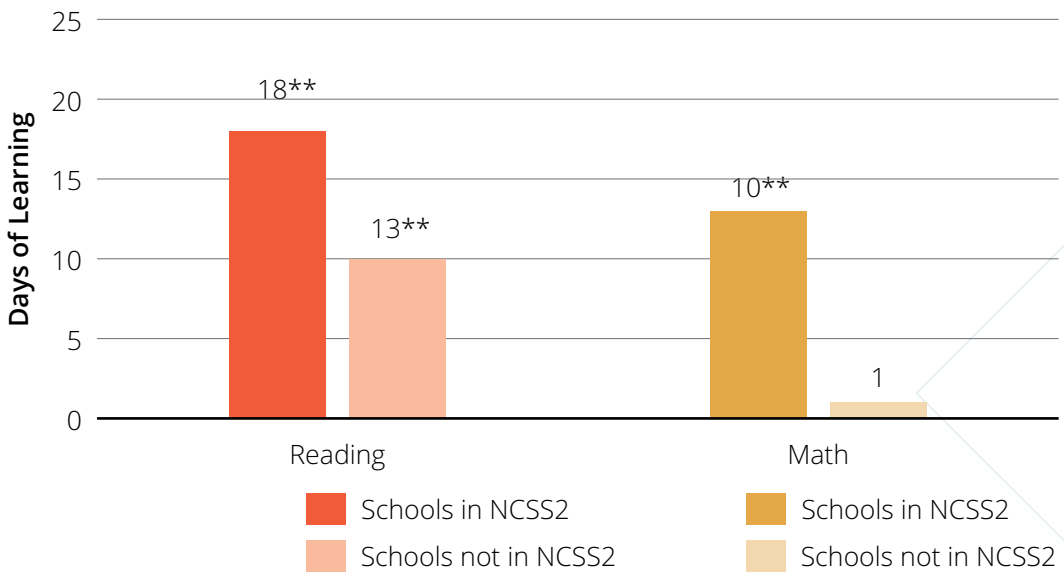


** Significant at p ≤ 0.01

While these results are the national averages for charter school students, the results vary greatly from state to state and by student characteristics. Since many charter school policies are set at the state level, differences across states are partly a function of variation in charter schools' legal and regulatory environments. Below we examine the outcomes by different student subpopulations.

To explore the trend of improved performance, we examined the pooled national data to see if schools that are new to our sample (by being new or having tested grades for the first time) had different results than schools that were included in earlier national studies. This comparison provides a partial view of the source of overall improvement over time. The existing charter schools had stronger growth than their TPS peers in reading (+18 days) and math (+10 days). The new-to-the-study schools had stronger growth in math (+13 days) and identical growth in reading as their TPS peers. Based on these results, the larger part of the improved performance of charter schools since the 2013 study stems from the earlier cohort getting stronger. Interestingly, the new schools in this study had better performance than new schools in the second national study and outpaced overall growth for all charter schools in both prior studies.

Figure 1.8: Annual Academic Growth in Previously Studied Schools Compared to Current Schools



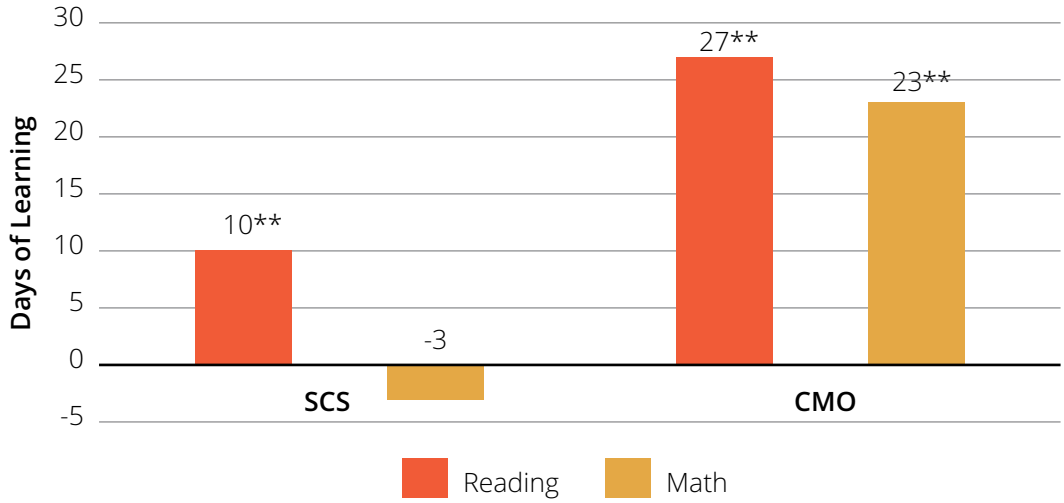
** Significant at $p \leq 0.01$

One mechanism by which the existing charter schools can get stronger over time is by the closure of poorer-performing charter schools. However, there are reasons other than academic performance that can lead to school closure. We examined the performance of the 207 charter schools that closed during our study window. The performance of th ese closed schools was similar in both subjects. Using reading to illustrate, the majority of these charter schools that closed (58 percent) were those with below-average achievement and weaker growth than their TPS comparisons. However, 30 percent of the schools that closed had stronger growth than their TPS comparisons, even if their achievement was below the state's average. Surprisingly, seven percent of the closed schools had stronger growth than their TPS comparisons and above-average achievement for their state.

RECAP: Academic Growth of Charter School Students by Type of School

To complement these aggregate analyses, CREDO expanded the analyses of charter school student academic growth by distinguishing the progress of students attending charter schools associated with charter management organizations (CMO) from those attending stand-alone charter schools (SCS).[18] The complete set of findings is available in the second volume: *Charter Management Organizations 2023* Students attending CMO-affiliated charter schools have statistically significant positive learning gains in reading and math compared to their TPS peers with similar observable characteristics. Students attending SCS had stronger growth in reading and similar growth in math to their TPS peers. Figure 1.10 shows these differences to be equivalent to an additional 27 days of learning in reading and 23 days in math for students attending charter schools associated with a charter management organization over their comparison group. This is contrasted to 10 additional days in reading and similar growth in math for students attending SCS as compared to their VCRs.

Figure 1.9: RECAP: Average Academic Growth for Charter School Students by Charter School Type, Reading and Math



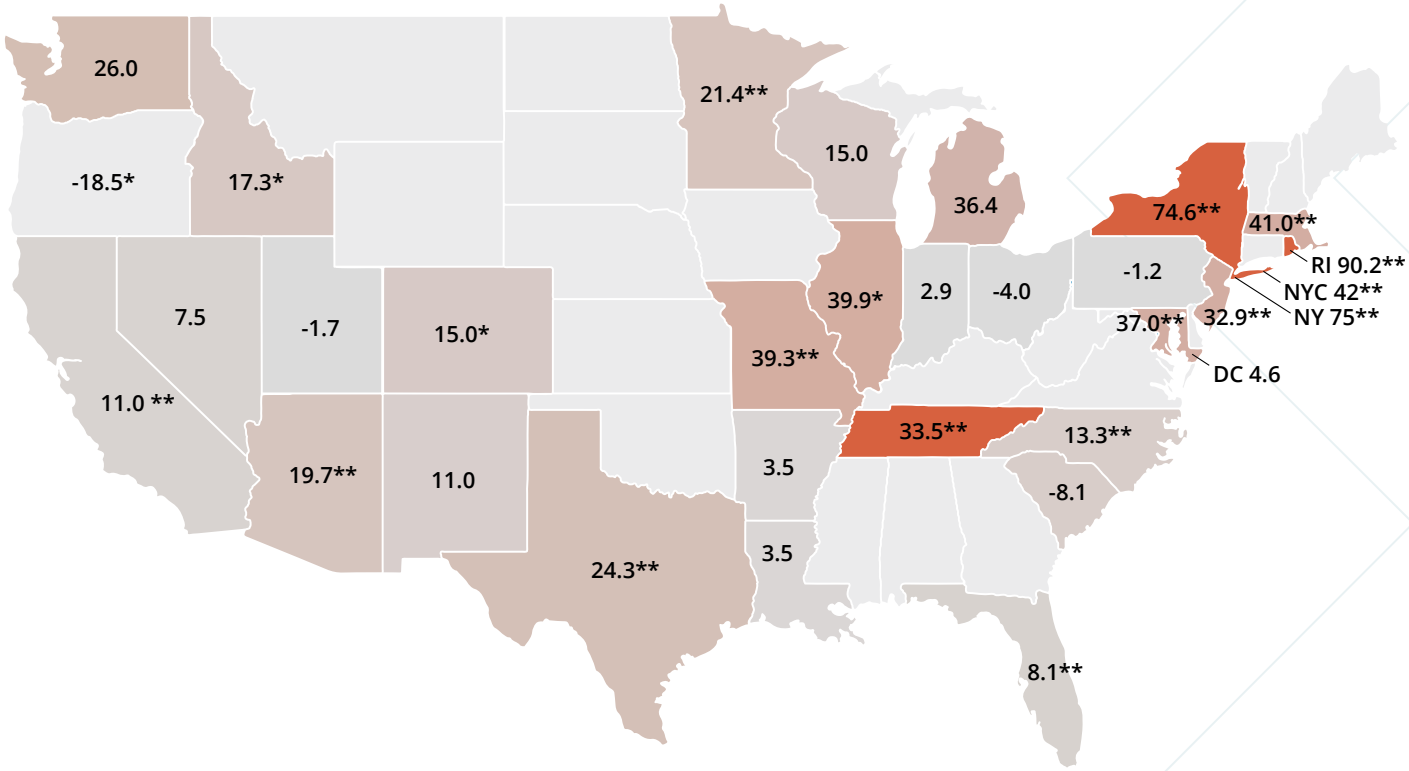
** Significant at $p \leq 0.01$
Figure above originally appears as Figure 2.4 in CMO23.

18 The CMO study does not include Idaho, Maryland, and Ohio.

Charter School Student Academic Growth by State

Charter school students had weaker reading growth than their TPS peers only in Oregon. Significantly stronger growth by charter students was seen in 18 states. In the remaining 12 states, growth for students attending charter schools was similar to that of their TPS peers. The strongest gains were in the Northeast. Rhode Island (+90 days) and New York State (+75 days) charter students saw the largest gains. New York City (+42 days) students had strong gains, as did students from Massachusetts (+41 days).

Figure 1.10: State Level Average Charter School Student Academic Growth, Reading

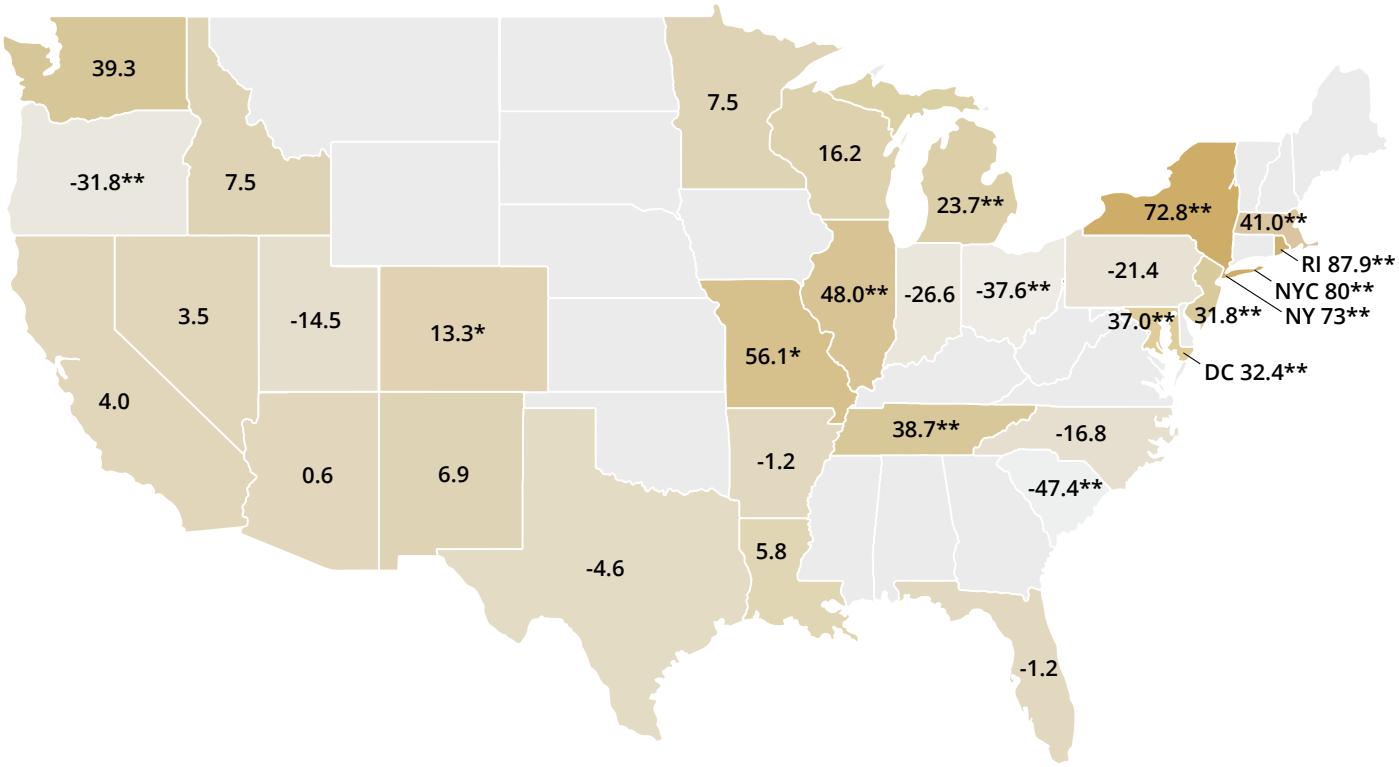


** Significant at p ≤ 0.01 * Significant at p≤ 0.05

In 12 of the 31 states in our study, charter school students had significantly stronger growth in math than their peers in TPS. Only three states showed weaker growth for charter students compared to their peers. The remaining 16 states' math growth was similar between charter students and their TPS peers. Of the states with significantly different growth for charter students, the largest effects were in Rhode Island, New York City, and New York State.[19] Charter students in Rhode Island gained the equivalent of attending an extra 88 days of learning per school year over their TPS peers. Charter students gained an additional 80 days in New York City and 73 days in the rest of New York State.

19 CREDO treats New York City as its own state because the size of New York City would overwhelm the New York State results and because New York City has several city-level policies that impact education outcomes.

Figure 1.11: State Level Average Charter School Student Academic Growth, Math



** Significant at p ≤ 0.01 * Significant at p≤ 0.05

Link to full state math and reading results here

Changes in Charter School Student Academic Growth by State

Having longitudinal data over multiple studies allows us to examine the performance of states relative to each other and each state's performance over time. This helps us understand the impact of state policies over time. Of the 25 states in the 2013 and 2023 studies, state charter school academic growth in reading increased in 2023 for 17 states and decreased for eight states.[20] The differences for New Jersey, Oregon, and Michigan were trivial.

In math, 15 states had stronger growth in 2023 than in 2013, and 10 had weaker growth. The differences for Ohio, Florida, and Rhode Island were negligible.

The largest decreases in both subjects occurred in Washington, D.C., and Louisiana. The largest increase for both subjects was in Nevada. Nevada had charter growth in 2023 that was not significantly different from the state's VCRs. Still, that modest performance was a vast improvement over the extremely negative performance of Nevada charter schools in 2013.

20 Due to the mandated destruction of data files from prior studies, differences for each state between periods could not be tested for statistical significance.

Rhode Island stood out in particular for having high growth in both subjects for both studies, even though the state's change in scores from 2013 to 2023 was negligible. Other notable improvements were Missouri in math and New York state, New York City, and Texas in reading. Even though Texas had a smaller reading growth score in 2023 than several other states, its change in growth from 2013 was larger.

Figure 1.12: Average Reading Growth of Charter School Students by State, 2013 vs 2023

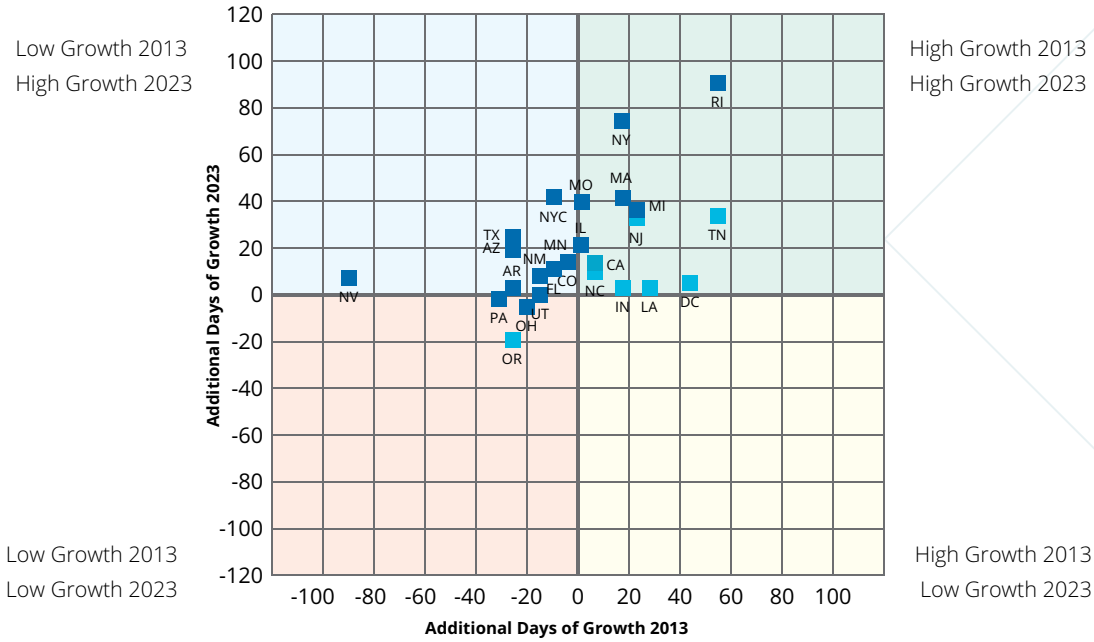
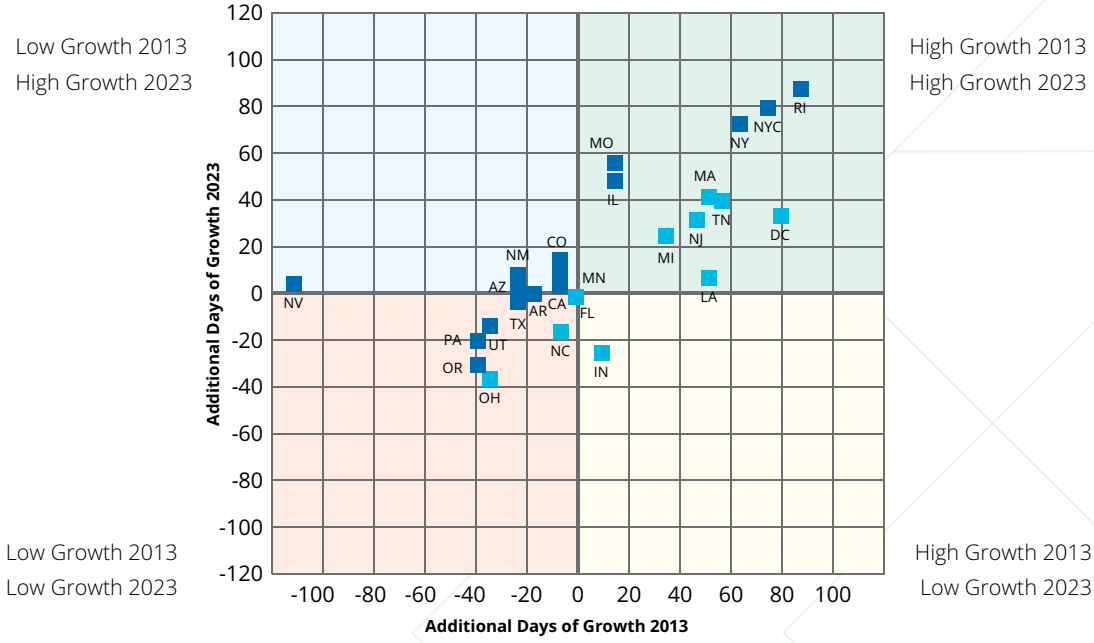


Figure 1.13: Average Math Growth of Charter School Students by State, 2013 vs 2023



Differences in Academic Growth by Charter School Student Characteristics

Differences by Race/Ethnicity

As seen in our earlier studies, the impacts of attending charter schools are not uniform for all students. When looking at student groupings, our analyses reveal varying overall status and growth for different subgroups. Therefore, it is important to examine the outcomes for students by this characteristic to gain a deeper understanding of the overall results at both the national and state levels. Students from different racial and ethnic groups can have opposite impacts from attending charter schools, which is obscured when looking at overall student outcomes. For example, in previous CREDO studies, White students attending charter schools generally have weaker growth than their peers attending TPS. Asian/Pacific Islander and Native American students tend to have growth similar to their peers. However, previous studies have shown that for Black and Hispanic students, attending a charter school often leads to significant academic growth.

We compared the academic growth across student race/ethnicity groups. Students were grouped into White, Black, Hispanic, Asian/Pacific Islander, Native American, and Multiracial students.

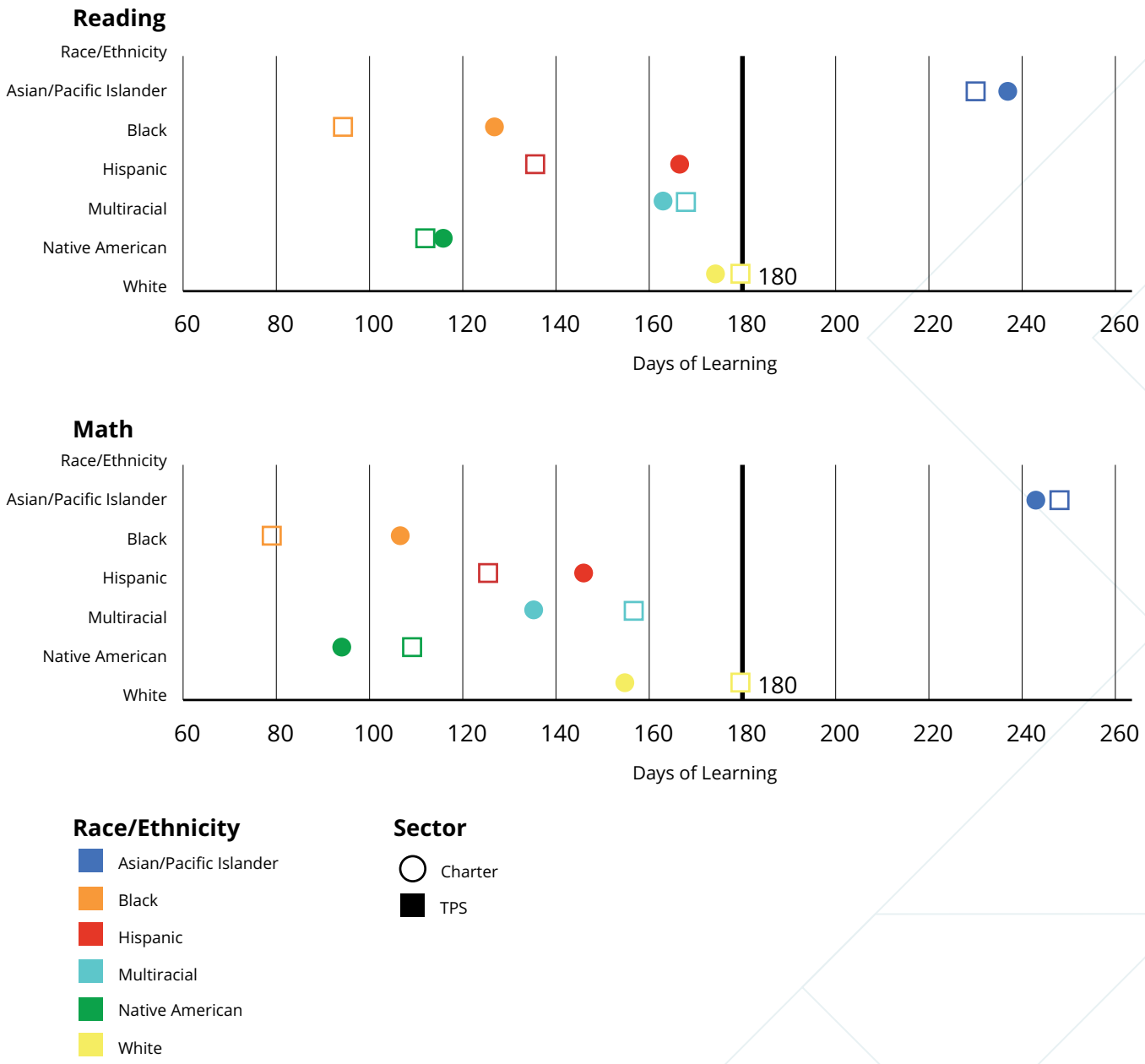
Compared to their TPS peers, Black students attending charter schools had 35 days more growth in a school year in reading and 29 days in math. This would be as if the students had attended an additional 1.5 months of schooling each year. The results were also positive and significant for Hispanic students. Relative to their TPS peers, Hispanic students grew an extra 30 days in reading and 19 additional days in math. Only two subpopulations of charter school students had weaker growth than their TPS peers in math. White and Multiracial students attending charter schools grew 24 fewer days per school year than their TPS peers. No racial/ethnic subpopulations had weaker growth than their TPS peers in reading.

However, because the TPS peer groups often have growth weaker than the average 180 days per year that anchors these analyses, even those subpopulations with positive growth may experience less than 180 days of growth per school year. The figure below shows the typical growth in math for each subpopulation of charter students and their TPS peers.

UNDERSTANDING SUBPOPULATION RESULTS

In these analyses, the growth of subpopulations in charter schools is compared to the growth of the same subpopulations in TPS. This means learning for Black charter school students is compared to their Black TPS peers. Both TPS and charter student results are studied against the 180-day baseline for White comparison students.

Figure 1.14: Days of Learning for Charter School and TPS Students by Race/Ethnicity, Reading and Math



Relative to the standard of 180 days of learning per year—the amount of growth that the average White TPS student in this study makes each year—Figure 1.15 delivers two essential findings. First, Black and Hispanic students in charter schools advance more than their TPS peers by large margins in math and reading. Multiracial, Native American, and White charter students show the reverse in math, lagging behind the growth of their TPS peers. Reading progress was equivalent for these subpopulations. Asian/Pacific Islander students in both sectors show similar growth.

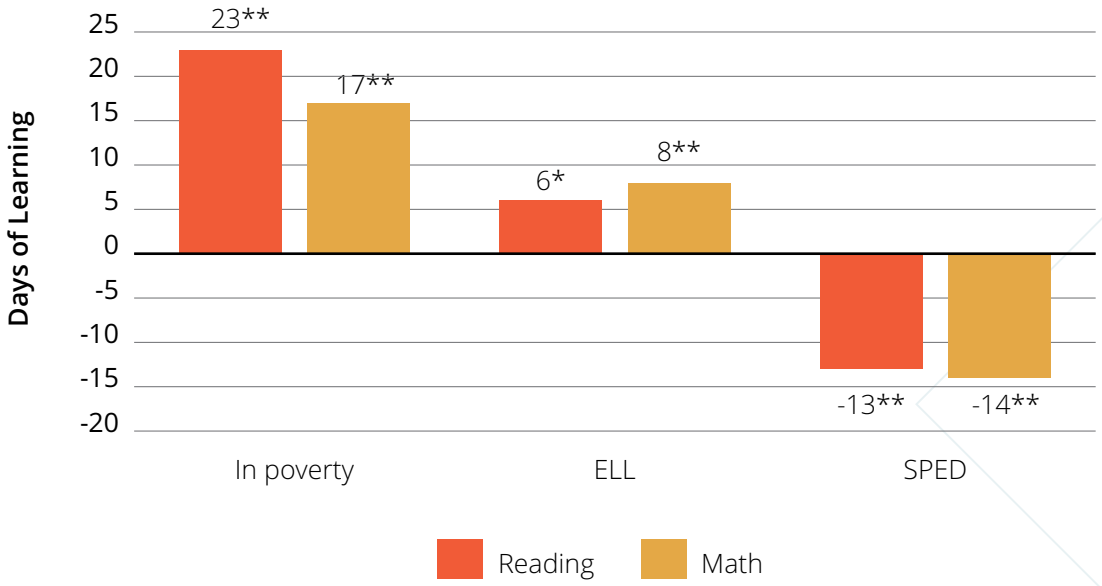
The second conclusion is more sobering: neither in the typical charter schools nor in the comparison TPS are Black, Hispanic, or Native American students posting growth that is close to 180 days a year in either reading or math. Multiracial students fare better but still don't reach typical growth. White students in charter schools are on par in reading and lag in math. Only Asian/Pacific Islander students, a small fraction of the student population, post better growth than the average growth of White TPS students. The message is clear. The majority of students in both settings are not learning as much as they need to for their schooling to be on track. These growth gaps are the building blocks of learning inequality that result in the achievement gaps that plague the nation.

Beyond the picture of different results at the average for different groups of students, the insights available from the distribution of student experience are potentially transformative. There are thousands of minority and economically disadvantaged students whose progress outpaces or is on par with White students in their school. We note these gap-busting cases and present more detail in the school-level results below.

Academic Growth for Charter School Students in Special Populations

Many studies have shown persistent disparities between students at the upper and lower ends of the socioeconomic spectrum (Duncan & Murnane, 2016; Hanushek et al., 2019). In this study, charter school students in poverty had stronger growth equal to 17 additional days of learning in math and 23 days stronger growth in reading than their TPS peers. English-language learner students who attended charter schools also had stronger growth in math (eight days) and reading (six days) than their TPS peers. However, students receiving special education services had significantly weaker growth in both math and reading than their TPS peers. Specifically, they grew 13 fewer days in reading and 14 fewer in math. Compared to the 2013 National Charter School Study, these most recent results represent a slight increase in charter school effectiveness for students in poverty and a slight decrease in effectiveness for English-language learners and special education students.

Figure 1.15: Annual Academic Growth for Charter School Students in Special Populations

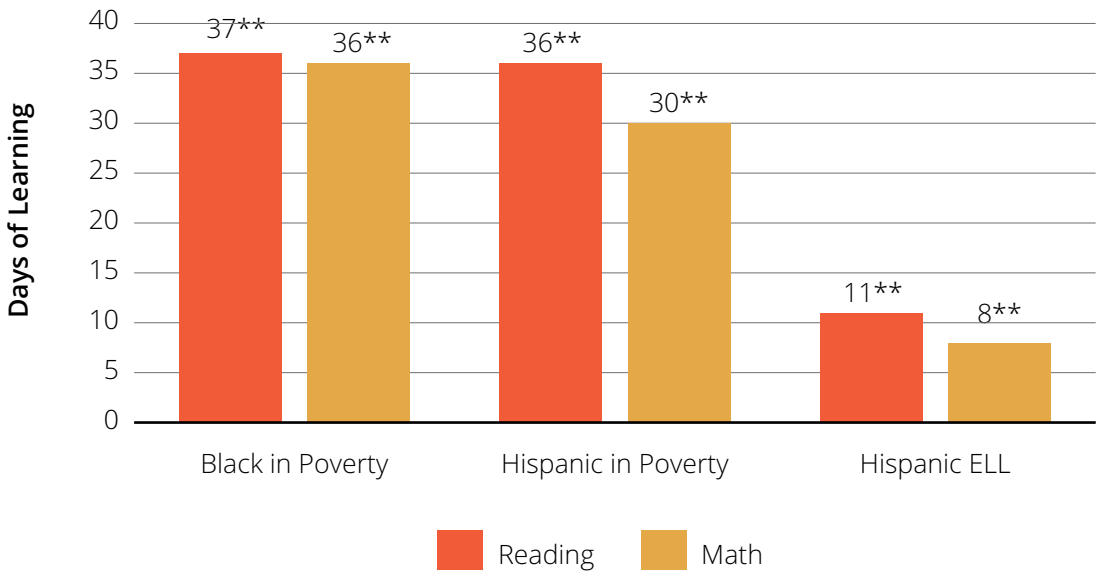


** Significant at p ≤ 0.01 * Significant at p≤ 0.05

The findings for separate subgroups detail the growth we observe for all charter students in each group, all else being equal. Of course, that is not the case; within groups, we know that some students, in addition to being in a minority group, also experience poverty or are not native English speakers. Students with compound designations are likely to face more challenges in their education. CREDO studied three such groups: Black students in poverty, Hispanic students in poverty and Hispanic students who are also English-language learner students.

In the current study, we find that Black students in poverty had 37 days stronger growth in reading and 36 days stronger growth in math when compared to their TPS peers. The results were similar for Hispanic students in poverty: they grew 36 more days in reading and 30 more in math than their TPS peers. There were also significant benefits for Hispanic students who are English-language learners (ELL). Hispanic ELL students gained an additional 11 days in reading and an extra eight days of learning in math by attending charter schools instead of their local TPS option.

Figure 1.16: Annual Academic Growth for Charter School Students with Compound Designations



** Significant at p ≤ 0.01

Student Annual Academic Growth by Charter School Grade Level

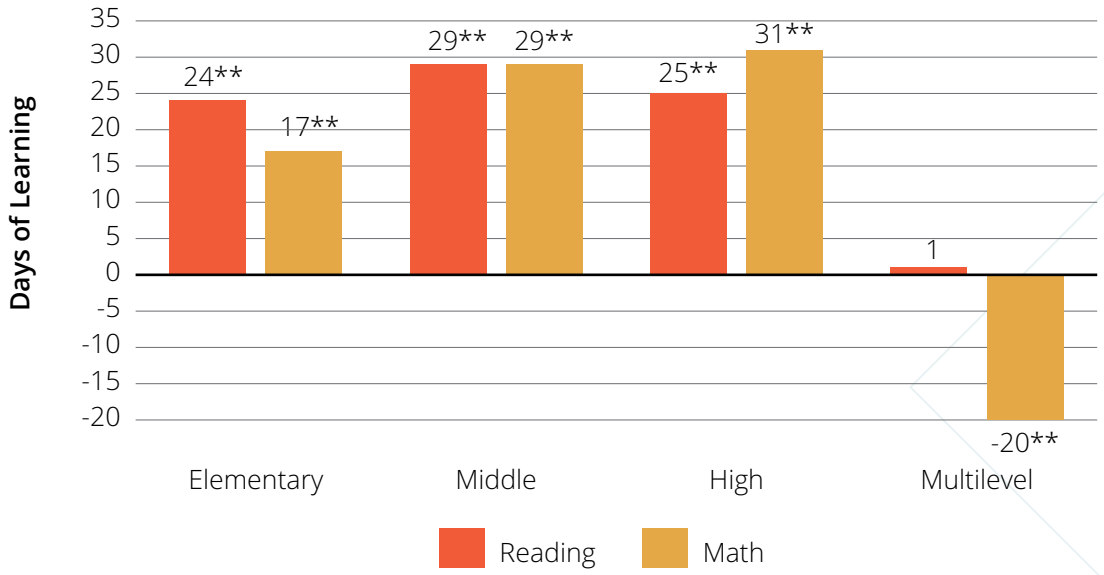
Another way CREDO has typically looked at charter school performance has been by examining charters grouped by the grades served by the school. Typically, there are four levels of schools. These are elementary (K–5), middle schools (6–8), high schools (9–12) and multilevel schools (a mix of grades that do not fall easily into one of the other categories, e.g., K–6, 6-12 or K-12).

The results show significantly positive growth in reading and math for charter schools serving elementary, middle or high school-age students. In contrast, results for multilevel charter schools were negative in math and similar to the TPS comparison groups in reading.

In reading, the results for charter schools were stronger. The average increase in growth for elementary charter school students was 24 additional days of learning. Middle school students saw 29 extra days and high school students saw 25 extra days on average. Students attending multilevel charter schools had growth similar to their TPS peers.

The average impact on math growth for charter school students was the same as attending 17 extra days for elementary students, 29 extra days for middle school students, and 31 additional days for high school students. Multilevel charter school students, on average, had 20 days less learning per school year.

Figure 1.17: Annual Academic Growth of Charter School Students by Grade Level



** Significant at p ≤ 0.01

Examining grade level charter performance against earlier CREDO study results, shown in Table 1.7, we see a marked improvement in all grade levels in both subjects. Seeing growth in all grade spans helps us understand that trends in the national aggregate performance are not concentrated in particular grades.

Table 1.8: Charter School Student Academic Growth by Grade Level across Studies, Reading and Math

	Reading			Math		
	2009	2013	2023	2009	2013	2023
Elementary	6**	17**	24**	0	12**	17**
Middle	12**	23**	29**	12**	29**	29**
High	-29**	0	25**	-12**	0	31**
Multilevel	-46**	-12**	1	-23**	-40**	-20**

** Significant at p ≤ 0.01

Annual Academic Growth of Online Charter School Students

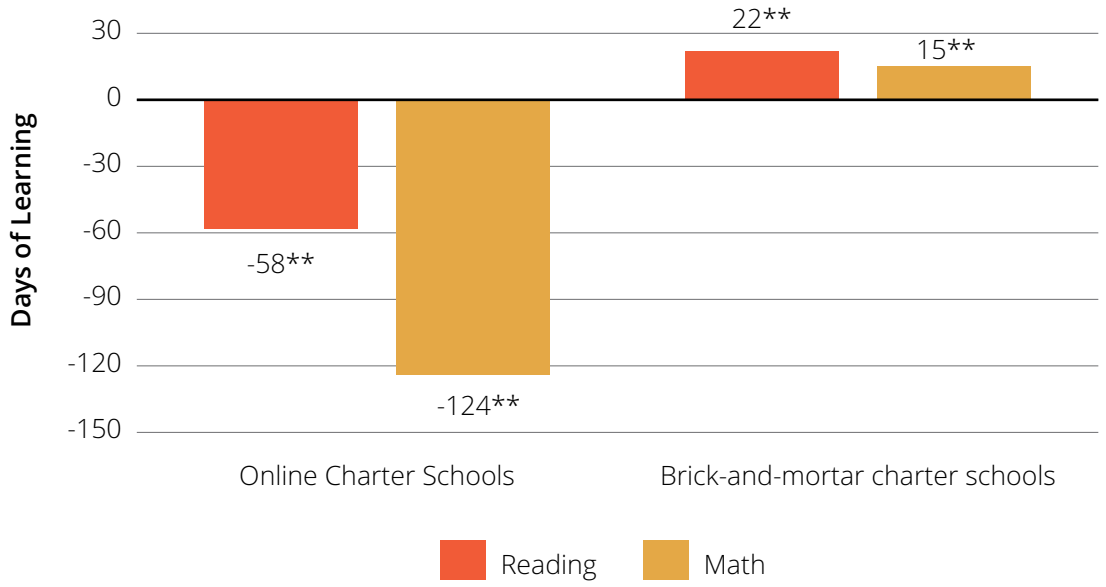
While enrolling only six percent of the charter school student population, online schooling continues to grow over time (Lehrer-Small, 2022). CREDO and other partners conducted a study of online charter schools in 2015, finding significant underperformance in the online setting compared to brick-and-mortar charter schools. With time since the previous study and additional focus from a number of charter school authorizers, we reexamine the growth of students attending online or brick-and-mortar charter schools compared to their TPS peers.[21]

Brick-and-mortar charter school students had significantly stronger growth in reading (22 more days) and math (15 more days). Online charter school students had much weaker growth. Online charter school students grew 58 fewer days in reading and 124 fewer days in math than their TPS peers.

Stated another way, compared to 180 days of learning for their brick-and-mortar TPS peers, the learning for an average online charter student advanced only 122 days in reading; in math, the progress for online charter students was 56 days per year. While across the nation, six percent of charter school students attend a virtual charter school; in Ohio and South Carolina, this rate is as high as 14 percent.[22]

It is important to note that examples of equivalent or better academic growth for students in virtual charter schools exist today, and their numbers have increased. These neutral and positive examples buck the preponderance of the evidence: of the 214 virtual charter schools in the study, 73 percent had weaker growth than their comparison group in reading, and 90 percent underperformed their comparison group in math.

Figure 1.18: Annual Academic Growth for Charter School Students by School Mode, Reading and Math



** Significant at p ≤ 0.01

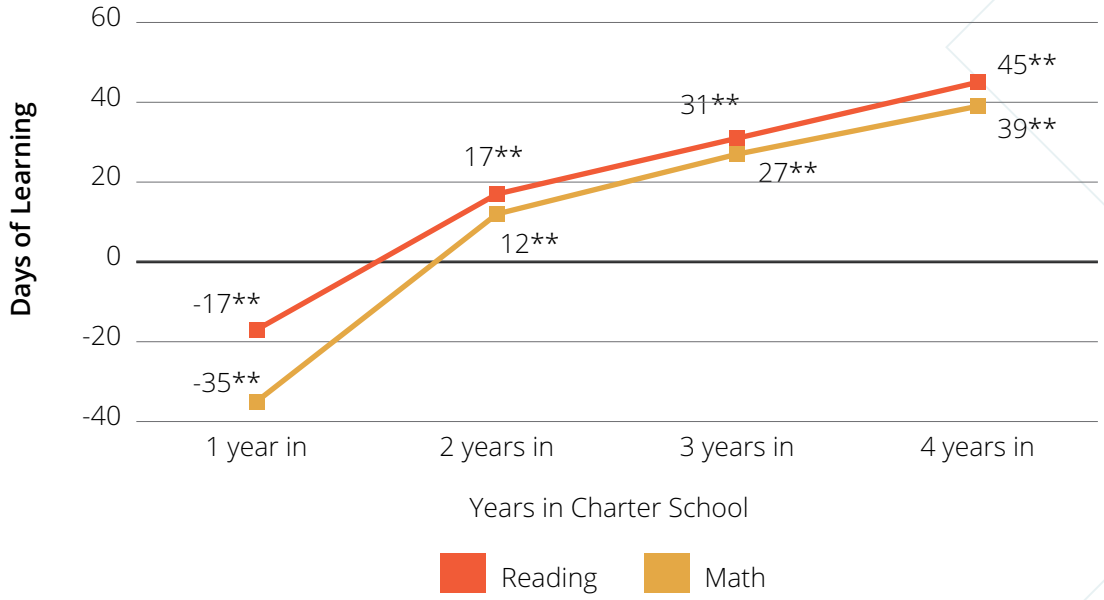
21 The comparison students for online charter students come from brick-and-mortar TPS. It is not possible to create comparison students from online TPS only.

22 Massachusetts, Maryland, New Jersey, New York, Rhode Island, and Tennessee do not allow online charter schools.

Academic Growth by Continuous Enrollment in Charter School

Students often have their weakest growth in their first year in a charter school (Cremata et al., 2013). This fits the known issues around school transitions and decreases in student performance. As seen in Figure 1.20, the subset of students who enroll in a charter school during our data window follow the pattern.[23] However, charter students overcome the initial dip associated with a school change, as shown below. By their fourth year in their charter school, students show 45 days stronger growth in reading than their TPS peers and 39 additional days of learning per year in math. However, it should be noted that the sample size of students attending a charter school for four years is small, limited by the number of tested grades available for study and the alignment of the study window with grade patterns in schools.

Figure 1.19: Annual Academic Growth for Charter School Students by Years of Enrollment



** Significant at p ≤ 0.01

23 This analysis included only those students seen entering charter schools from a TPS. Students already in charter schools in their first year of the data window were excluded.

Table 1.9: Charter School Student Academic Growth by Years of Charter Enrollment across Studies, Reading and Math

	Reading			Math		
	2009	2013	2023	2009	2013	2023
1 Year in Charter	-35**	-35**	-17**	-52**	-46**	-35**
2 Years in Charter	6**	17**	17**	0	12**	12**
3 Years in Charter	12**	35**	31**	17**	17**	27**
4 Years in Charter	n/a	41**	45**	n/a	35**	39**

** Significant at $p \leq 0.01$

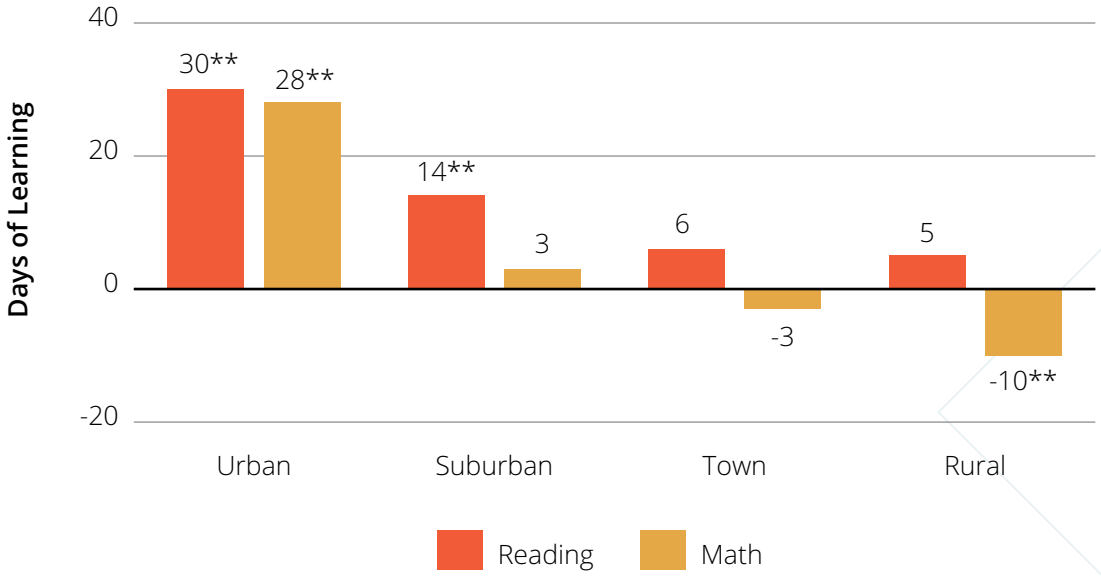
As with measures of charter growth presented earlier, we see persistent improvement in the charter sector in reading and math. While students consistently take a large dip in their first year in charter schools, the size of the drop has decreased from the 2009 study to the 2023 study. We also see steady or improving performance for the charter sector in the 2023 study except for a slight drop in reading from 2013 for students in their third year attending a charter school. These results suggest improved onboarding of new students across the charter school community.

Charter School Student Academic Growth by Location of their School

In previous studies, CREDO and others have found that charter schools were most effective for students living in urban communities (Clark et al., 2015; Cremata et al., 2015; Cremata et al., 2013). This remains true in this latest study. Compared to their TPS peers, urban charter school students had an additional 29 days of growth per year in reading and 28 additional days in math, both of which were significant. Suburban charter school students also had stronger growth in reading (+14 days). However, rural students enrolled in charter schools tended to have 10 days less growth in math than their TPS peers.[24]

24 Analyses of charter performance by school location exclude those students attending virtual charter schools as the location of these students cannot be determined. The impact on students attending virtual schools was discussed in a previous section.

Figure 1.20: Charter School Student Academic Growth by School Location, Reading and Math



** Significant at p ≤ 0.01

1.5 School-Level Impacts

School-Level Academic Growth

Analyzing school-level performance is another valuable way to assess the effectiveness of charter schools. Though the overall results of the charter school sector are largely positive in reading and math, it does not follow that every individual charter school performs better than the alternative. School performance is important for policy-related decisions such as funding or renewal. Thus, it is helpful to test if charter schools deliver academic progress that is greater, the same, or smaller than is seen for identical students in the feeder schools nearby.

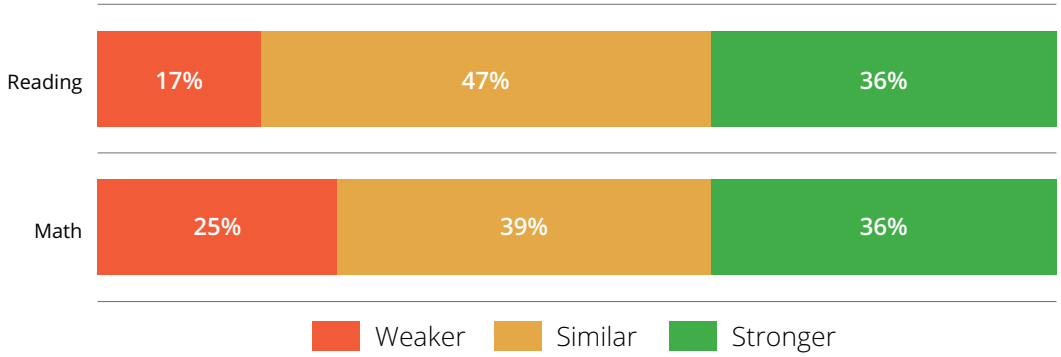
In order to determine school-level charter performance, we compute each charter school's average impact on student learning over the two most recent growth periods (2017 and 2018). We compare the school average to the same measure of learning for their TPS VCRs.[25] The average gains of the TPS VCRs serve as a proxy comparison of what learning would have occurred for a charter schools' students had they instead enrolled in the local TPS options. The outcome of interest is the average contribution to student learning gains for each charter school per year. The measure is expressed relative to the gains the charter school students' TPS peers posted. Each charter school is assessed to see if it is performing significantly stronger, significantly weaker, or similar (not statistically significantly different) to its VCR comparison group.

25 We chose to base the school-level analysis on the two most recent growth periods in this analysis for two reasons. First, we wanted to base the result on a contemporary picture of charter school performance. Second, the two-growth-period time frame made it possible to include the newest schools and still ensure that performance for all the schools included the same amount of data, thereby creating a fair test for all. The school-level analysis includes only those schools with at least 30 students to ensure a sufficient sample size for the statistical stability of estimates.

Charter schools with stronger growth comprised 36 percent of the study schools in reading. Forty-seven percent of charter schools had similar growth to their TPS peers. Charter schools with weaker average growth in reading than their TPS comparison groups comprised 17 percent of the study.

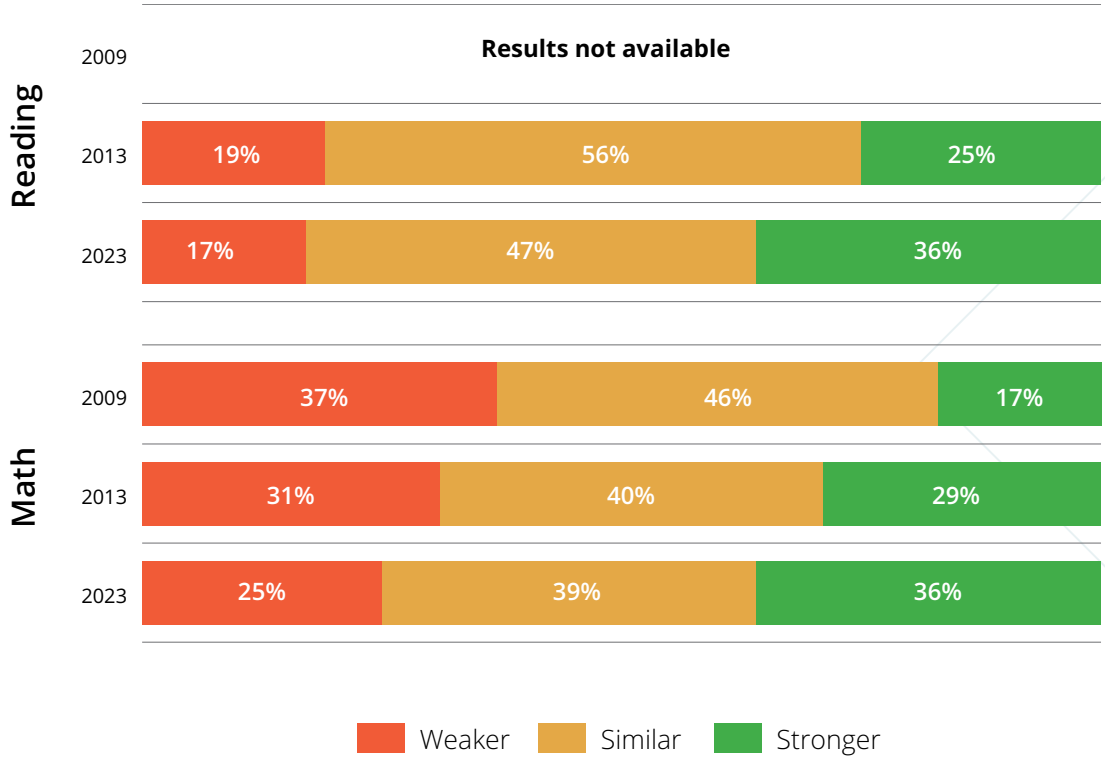
In math, 36 percent of charter schools had statistically significantly stronger growth for their students than the TPS peers. This is compared to 25 percent of charter schools with weaker math growth than their TPS comparisons and 39 percent with similar growth.

Figure 1.21: Academic Growth of Charter Schools Compared to Their Local TPS, Math and Reading



We can compare these distributions to earlier work. Both prior CREDO studies included local school-level comparisons for math. The 2013 National Charter School Study presented an analysis for reading, but not the 2009 report. A consistent pattern appears by examining the results of these analyses over time. Charter schools have improved performance over time at both ends of the range. Figure 1.22 shows a marked rise in the number of charter schools with better development and a decrease in those with weaker growth than their VCR set. This trend amplifies the average national charter school effect at the student level, suggesting that improvements are widespread and not due to concentrated impacts in a subset of schools.

Figure 1.22: Academic Growth of Charter Schools Compared to Their Local TPS across Studies, Reading and Math



School-Level Academic Growth by State

The prior multi-state comparisons can be repeated separately for each state. Since each state has its policies and practices that can impact how charter schools operate, these state-specific school-level comparisons give us a small view of these differing environments. The data reveals that some states have stronger charter markets than others. As seen in the figure, New York does not have any charter schools whose reading growth is significantly weaker than their VCRs.

READER NOTE:

On the interactive website, the reading and math figures display the percentages for each category of performance.

Figure 1.23: Average Academic Growth in Charter Schools versus. Their Local TPS by State: Reading

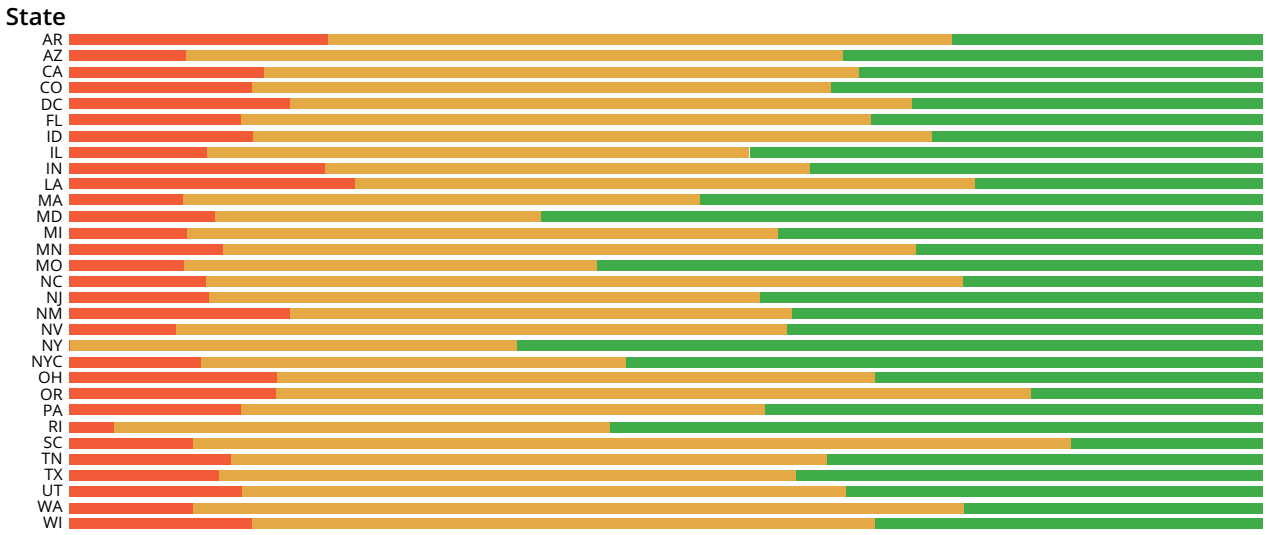


Figure 1.24: Average Academic Growth in Charter Schools versus. Their Local TPS by State: Math

These results are encouraging, but they require a note of caution. Since the reference point in these comparisons is the growth that equivalent students in the local TPS realize, this comparison does not reveal if the difference is modest or large, nor does it indicate where the difference occurs in the range of absolute achievement. Positive differences at the lowest levels of achievement may not be sufficient to move students ahead fast enough to result ultimately in constructive long-term outcomes such as academic proficiency or post-secondary readiness. Similarly, a charter school may post growth results that are considered outsized for any school but still lag behind their community schools in achievement. Simultaneous consideration of student academic growth and achievement is the only way to get the complete picture of charter school performance.

1.6 Charter School Academic Growth and Achievement

Student academic growth measures how much students advance their learning in a year, and student achievement measures the stock of their knowledge at the end of the year. In this section, we integrate the findings about growth and achievement to show comprehensively the results that charter schools deliver for their students.

Both dimensions of student performance are needed to situate charter schools in their local community contexts and within the larger mission of academically preparing students with knowledge and skills for future success. Importantly, considering growth and achievement simultaneously also gives us a basis for making predictive statements about how charter schools will likely support their students in the future.

To ground this presentation, it is useful to consider four basic categories of school performance. This construct applies to all schools, CMO-affiliate charter schools, stand-alone charter schools, district schools and others.

We can classify any school based on whether and by how much its average academic progress in a year compares to the other options its students could select. Schools that do not advance student learning as much as the comparison are considered "low growth." Those that exceed the local standard are deemed "high growth." These differences can be mapped on a continuum from "very low growth" to "very high growth." We use the growth of the local TPS alternative as the standard in this demonstration.

Looking at absolute achievement—the measure of what students know at the end of a school year—we use the achievement scores that students get on state performance tests as a measure of achievement and place schools along that distribution based on school-wide averages. Schools that mirror the state average are designated "50th percentile."[26] Schools with an average performance at lower (or higher) points of the achievement range are situated below (above) the average—we use the 25th percentile and the 75th percentile as additional reference points.

If we map the growth and achievement dimensions together, four groups result:

- **High Growth—High Achievement:** schools that exceed the growth of their local options and whose students are above the state average in overall achievement.
- **High Growth—Low Achievement:** schools that exceed the growth of their local options but with overall student achievement below the state average.
- **Low Growth—High Achievement:** schools whose students exceed the state average on achievement but do not advance as much yearly as their comparisons.
- **Low Growth—Low Achievement:** schools with lower academic growth than their local alternatives and whose students' achievement is lower than the state average at the end of a school year.

26 The 50th percentile is the point value in a range of scores, in this case achievement for each state, that splits all the scores so that 50 percent are above and 50 percent are below the point.

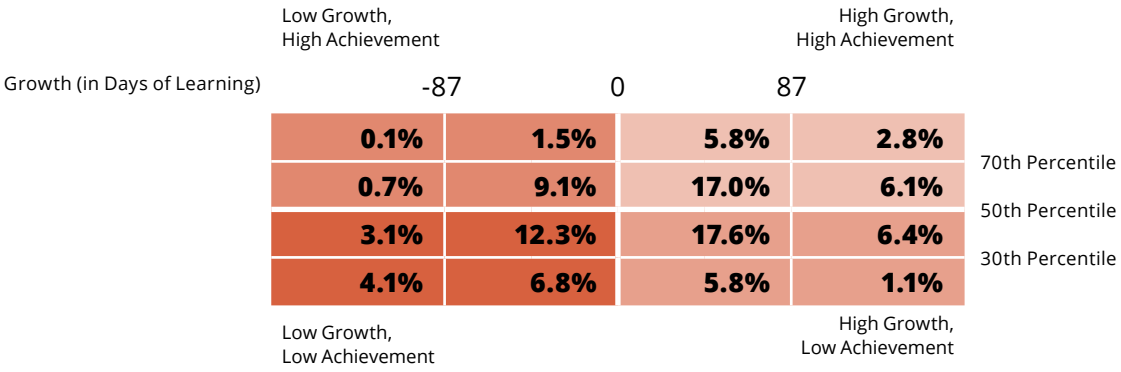
Using the last two years of school performance, we mapped the charter schools in this study onto the structure described above. (For reliability, we only included schools with 30 tested students.) We subdivided each quadrant into four smaller groups, yielding 16 cells within the map. The results appear in Figure 1.25 for Reading and Figure 1.26 for Math.

NOTE TO READERS:

The thumbnail table below presents the total proportion of students in each major quadrant in Figure 1.25. These values appear on the study website as a layer of the chart—the user can see the quadrant totals and then drill down to see the inner-quadrant values.

11.4	31.7
26.3	30.9

Figure 1.25: Academic Growth and Achievement, Reading



As shown in Figure 1.25, summing the percentages in the top quadrants yields 43 percent of schools with average student achievement above the state average. Currently, these students are better prepared for future learning than half the students in their respective states. However, their growth performance significantly influences their outlook for the future. Sixty-two percent of charter schools have stronger yearly growth than the local TPS and 38 percent have weaker growth.

Schools in the High Growth—High Achievement quadrant can expect to remain in that part of the map if their growth continues at their current pace. Roughly a third of charter schools appear in this quadrant. At current levels of performance, these schools will likely increase their students' achievement levels over time. Of particular interest is the subset of High Growth—High Achievement schools that advance students of any academic background to high levels of achievement; their operations and practices could help inform improvements in lower-performing charter and traditional schools.

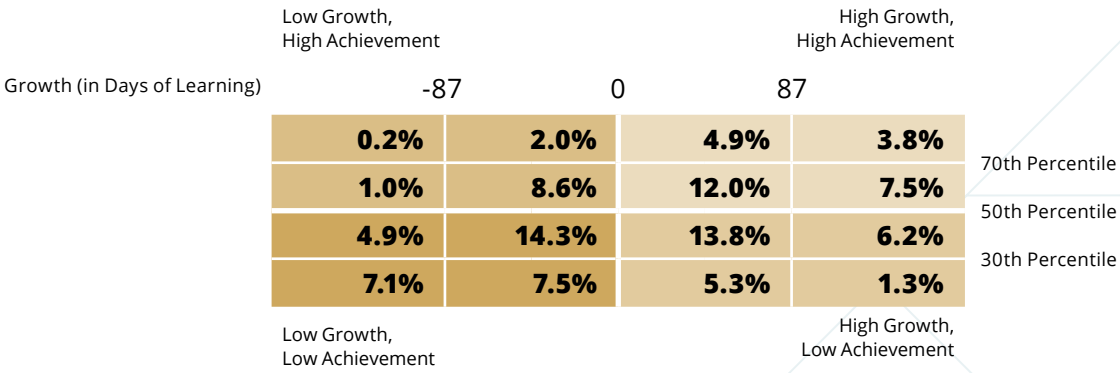
Schools in the Low Growth—High Achievement quadrant can expect to drift downward in the achievement ratings if they maintain their current pace of growth since other schools with higher growth rates will eventually surpass them. Since student achievement in these schools is above state averages, the impact of lower growth may not be as concerning as for students at lower levels of achievement. Roughly a tenth of charter schools display this pattern, many of which are close to average in both growth and achievement. Modest improvements in student learning each year could move those schools into the upper right quadrant.

The remaining charter schools, 57 percent, are situated in the lower two quadrants with achievement that falls below the state average. This is consistent with the earlier findings that charter schools enroll both a larger share of lower-decile students and a smaller share of high-decile achievers. Again, their position and prospects are distinguished by the amount of growth their students demonstrate.

The High Growth—Low Achievement quadrant displays the results for 31 percent of all charter schools. These schools serve students with current achievement that is weaker than the average in their states. These schools have demonstrated success with students of modest or challenged academic backgrounds. With higher than average growth each year, their students will elevate their achievement over time. In theory, given enough time, the students in the lower left quadrant would move up to the upper right quadrant.

The 26 percent of schools in the Low Growth—Low Achievement quadrant are of greatest concern. These schools serve academically challenged students and produce weaker growth than their TPS comparisons. Should the performance of these schools remain unchanged, their students will drift further behind over time, even if all the other schools on the map remain stable. Increases in growth are within reach for these schools, which seem possible for nearly 20 percent, which would migrate them to the lower right area. Especially concerning at the moment are outcomes for the students attending the four percent of schools in the cell with the lowest growth and achievement. This group represents charter schools in need of immediate attention.

Figure 1.26: Academic Growth and Achievement, Math



The inferences for math are the same, albeit with different percentages. Above-average achievement exists in 40 percent of charter schools, while 60 percent have achievement lower than their state averages. Compared to their local TPS, 55 percent of charter schools had stronger growth, with 45 percent having weaker growth. The data provides additional evidence that charter schools tend to serve lower-performing students but grow them more than is typical. As with reading, the current and future story depends on the quadrant in which schools are located.

NOTE TO READERS:

The thumbnail table below presents the total proportion of students in each major quadrant in Figure 1.26. These values appear on the study website as a layer of the chart—the user can see the quadrant totals and then drill down to see the inner-quadrant values.

11.8	28.2
38.8	26.4

The High Growth—High Achievement quadrants contain 28 percent of charter schools, a slightly smaller share than appeared for reading. Maintaining the current pace of growth would result in these schools moving higher in the achievement range.

The High Growth—Low Achievement quadrant in the lower right reflects schools that deliver stronger growth to below-average achieving students. This group makes up 26 percent of all charter schools, a smaller share than in the same reading quadrant. Their students will move higher in the achievement range if these schools maintain or improve their growth.

Twelve percent of schools land in the **Low Growth—High Achievement** quadrant in the upper left, with high average achievement but below average growth. The share of charter schools in this quadrant Is nearly identical for reading and math. The majority of schools in this quadrant could either move down into the lower achievement quadrant if they remain static or move to the High Growth—High Achievement area with improved growth.

The left-hand-side lower quadrant, representing **Low Growth—Low Achievement**, makes up 34 percent of charter schools. This is a significantly larger share of schools than in the analogous reading quadrant. The greatest worry is that 7 percent of schools are situated in the lowest performing cell. They offer the weakest growth to students with constantly low achievement levels.

1.7 Gap-Closing Charter Schools

Earlier in the findings, we reported that a significant share of charter schools deliver gap-busting growth for their students. We probed this finding further to see if these exceptional schools shared any common attributes. We found hundreds of schools that satisfy dual criteria: (1) the average achievement of the school exceeds the state average, and (2) their disadvantaged students (Black, Hispanic, in-poverty, ELL) have growth as strong or stronger than their non-disadvantaged peers in the same school.

In reading, seven percent of schools in the study sample (526 schools) met the dual criteria for Black students compared to their White peers. Comparing Hispanic students to White students, the percentage of charter schools meeting the dual criteria was 13 percent (912 schools).

Further, 19 percent of charter schools (1,393 schools) met the criteria for students in poverty, compared to their peers not in poverty. For ELL students compared to non-ELL students, 14 percent of charter schools (1,015 schools) met the dual criteria.

In math, Black students outpaced their White peers in six percent of charter schools (456 schools). Similar results for Hispanic students occurred in 10 percent of charter schools (731 schools). Comparing students in poverty to their peers not in poverty, 16 percent of schools (1,142 schools) met the criteria. For ELL students, 11 percent of schools (809 schools) met the criteria. These charter schools excel at addressing achievement gaps for their students.

Table 1.10: Charter Schools with No Learning Gaps and High Achievement

	Reading		Math	
	Number	Percentage	Number	Percentage
Blacks equal or outperform Whites	526	7.3	456	6.3
Hispanics equal or outperform Whites	912	12.6	731	10.2
Poverty students equal or outperform non-Poverty students	1,393	19.3	1,142	15.9
ELLs equal or outperform non-ELLs	1,015	14.1	809	11.2

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As a Matter of Fact:

The National Charter School Study III 2023

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School Study III 2023

Volume 2
Charter Management Organizations 2023

Authors
Margaret E. Raymond, Ph.D.
James L. Woodworth, Ph.D., Lead Analyst- 31 State Study
Won Fy Lee, Ph.D., Lead Analyst- CMO Study
Sally Bachofer, Ed.M.

Contributors
Meghan E. Cotter Mazzola, M.S.
William D. Snow
Tzvetelina Sabkova, M.A.

credo

Center for Research on Education Outcomes
Stanford University
Stanford, CA
https://credo.stanford.edu

CREDO, the Center for Research on Education Outcomes at Stanford University, aims to improve empirical evidence about education reform and student performance at the primary and secondary levels. CREDO at Stanford University supports education organizations and policy makers in using reliable research and program evaluation to assess the performance of education initiatives. CREDO's valuable insight helps educators and policy makers strengthen their focus on the results of innovative programs, curricula, policies and accountability practices.

Acknowledgments

CREDO gratefully acknowledges the support of the state education agencies that contributed their data to this partnership. Our data access partnerships form the foundation of CREDO's work, without which studies like this would be impossible. We strive daily to justify the confidence placed in us.

The research presented here uses confidential data from state departments of education. The views expressed herein do not necessarily represent the positions or policies of the organizations noted above. No official endorsement of any product, commodity, service or enterprise mentioned in this publication is intended or should be inferred. In addition:

- This research result used data structured and maintained by the MERI-Michigan Education Data Center (MEDC). MEDC data is modified for analysis purposes using rules governed by MEDC and is not identical to data collected and maintained by the Michigan Department of Education (MDE) and/or Michigan's Center for Educational Performance and Information (CEPI). Results, information and opinions solely represent the analysis, information and opinions of the author(s) and are not endorsed by, or reflect the views or positions of, grantors, MDE and CEPI or any employee thereof.
- Data for this report was provided by the Missouri Department of Elementary and Secondary Education.
- 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, or the State of Texas.

The analysis and conclusions contained herein are exclusively those of the authors and are not endorsed by any of CREDO's supporting organizations, their governing boards, or the state governments, state education departments or school districts that participated in this study. All errors are attributable to the authors.

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2.1 Introduction

Minnesota's legislature adopted the first charter school law in 1991, allowing for the creation of public schools governed and managed independently from local school boards. City Academy in St. Paul opened in 1992 as the first charter public school in the country, serving about 35 students in its first year of operation. In the 2021-22 school year, over 7,800 charter schools were in operation, serving over 3.7 million students. Forty-five states and the District of Columbia permit the operation of charter schools.

Although the majority of charter schools in the United States are single schools, many organize into formalized entities that pool common governance, operational, financial and programmatic resources. These arrangements, called Charter Management Organizations (CMOs) or "networks," aim to increase operational efficiencies and encourage strong student academic outcomes. Aspire Public Schools created the first CMO in the country in the early 1990s for its growing network of schools in Northern California; in the 2020-21 school year, 432 CMOs operated a total of 2,045 CMO-affiliated schools and campuses, serving 955,730 students (White & Xu, 2022).

For the past two decades, the Center for Research on Education Outcomes (CREDO) at Stanford University has examined charter schools in general and CMOs as a distinct subset from a nonpartisan and policy-neutral position. The evolution of charter schools in the United States public school scene is worthy of study. There is broad interest in their contributions to improving outcomes for the students they serve and, by extension, to the broader public education group.

In this report, we classify charter schools into two categories.[1]

> Many definitions exist for Charter Management Organizations (CMO), so it is important to articulate the one used in this study. We define a CMO as an organization that is contracted to perform whole-school services to at least three separate charter schools. A governing board holds the charter for the school(s) and contracts with the CMO to provide a range of services to the school(s), including, for example, academic programming, operations and back-office services. The governing board is ultimately responsible for fiscal health, legal compliance and academic performance of the schools it oversees. Our designation of CMO applies to nonprofit or for-profit operators, which are sometimes known as Education Management Organizations (EMOs). For this study, we include both non-profit and for-profit organizations in our CMO count.
>
> In this study, we define stand-alone charter schools (SCS) as any charter school that operates as one or, at most, two schools.

1 CREDO's 2017 CMO study categorizes charter schools into four types: 1. CMOs, 2. VOSs, 3. Hybrid, and 4. Independent charters (Woodworth et al., 2017). In the current study, we break down the charter into two categories. 1. CMOs and 2. Non-CMOs that combine VOSs, Hybrid, and Independent charters.

Funders and policy makers consider CMOs as an important lever in their aims to provide high-performing schools. Their assumptions rarely are put to the test. Even when they are, previous research measuring the impact of CMOs on students' academic outcomes produced mixed results. Some of the work has been anecdotal or small-scale, showing improved student outcomes associated with students enrolled in CMO schools (Angrist et al., 2012; Dobbie & Fryer, 2015; Raudenbush et al., 2011). More generally, the earlier literature shows CMO impacts on student outcomes to be small. Large variations in CMO quality across the group have appeared in several studies (Furgeson et al., 2012; Woodworth et al., 2017).

This report presents the results of our third study of CMOs. The first report from 2013, *Charter Growth and Replication*, examined the performance patterns from the opening of schools through the period of replication and scaling. The second report, *Charter Management Organizations*, released in 2017, analyzed the different contributions to academic progress by CMOs and SCS (though the nomenclature for this latter group has changed over time).

This report on CMO performance is part of a more extensive national study of charter schools prepared by CREDO. *As a Matter of Fact: The National Charter School Study III (NCSS3)* examines the impact of charter school enrollment on students' academic growth. Due to the large scope of the research, the report is sectioned into two volumes. The first, *Charter School Performance in 31 States 2023 (CSP31)* pools all charter students together to examine sector-wide impacts. This report, Volume 2, explores an important structural and operational attribute of charter schools; namely, whether students attend a school that is a stand-alone charter school (SCS, also called independent charter schools) or a member of a Charter Management Organization (CMO), also called networks in some cases. The nationwide impact of charter schools on student academic progress over time is, partly, a story of the rise in the number and sizes of CMOs. This report tells that story empirically.

This study uses anonymized student-level administrative data from 28 states.[2] We treat New York City and Washington, D.C., as separate jurisdictions to give us 28 "states" included in this study. The data window spans the school years from 2014-15 to 2018-19, which creates four growth periods. We address the critical questions on whether systematic differences in the impact on student learning exist between CMO-affiliated and SCS schools.

Our outcome of interest is the change in students' knowledge and skills from one year to the next. We use the terms "growth," "gains," and "learning" interchangeably in describing the incremental progress students make over a school year.

We probe the aggregate results to understand better how students fare in different charter school environments and, in turn, how well different charter schools can provide high-quality education to all their students. Since many students attending charter schools are people of color from educationally and economically disadvantaged backgrounds, understanding the impact of CMOs and SCS on vulnerable populations is important. Disparities in academic outcomes are well documented, for example, between those from high socioeconomic backgrounds and those from underserved communities (Duncan & Murnane, 2016; Hanushek et al., 2019). Here, we seek not only to quantify any differences between student groups but also to identify cases where all students benefit academically.

2 Idaho, Maryland and Ohio are included in the companion study, CSP31, but not part of the CMO analysis due to restrictions in CREDO's data use agreements with each state.

The results provide the most current picture possible of the charter group in the nation.

Section 2 of this report describes methods and data, and Section 3 documents descriptive facts and trends about the charter groups. The main results from the impact analyses follow in Section 4. We present findings disaggregated by student and school characteristics. A market analysis provides evidence of effectiveness by organizational traits.

Because the National Charter School Study III findings and this deeper investigation of CMOs and SCS are intertwined, we prepared a consolidated Summary of Findings, Conclusions and Implications.

2.2 Methods and Data

Definition of Network Schools

Building upon the database created for CREDO's 2013 and 2017 reports, we identified 368 CMOs operating in the 28 states between the 2014–15 and 2018–19 school years. There is no national database of CMO networks. Thus, CREDO used a variety of data sources to identify the CMOs, including data from state educational agencies, charter school organizations and individual CMOs.

Measure of Academic Performance

For the key outcome variable, we use academic growth at the student level. Academic growth is defined as the change in learning from one testing period to the next. For readers to understand better the results of our analyses, academic growth is presented as marginal days of learning compared to a typical student who obtains 180 days of educational progress in a typical school year of 180 days. Students with above average growth are said to obtain additional days of learning in the same period and students with lower-than-average growth are said to have fewer than 180 days of learning.

Comparison Group and Analytic Model

To create a comparison group with similar demographic and academic profile characteristics to that of students enrolled in the charter schools, we use a combination of matching and statistical analyses to account for the systematic differences between students attending different types of schools.

In the first stage of the analysis, we employ the virtual control record (VCR) method, which is a matching strategy developed by CREDO (Davis & Raymond, 2012) to construct a comparison group including traditional public school students who exhibit similar socio-demographic and academic characteristics as the students who attend CMO-affiliated and non-CMO-affiliated charter schools. The VCR approach creates a "virtual twin" for each charter student by drawing on the available records of the TPS that the students in a given charter school would have likely attended if they were not in that charter school. We ensure that all dimensions of observable characteristics are statistically similar between the students enrolled in the CMO-affiliated charter schools and the comparison group from the TPS.[3]

In the second stage, based on the matched sample, we conduct statistical analyses to examine the effect of CMO-affiliated charter school attendance on the student's academic growth.

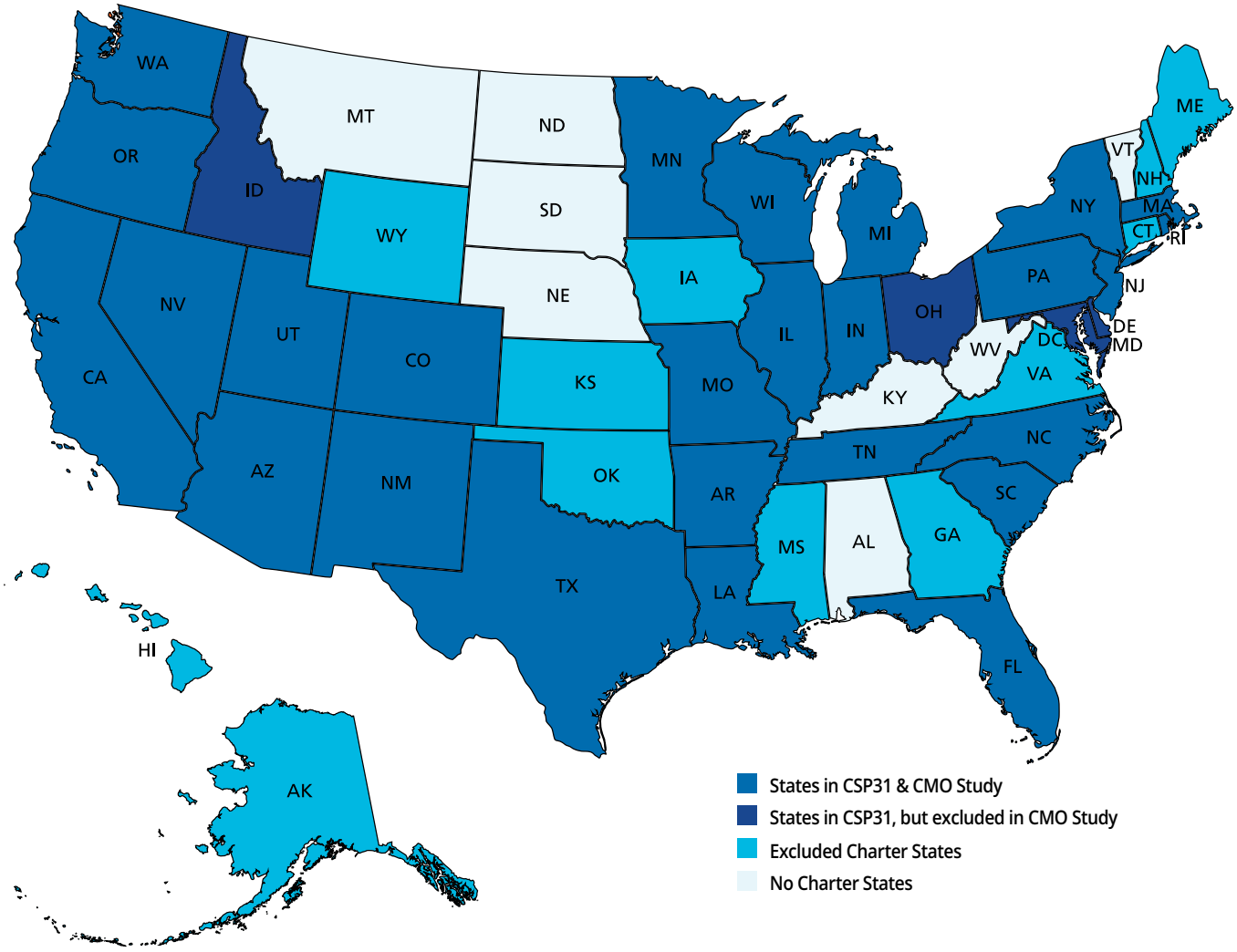
3 Due to the variable distribution of students by school type and subgroup across the country, some student subgroups have low match rate in some states. Low match rates require a degree of caution in interpreting the national pooled findings as they may not fairly represent the learning of the student groups involved.

Data

This study uses student-level administrative data from 29 states.[4] We treat New York City and Washington, D.C., as separate jurisdictions that give us 31 "states" included in this study. The data window spans school years from 2014–15 to 2018–19, which creates four growth periods. Under FERPA-compliant data-sharing agreements, we use anonymized student-level administrative data; this study uses data from five school years, from 2014–15 to 2018–19.

Using test scores from Every Student Succeeds Act (ESSA)-mandated achievement tests administered each spring, we calculate the difference in a student's scores.

Figure 2.1. Map of States Included in the 31-State and CMO Studies

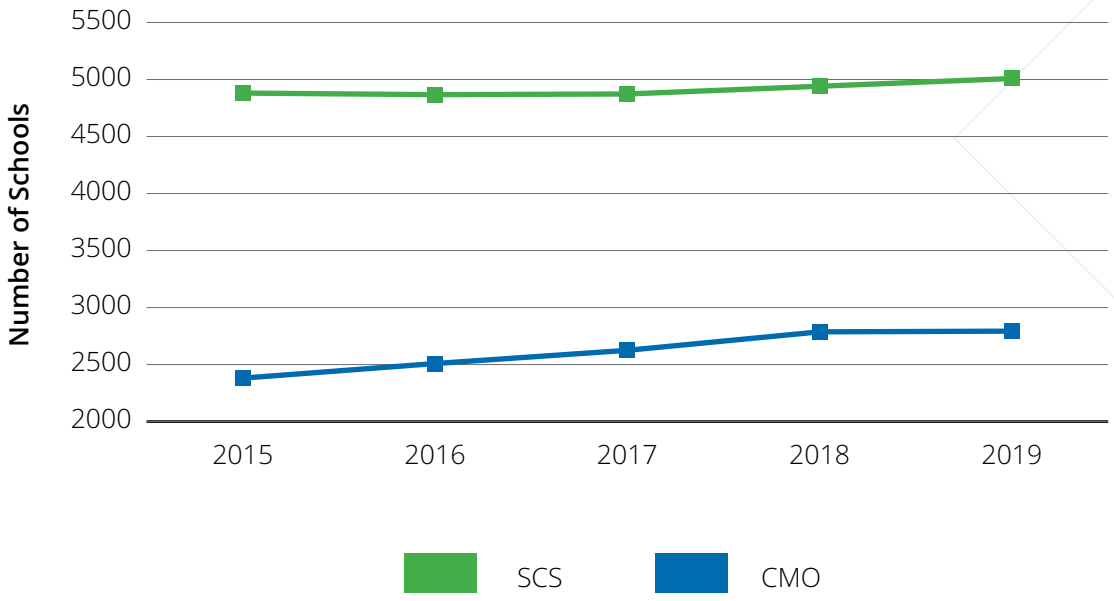


4 Figure 2.1 shows the map of states included in the CSP31 and CMO analysis.

2.3 Descriptive Statistics of Students and Schools

Figure 2.2 shows the recent nationwide expansion of CMO-affiliated and stand-alone charter schools. CMO-affiliated charter schools increased from 2,381 schools in 2014–15 to 2,793 schools in 2018–19, a 17 percent increase over the five years. The growth among the stand-alone charter group was about 2.6 percent during the same period, but there were about two stand-alone charter schools for every CMO-affiliated charter school in 2014–15. The ratio decreased to about 1.8 in 2018–19.

Figure 2.2. Growth in Number of Schools by Charter School Type, 2014–15 to 2018–19



Source: NCES Core of Common Data, 2015–2019. CMO school list identified by authors.

A summary of school characteristics by CMO affiliation status is included in the analytic data presented in Table 2.1. Regardless of the group, many students enrolled in the charter schools are students of color, and Hispanic students make up the largest minority group in both groups. Most students enrolled in CMO-affiliated charter schools and stand-alone charter schools live in poverty, with 65 and 53 percent, respectively.[5] Another substantial difference between the SCS and CMO-affiliated charters is the share of White students: CMO-affiliated charters have 21.6 percent White students. In comparison, the share in SCS is higher at 38.2 percent. The location differences may contribute to the demographic differences in the student bodies between the groups. Approximately 58 percent of CMO-affiliated charters are in urban areas, while 46 percent of SCS operate in urban settings. The percentage of virtual schools is similar between the groups at about five percent.

5 A student in poverty is eligible for free or reduced-price lunches under the National School Lunch Program, is certified as a recipient of public assistance support or meets state-defined criteria for poverty. Since our study design compares each charter school student to his exact-match VCR from nearby TPS, both students face the same criteria for poverty designations. The variation in definitions across states does not affect the results.

Table 2.1. School Characteristics by Charter Charter School Type, Matched Analytic Data

	SCS	CMO
Number of Schools	3,578	1,959
Number of Observations (student-level)	563,224	431,718
Student Demographic Characteristics		
Percent Students in Poverty	52.9%	64.5%
Percent ELL	7.6%	10.8%
Percent Students receiving Special Education	7.7%	6.9%
Percent White	38.2%	21.6%
Percent Black	21.2%	27.7%
Percent Hispanic	33.7%	44.8%
Percent Asian/Pacific Islander	3.9%	3.6%
Percent Native American	0.4%	0.2%
Percent Multiracial	2.6%	2.0%
Locale		
Urban	45.6%	58.4%
Suburban	31.5%	28.8%
Town	3.9%	1.3%
Rural	10.3%	6.9%
Virtual	5.1%	4.5%
Grade Span		
Elementary	42.1%	40.5%
Middle	13.7%	21.2%
High	5.4%	7.0%
Multi-grade	38.8%	31.4%

Note: Values use data for the 2017–18 school year

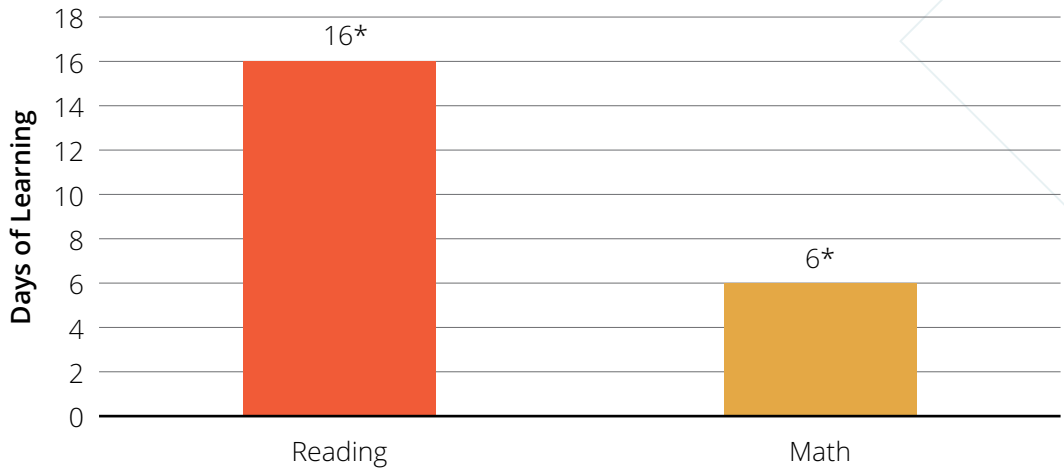
2.4 Analytic Findings

This section presents the average impact of attending CMO or stand-alone charter schools on a student's academic growth. Academic growth is denominated in the days of learning scale, based on an average student in a TPS who attends school for 180 days and gains 180 days of learning. In each analysis, we compare the growth of charter school students to the learning of their TPS peers, represented by a virtual control record as described in the Methods section. We conduct two statistical tests: one to test differences between charter learning and TPS learning and the second to examine differences in results between students in SCS and those in CMO-affiliated charter schools.

2.4.1. RECAP: Annual Academic Growth of Charter School Students in 31 States

As mentioned, this study parallels *Charter School Performance in 31 States 2023 (CSP31)*. The primary finding in CSP31 of positive annual academic gains for charter school students provides the departure point for this study. As shown in Figure 2.3, CSP31 reported that in a year's time, students attending charter schools make an additional 16 days of learning in reading and six days of learning in math, compared to their TPS comparison peers. Importantly, CSP31 shows steady increases in student academic growth over the years of the current study and over the 15 years of CREDO's charter school research. In this report, we probe the overall charter school results from CSP31 by structural and operational attributes of charter schools.

Figure 2.3. RECAP: Annual Academic Growth of Charter School Students, Reading and Math



Note: The figure above originally appears as Figure 1.7 in CSP31.

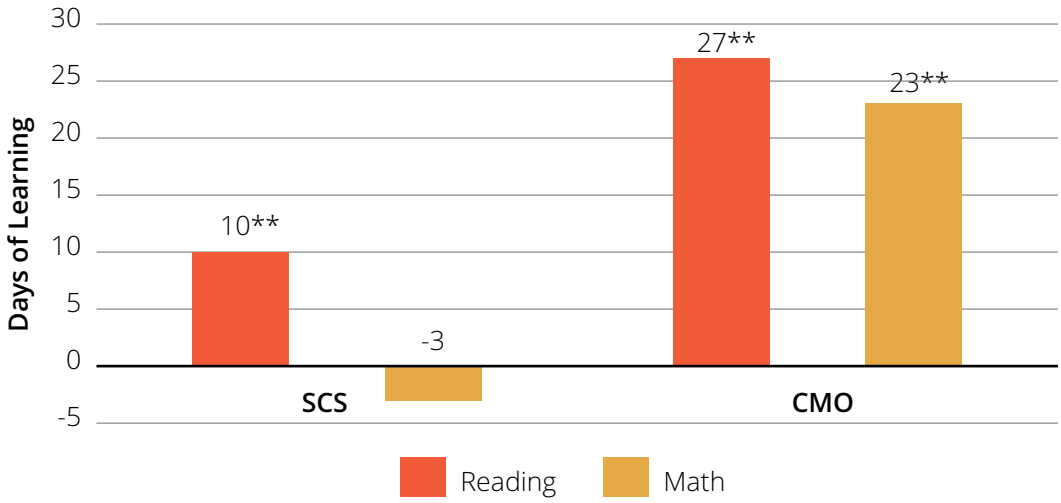
* Significant at the 0.05 level, ** Significant at the 0.01 level

2.4.2. Academic Growth by Charter School Type

The overall impact of attending SCS or CMO charter schools on students' annual academic growth in reading and math is shown in Figure 2.4. Compared to their TPS VCR peers, CMO-affiliated charter school students have statistically significant learning gains in reading and math. Students attending stand-alone charter schools had stronger growth in reading and similar growth in math compared to their TPS peers. The students attending CMO schools gain the equivalent of 27 additional days of reading learning and 23 additional days of math learning per 180-day school year. Students attending the stand-alone charter also make statistically significant gains in reading (+10 days), but the difference is not statistically different from their peers. In order to test the difference in the learning growth in math between the CMO and SCS, we

conduct a statistical test.[6] For reading and math, the analysis indicates that students attending CMO-affiliated charter schools show stronger growth than students attending stand-alone charter schools in both subjects.

Figure 2.4. Annual Academic Growth of Charter School Students by Charter School Type, Reading and Math



* Significant at the 0.05 level, ** Significant at the 0.01 level

The results in Figure 2.4 reflect the average growth based on all tested students in all schools in all the study years for each type of charter school. It is important to note that around the average, there are wide variations in academic growth. This is evident in Figures 2.5 and 2.6, showing the school-level distribution of academic growth by their charter group affiliation. In each charter group, the academic growth ranges from negative 300 days to positive 300 days, suggesting the school quality varies greatly within each group. We use the variation across students, schools or types of charter schools in the rest of our analysis.

CMOs have multiple schools that, in theory, could have distinctly different results. Accordingly, we disaggregate the distributions from Figures 2.5 and 2.6 to create CMO-specific averages and ranges. The average academic growth for each CMO is of keen interest to leaders and policy makers; Appendix A presents these results.

6 We conducted a test to determine whether there is a statistical difference between the academic growth in the two groups.

Figure 2 5. Distribution of Academic Growth in SCS and CMO Schools - Reading

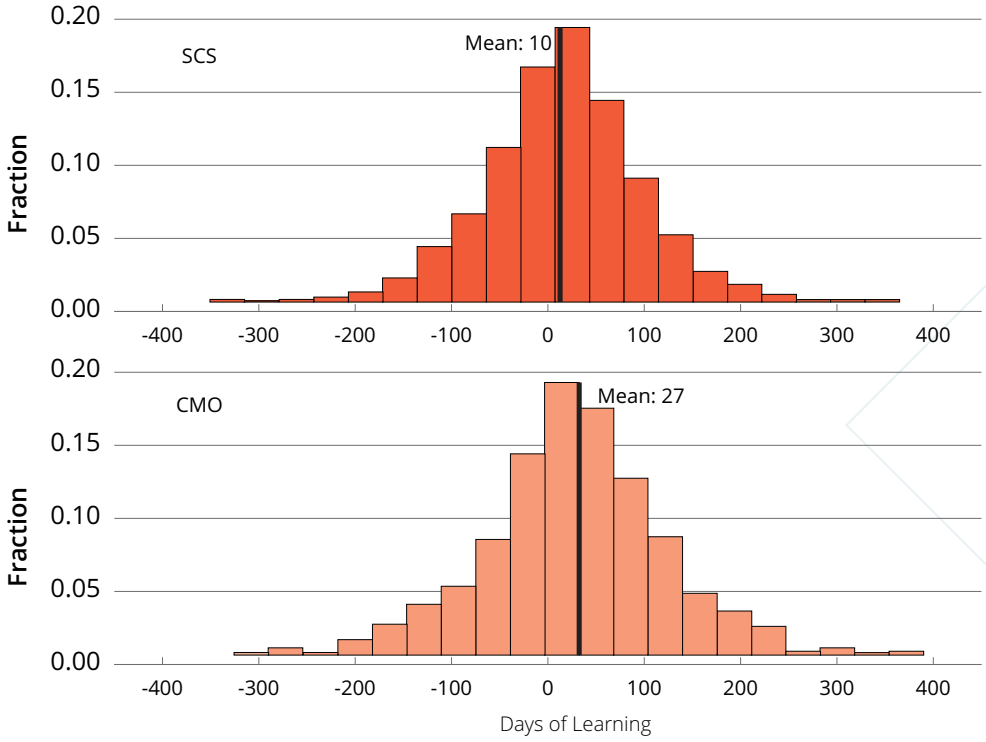
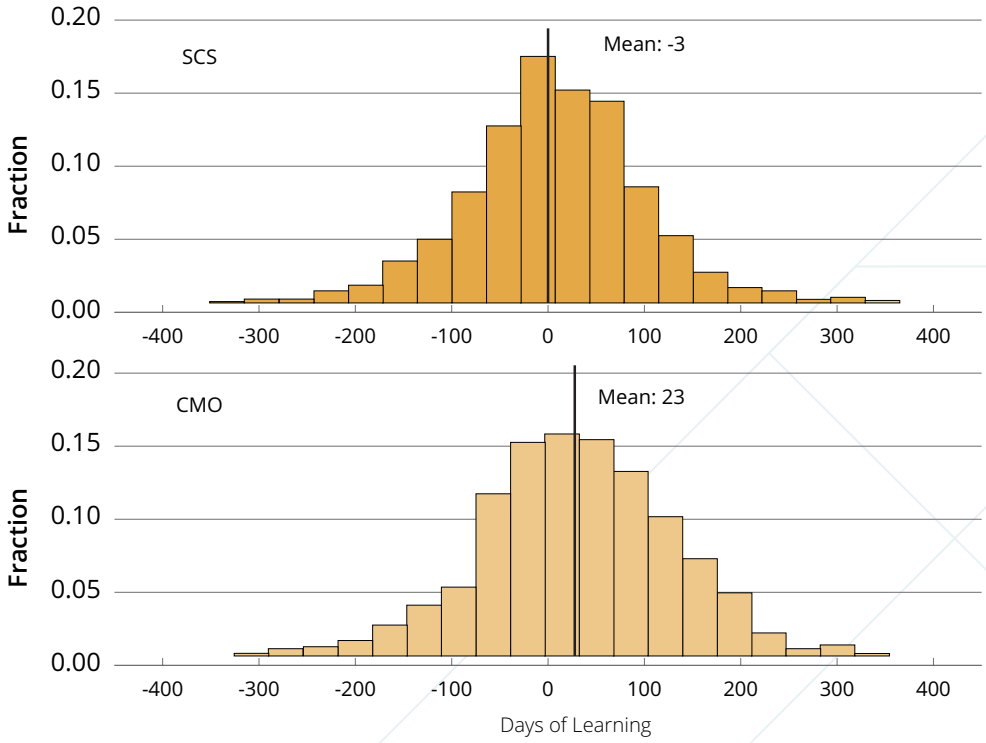


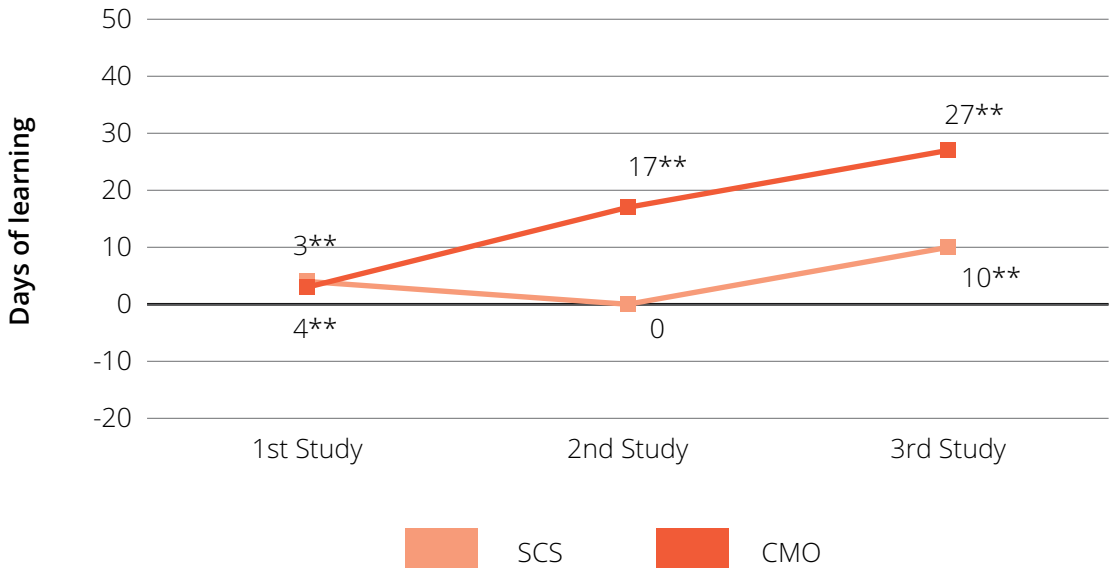
Figure 2.6. Distribution of Academic Growth in SCS and CMO Schools - Math



2.4.3. Academic Growth Trend by Charter School Type

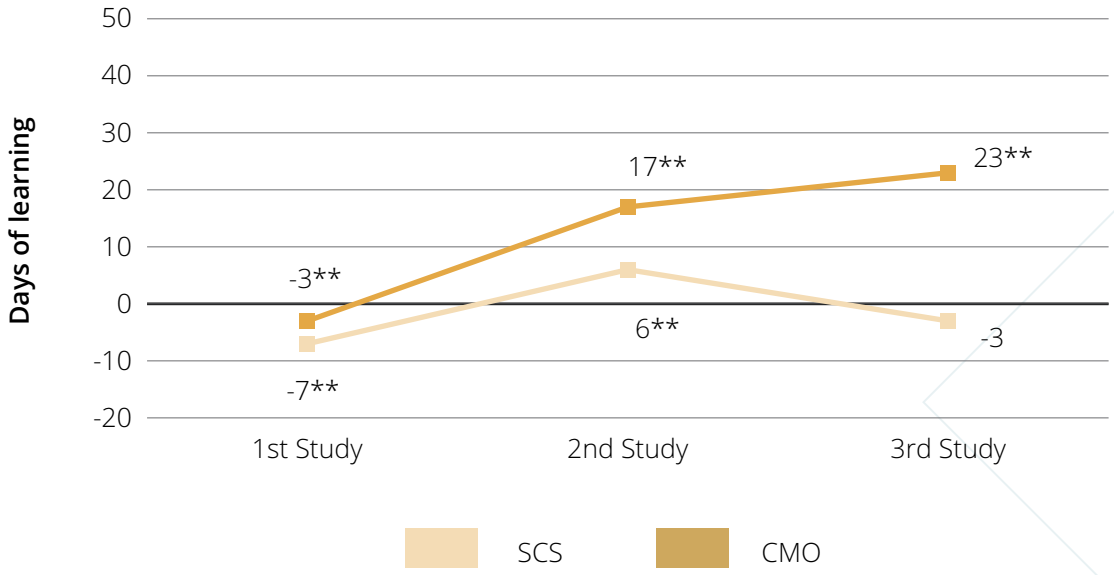
Figures 2.7 and 2.8 show the academic growth by charter group estimated in CREDO's series of CMO reports (Woodworth et al., 2017; Woodworth & Raymond, 2013). CMO-affiliated charter schools have seen a marked improvement in student academic growth in reading and math, adding approximately 10 additional days of learning in each study. In reading, students' progress in stand-alone charter schools is positive in two of the three studies and equivalent to the learning of TPS peers in the third. For math, learning gains for students in stand-alone charter schools lagged that of their TPS VCR peers by seven days of learning in the 2013 study. Growth improved over time to show six days of additional learning in the 2017 study and has no significant difference from growth in TPS students in the current study. Examining the graphs also reveals a widening gap between SCS and CMO-affiliated charter schools in the magnitude of student academic growth for reading and mathematics.

Figure 2.7. Academic Growth Trend by Charter School Type, Reading



* Significant at the 0.05 level, ** Significant at the 0.01 level

Figure 2.8. Academic Growth Trend by Charter School Type, Math



* Significant at the 0.05 level, ** Significant at the 0.01 level

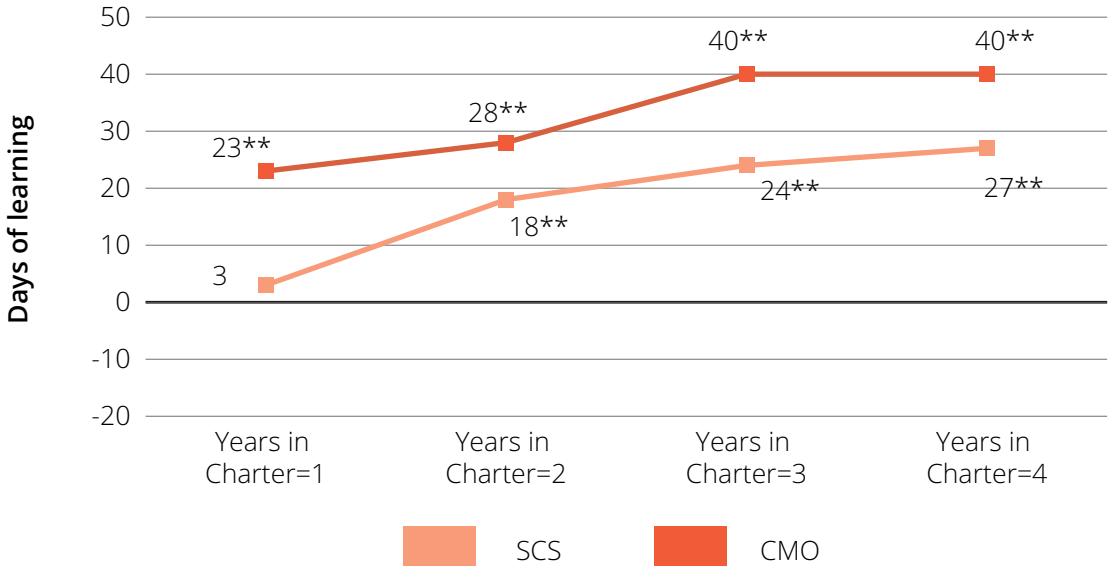
2.4.4. Academic Growth by Students' Years of Enrollment in Charter Schools

Figures 2.9 and 2.10 show changes in learning growth in reading and math with each additional year of enrollment in a group-specific charter school compared to TPS peers.[7] The academic growth of a student shows an increase in growth the longer a student is enrolled in either CMO-affiliated charter or stand-alone charter schools. This relationship exists for both reading and math. Students enrolled in stand-alone charter schools display a comparable rate of improvement, but their growth is smaller than the students in CMO charter schools. Students in their first year of a CMO-affiliated charter school gain 23 days more of learning than those in the traditional public school system.

In comparison, students enrolled in stand-alone charters only make three additional days of progress. The number of additional days of learning grows as the students' years of enrollment in the school increase. In their fourth year, CMO students gain 40 additional days of learning, while stand-alone charter students gain 27 more than their TPS peers. The statistical tests indicate that the difference in the academic performance between the two charter groups is statistically significant in all years in the data window.

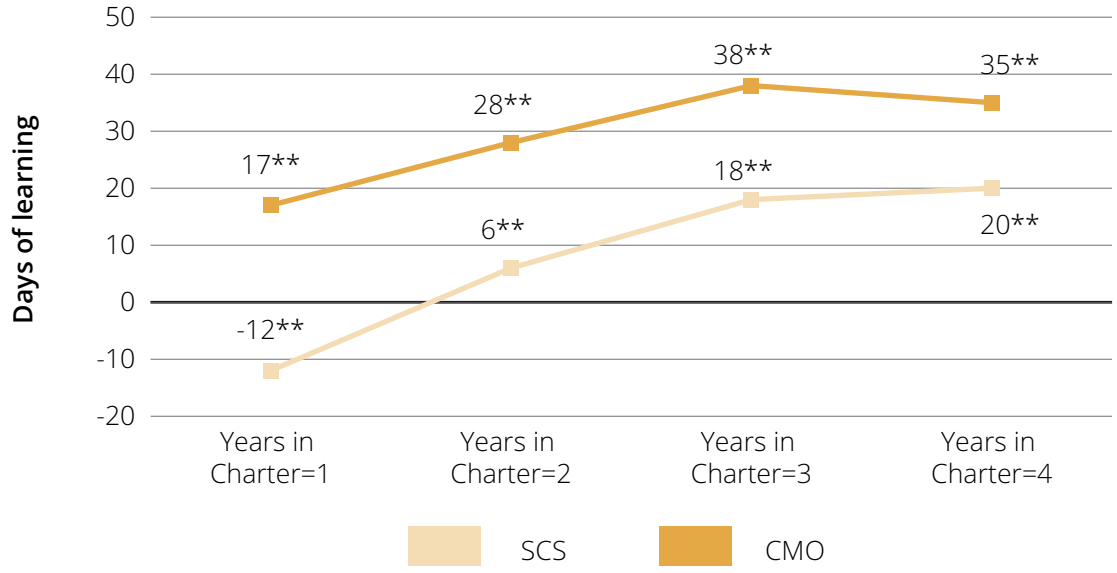
7 This analysis included only those students seen entering the charter schools from a TPS. Students already in charter schools in their first year of the data window were excluded.

Figure 2.9. Academic Growth by Students' Years of Enrollment by Charter School Type, Reading



* Significant at the 0.05 level, ** Significant at the 0.01 level

Figure 2.10. Academic Growth by Students' Years of Enrollment by Charter School Type, Math

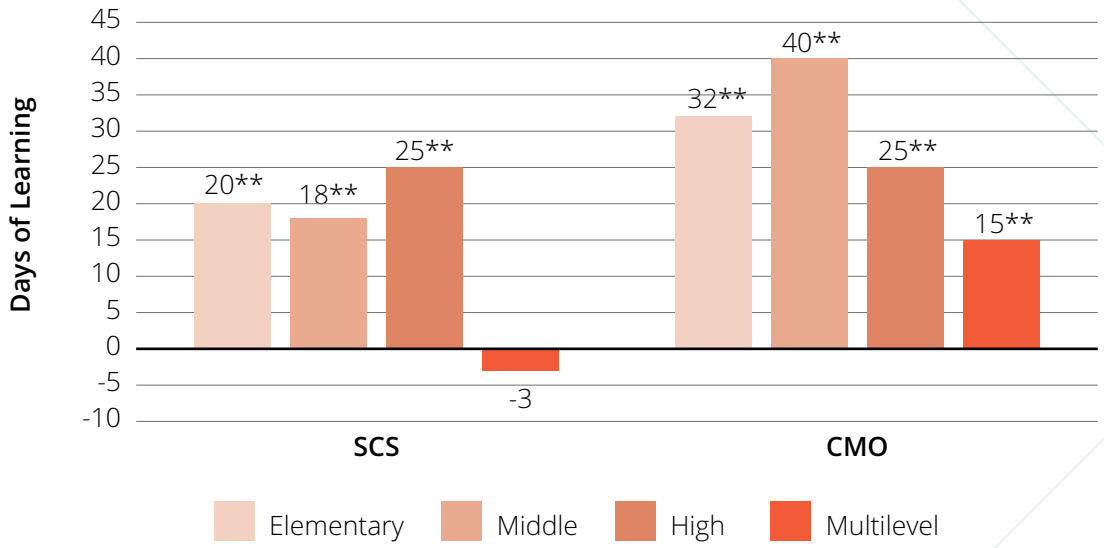


* Significant at the 0.05 level, ** Significant at the 0.01 level

2.4.5. Academic Growth by Charter School Grade Span

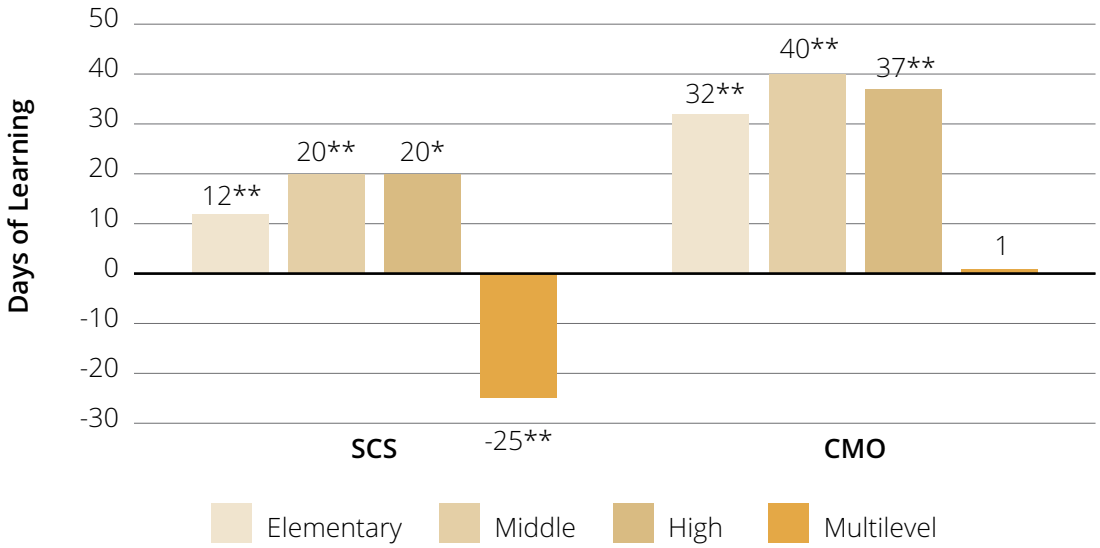
Students enrolled in all grades K through 12 in CMO-affiliated charter schools show statistically significant positive academic growth compared to their TPS VCRs. Consistent with previous CREDO findings, students in CMO-affiliated middle schools exhibit the most sizable academic growth at 40 additional days of learning for reading and math. Figures 2.11 and 2.12 show adverse effects only for the students enrolled in multilevel stand-alone charter schools. The statistical test shows that the difference in the academic performance between the CMO and stand-alone schools is statistically significant for students in all grade bands except for high schools (grades 9–12). For high schools, the difference in the size of the academic growth between the CMO and stand-alone schools is minimal, especially for reading. The results show no meaningful differences between the two groups in terms of reading and math scores.

Figure 2.11. Academic Growth by Charter School Grade Span and Charter School Type, Reading



* Significant at the 0.05 level, ** Significant at the 0.01 level

Figure 2.12. Academic Growth by Charter School Grade Span and Charter School Type, Math



* Significant at the 0.05 level, ** Significant at the 0.01 level

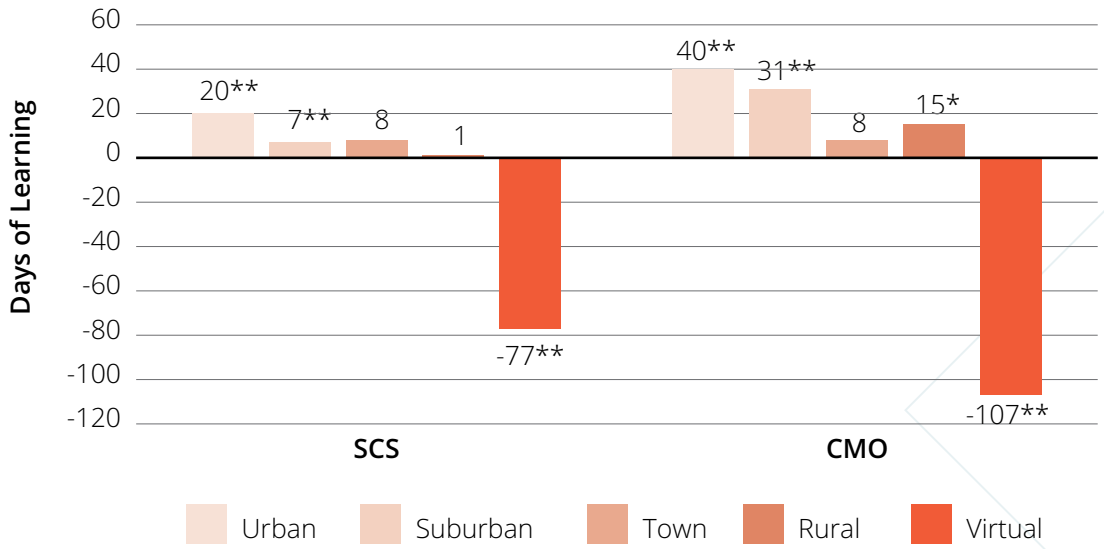
2.4.6. Academic Growth by Charter School Locale

Figures 2.13 and 2.14 reflect the academic growth of charter school students by the physical locale of charter schools affiliated with CMOs and those that are stand-alone. Because virtual charter schools can enroll students from larger geographic areas than brick-and-mortar charter schools, they appear as a separate category in these analyses. As shown earlier, CMO charters are more likely to be in urban areas (58 percent, vs. 46 percent for SCS). The figures demonstrate that students in CMO-affiliated charters in urban areas experience 40 more days of reading instruction and 46 more days of math instruction compared to the TPS VCRs. While the difference in student learning is still noticeable in suburban CMO schools, the difference is less dramatic. Students attending urban stand-alone charter schools make 20 additional days of learning in reading and 12 additional days of learning in math. Urban and suburban stand-alone charters make up more than 80 percent of the total stand-alone charter groups, and students attending these stand-alone charters show growth on par with their TPS peers. When comparing the academic performance between the CMO-affiliated and stand-alone charters, statistical tests point to the fact that CMO-affiliated charters located in urban and suburban areas provide better results than stand-alone charters.

A troubling result is virtual schools' dramatically sizeable negative impact on academic growth. The students in the virtual CMO schools trail behind their TPS peers by 107 days in reading and 155 days in math. The results for stand-alone virtual charters is similar at 77 days less learning in reading and 142 days less learning in math than their TPS peers.[8] This finding is consistent with previous CREDO studies that found substantially lower academic growth in virtual charter schools across the group (Woodworth et al., 2015, 2017).

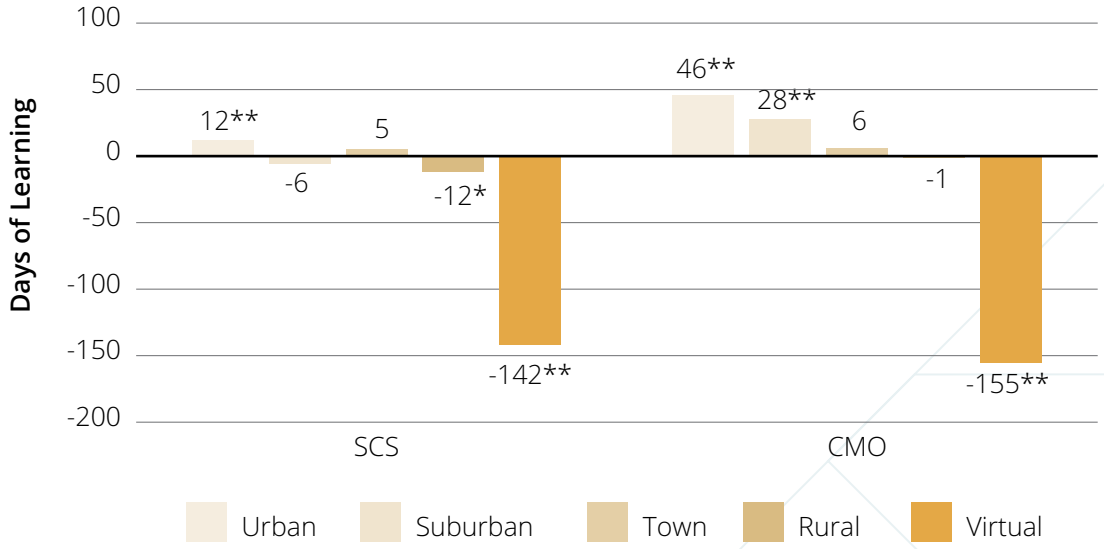
8 The results for CMO and SCS mirror but do not precisely align with the findings in CSP31 because three states are omitted from the CMO/SCS analysis.

Figure 2.13. Academic Growth by Charter School Locale and Charter School Type, Reading



* Significant at the 0.05 level, ** Significant at the 0.01 level

Figure 2.14. Academic Growth by Charter School Locale and Charter School Type, Math



* Significant at the 0.05 level, ** Significant at the 0.01 level

2.4.7. Average Academic Growth of Charter School Students by State

Table 2.2 shows the academic growth for students in CMOs and SCS in each state included in the study. Across the states in both charter school settings, statistically significant positive growth in reading was more prevalent than in math. CMO-affiliated charters showed statistically significant growth in 14 states in reading and 11 in math. For SCS, students in 15 states had significantly positive reading gains but significant math gains appeared only in seven states.

The state results also revealed a few cases where charter school students had statistically significantly smaller learning gains than their TPS peers: CMO-based learning lagged TPS in two states in reading and two states in math. SCS learning significantly lagged TPS comparisons in only one state in reading but was found in six states for math learning.

The remaining comparisons to TPS were statistically insignificant.

The bolded text in each column indicates the contrast between student academic growth in various types of charter schools in each state. If a particular group has larger growth with a statistically significant difference within the same state, it is highlighted.

Table 2.2. Average Academic Growth of Charter School Students by Charter School Type and State

	Reading				Math			
	CMO		SCS		CMO		SCS	
	Days of Learning	Significance	Days of Learning	Significance	Days of Learning	Significance	Days of Learning	Significance
AR	14		-3		-5		1	
AZ	24	**	14	**	5		-5	
CA	19	**	7	*	10		1	
CO	14		16	*	34	**	5	
DC	12		-6		50	**	6	
FL	21	**	-1		13		-12	*
IL	46	**	32	**	66	**	27	**
IN	7		-1		-11		-42	
LA	-6		10		13		1	
MA	51	*	40	**	72	*	38	**
MI	54	**	21	**	45	**	6	
MN	35	**	19	*	22		5	
MO	24		56	**	34		79	*
NC	19	**	12	**	15		-22	*
NJ	55	**	20	*	63	**	14	
NV	15		-2		16		-11	
NY	110	**	65	**	124	**	60	**

	Reading				Math			
	CMO		SCS		CMO		SCS	
	Days of Learning	Significance	Days of Learning	Significance	Days of Learning	Significance	Days of Learning	Significance
NYC	62	**	21	**	114	**	45	**
OR	-33		-17	*	-72	*	-27	*
PA	14		-8		-1		-31	*
RI	134	**	75	**	169	**	60	**
SC	-44	**	-2		-91	**	-40	*
TN	24	**	44	**	32	*	46	**
TX	34	**	2		16	**	-49	**
UT	-2		-2		-8		-15	
WA	-71	*	63		-9		58	
WI	-2		18	*	10		17	
Significant Positive Total	14		15		11		7	
Significant Negative Total	2		1		2		6	
Not Significantly Different	11		11		14		14	

Note: NM has been excluded from the list due to the small number of CMO-affiliated charter schools in the state. Numbers appearing in bold signify statistically significant differences between CMOs and SCS.

* Significant at the 0.05 level, ** Significant at the 0.01 level

2.4.8. Academic Growth of Charter School Student Groups

2.4.8.1.Academic Growth by Race/Ethnicity

Beyond the overall learning impacts of attending CMO schools or stand-alone charter schools, we are interested in knowing if all students share the gains. We first examine the gains for different race/ethnicity groups. This is one way to track if schools are fulfilling their role as builders of opportunity for every enrolled student.

As shown in Figures 2.15 and 2.16, the academic growth of students in CMOs and stand-alone charter schools can be arranged by student groups. For each type of charter school, we compare students to their TPS peers of the same race/ethnicity, whose performance is benchmarked on the zero line. (For instance, we assess the educational improvement of Black CMO and SCS students relative to their Black TPS peers, likewise Hispanic students in comparison to TPS Hispanic learners, etc.) The impact of attending different groups of charter schools is nearly null on reading and 23 days weaker in math for White students compared to their White peers in the TPS. On the other hand, Black and Hispanic students in charter schools display substantially

higher growth when compared to the TPS students of the same racial/ethnic group enrolled in TPS. For example, Black students enrolled in CMO-affiliated charter schools make an additional 41 days of learning in reading and 47 days in math relative to the Black students in TPS. For Black students attending a stand-alone charter, the impact is smaller with 25 additional days in reading and 17 days in math. The data shows that the differences between the types of charter schools of 16 days for reading and 30 days for math are statistically significant.

The story is quite similar for Hispanic students. Hispanic students attending either the CMO-affiliated or stand-alone charters perform substantially better than their peers in TPS. However, Hispanic students attending CMO-affiliated charter schools had 22[9] days more reading gain than Hispanic students attending SCS. The difference in math for Hispanic students was even larger, with CMO-affiliated Hispanic students gaining 30 days more learning than those in stand-alone charter schools. Black and Hispanic students comprise many of the student bodies in schools in urban cities across the United States. The statistical analysis results indicate that the differences in academic performance between the CMO and stand-alone schools for Black and Hispanic students were statistically significant. These findings indicate that both stand-alone and CMO-affiliated charters, on average, may contribute to narrowing the racial achievement gaps, but CMO-affiliated charter schools give the stronger boost.

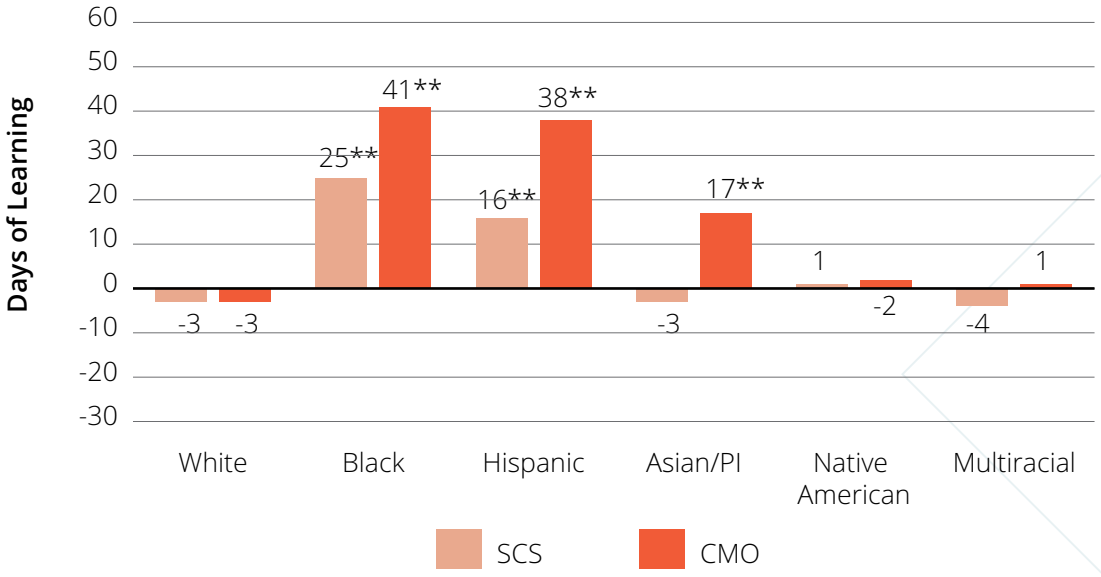
The effects on Asian/Pacific Islander students are not as strong as those on Black and Hispanic students. However, those enrolled in charters associated with CMOs increased their learning by 17 days in reading, while no statistically significant impact was found for math. Meanwhile, Asian/Pacific Islanders in stand-alone charters show similar growth to their TPS peers in reading but are lagging in math by 11 days. This difference between CMO charters and stand-alone charters is statistically significant, signifying that CMOs have a more positive impact on Asian/Pacific Islanders over stand-alone charters.

According to our analysis, the academic performance of Native American students does not improve when they attend charter schools. In addition, multiracial students enrolled in charter schools do not perform as well in reading as their counterparts in traditional public schools and have similar performance in math.

The estimates in this section align with the previous findings. CREDO's previous reports show that the impact of charter schools on academic growth was positively significant for Black and Hispanic students: the 2017 CMO study reported that Black students attending CMO-affiliated charter schools made, on average, 40 additional days of learning in reading and 29 additional days of learning in math compared to the Black students attending TPS. Similarly, Hispanic students attending CMO-affiliated charter schools made 34 additional days in reading and 29 additional days in math compared to the Hispanic students in TPS (Woodworth et al., 2017).

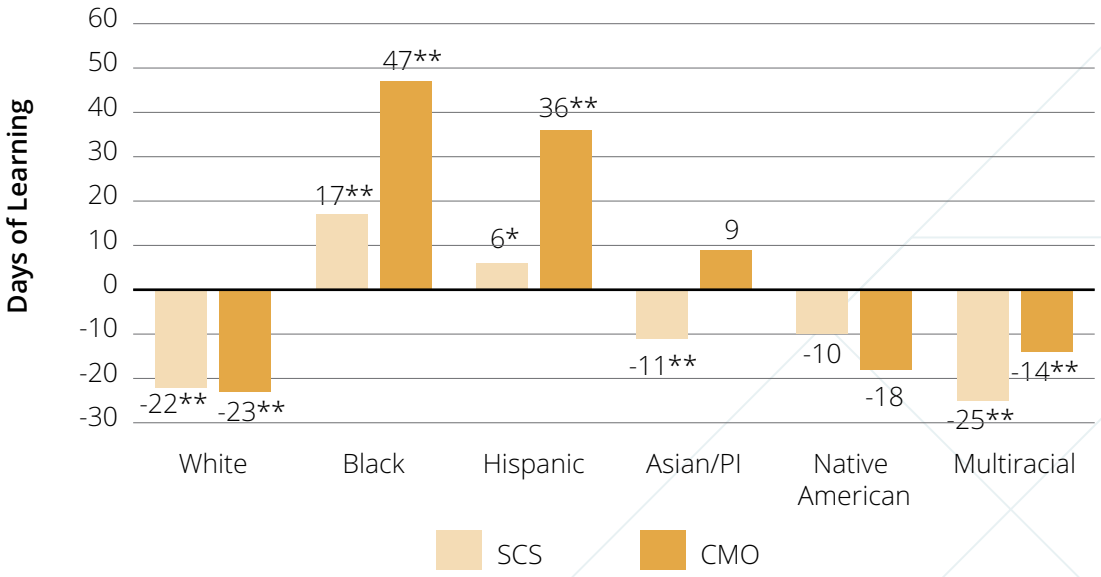
9 The 22 days of learning difference is derived by subtracting days of learning of SCS (16 days) from the days of learning of CMO (38 days).

Figure 2.15. Academic Growth by Race/Ethnicity and Charter School Type, Reading



* Significant at the 0.05 level, ** Significant at the 0.01 level

Figure 2.16. Academic Growth by Race/Ethnicity and Charter School Type, Math



* Significant at the 0.05 level, ** Significant at the 0.01 level

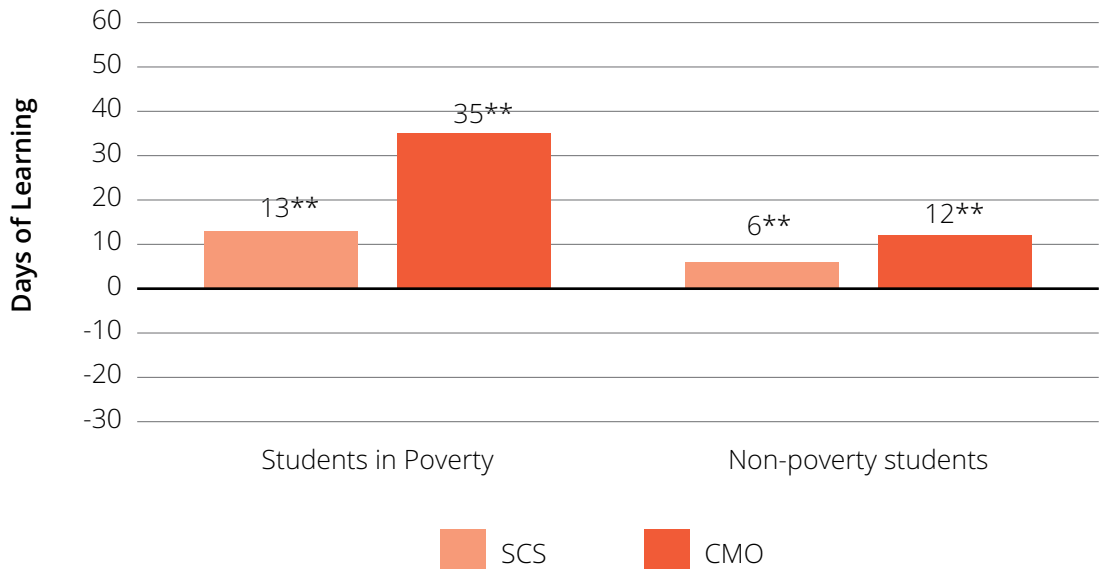
2.4.8.2. Academic Growth by Poverty Status

Education is a critical factor in improving life outcomes for students in poverty. The role of charter schools in opening future options for students has been a strong interest of policy makers, funders and educators for much of the 30 years of charter school operations.

Our analysis indicates that students enrolled in CMO-affiliated charter schools show 35 days of additional learning in reading and 36 days in math compared to their VCR TPS peers who are also in poverty (Figures 2.17 and 2.18). Students in poverty attending stand-alone charter schools show positive learning gains in reading and similar gains in math compared to their VCR TPS peers. The academic gains of CMO-affiliated students are significantly larger than those attending stand-alone charters, yielding a 22-day difference in reading and a 32-day gap in mathematics.

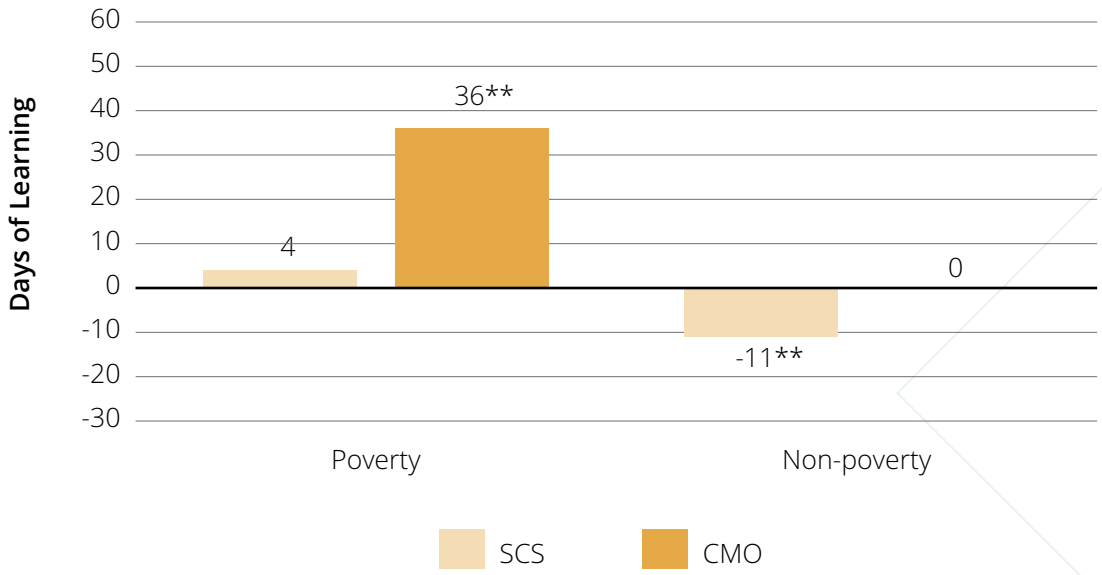
For non-poverty students, the magnitude of the effect is significant but smaller in reading. Non-poverty students in CMOs had similar growth to their peers in math. Non-poverty students attending stand-alone charter schools had negative growth compared to their TPS peers. CMO students not in poverty made greater learning gains for both subjects than those students in stand-alone charter schools.

Figure 2.17. Academic Growth by Poverty Status and Charter School Type, Reading



* Significant at the 0.05 level, ** Significant at the 0.01 level

Figure 2.18. Academic Growth by Poverty Status and Charter School Type, Math



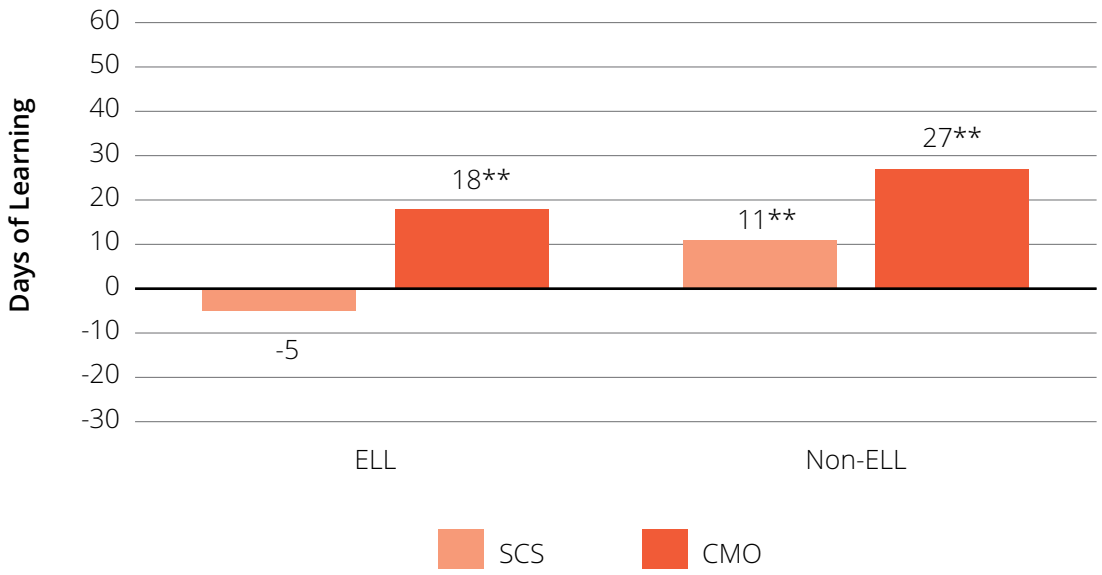
* Significant at the 0.05 level, ** Significant at the 0.01 level

2.4.8.3. Academic Growth by ELL Status

Public schools commit to educating students whose first language is not English. This requires additional expertise and resources. The learning outcomes of English-language learner (ELL) students is a continuing interest in public education. In the context of this study, serving ELL students is also an area where a CMO's scale of multiple schools potentially could provide advantages over independent charter schools.

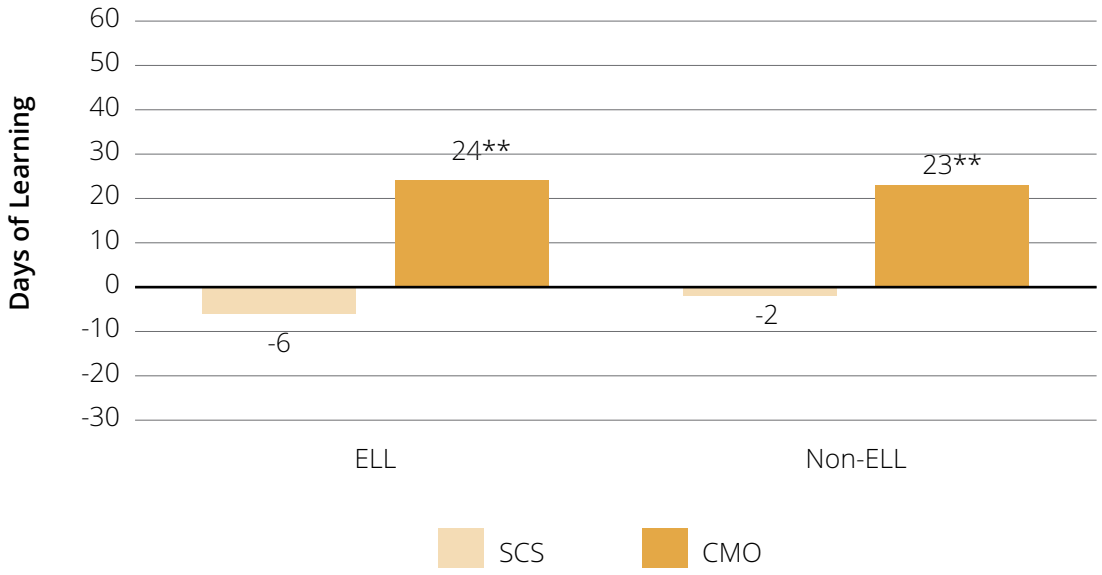
CMO-affiliated charter school ELL students outperform their TPS ELL peers as well as the ELL peers in the stand-alone schools: ELL students enrolled in CMO-affiliated charter schools make 18 additional days of learning in reading and 24 additional days of learning in math relative to the ELL TPS peers (Figures 2.19 and 2.20). The academic growth is slightly larger in reading and similar in math for non-ELL students enrolled in the CMO-affiliated charter schools. For reading, they make 27 additional days of learning while exhibiting 23 additional days of learning in math. Stand-alone charter students trail behind CMO students in academic growth in all categories, and the differences are statistically significant.

Figure 2.19. Academic Growth by ELL Status and Charter School Type, Reading



* Significant at the 0.05 level, ** Significant at the 0.01 level

Figure 2.20. Academic Growth by ELL Status and Charter School Type, Math



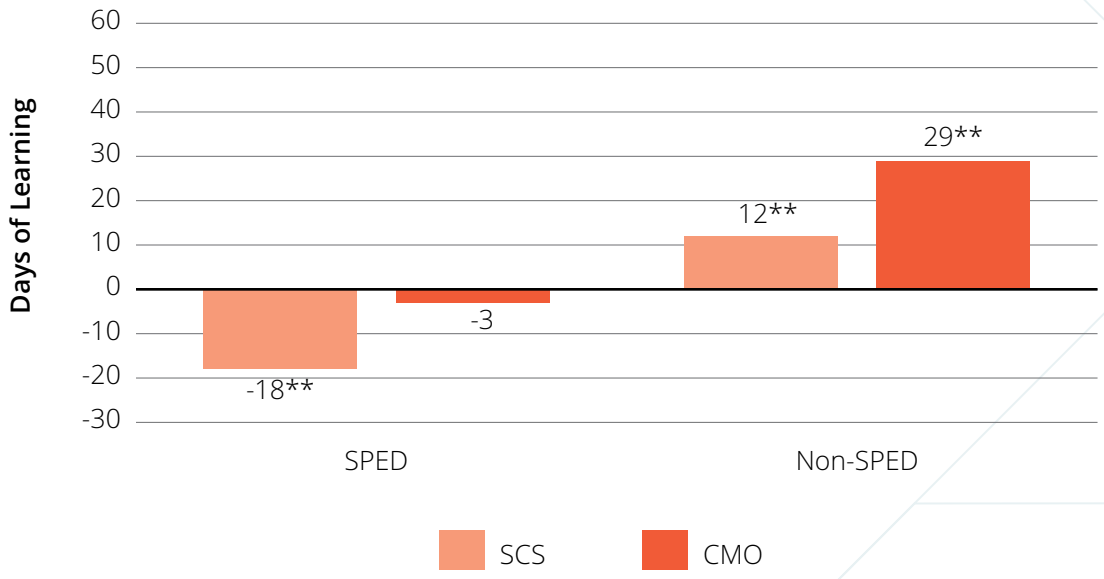
* Significant at the 0.05 level, ** Significant at the 0.01 level

2.4.8.4. Academic Growth by Special Education Status

One of the largest federal funding sources for K–12 education is IDEA[10], which serves more than 7.5 million eligible children and students with disabilities. State spending policies allocate additional investment for students with disabilities eligible for specialized education services. It is important to understand how the learning of this vulnerable population fares in either type of charter school.

Approximately 11 percent of students attending charter schools receive special education services. As shown in Figures 2.21 and 2.22, when it comes to the academic growth of special education students, CMO special education students gain equivalent learning as their TPS counterparts in reading and math. In this case, a "no different" finding reflects an improvement over earlier periods. However, special education students attending stand-alone charter schools exhibit significantly smaller learning gains than their TPS peers, on the order of 18 fewer days of learning in reading and 23 fewer days in math.[11] The difference was even larger in math at 22 days. The relative differences between the CMO and stand-alone charter schools are statistically significant for special and non-special education students in reading and math.

Figure 2.21. Academic Growth by Special Education Status and Charter School Type, Reading

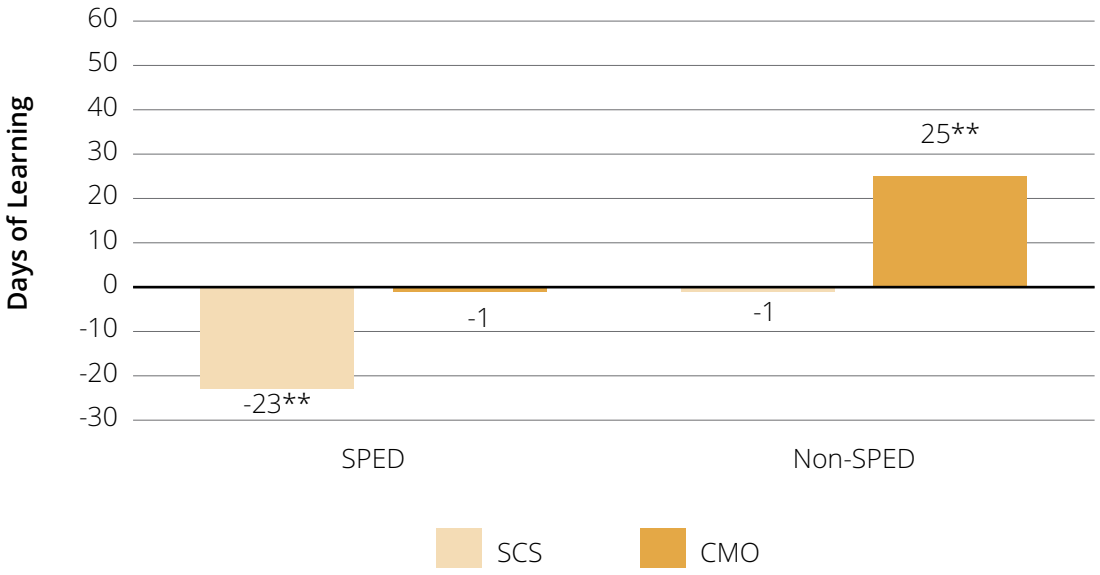


* Significant at the 0.05 level, ** Significant at the 0.01 level

10 See Individuals with Disabilities education Act (IDEA) at https://sites.ed.gov/idea/

11 The difference between the learning of SPED students in CMO and SCS was 15 days. The 15 days of learning difference is derived by subtracting days of learning of SCS (-18 days) from the days of learning of CMO (-3 days).

Figure 2.22. Academic Growth by Special Education Status and Charter School Type, Math



* Significant at the 0.05 level, ** Significant at the 0.01 level

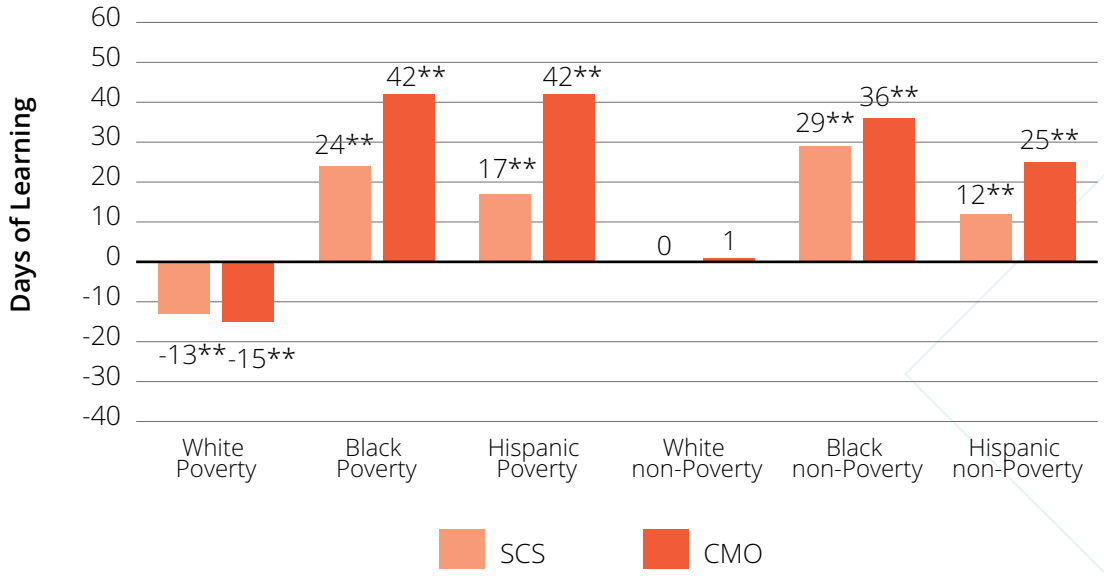
2.4.8.5. Academic Growth by Race/Ethnicity & Poverty Status

As shown in Table 2.1, students served by the CMO-affiliated charter schools are predominantly low-income minority students. In this section, we examine how student learning differs for student groups in different types of charter schools by race/ethnicity and poverty status. Compared separately for CMOs and stand-alone charter schools, we estimated the growth of each student group against its TPS peers. Although the learning gains of attending stand-alone charter schools are smaller than that of CMO-affiliated charter schools, Black and Hispanic students, regardless of the poverty status in both settings, make statistically significant positive academic growth compared to their TPS VCRs in both subjects.[12]

As shown in Figures 2.23 and 2.24, CMO-affiliated charters appear to show more positive impacts for Black students and Hispanic students in both subjects. In addition, the amount of growth is larger for the students in poverty than those not in poverty. For reading, Black students in poverty enrolled in CMO-affiliated charter schools make, on average, 42 additional days of learning compared to their TPS peers, while the Black students in poverty enrolled in stand-alone charter schools make 24 additional days of learning than their TPS peers. While the results demonstrate a positive and robust impact for Black and Hispanic students, it is notable that for white students in poverty underperform by 15 days in CMO and 13 days in SCS compared to the white students in poverty in TPS schools. This research implies that CMO-affiliated charters are more successful in the academic development of children from minority backgrounds and low-income households.

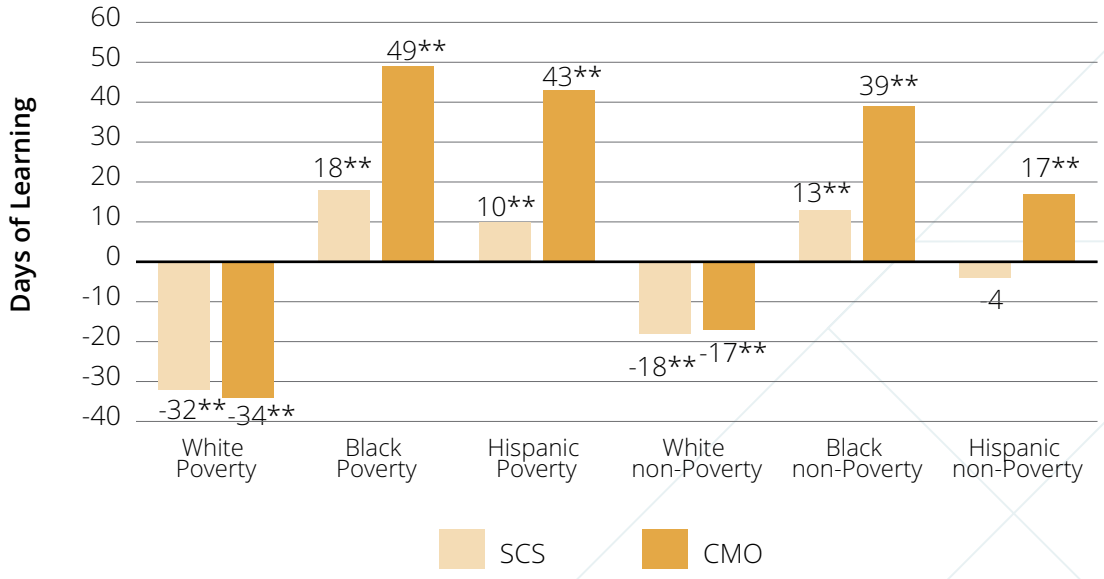
12 With one exception for the Hispanic non-poverty group in math, where students attending stand-alone charters grow on par with TPS peers.

Figure 2.23. Academic Growth by Race/Ethnicity & Poverty Status and Charter School Type, Reading



* Significant at the 0.05 level, ** Significant at the 0.01 level

Figure 2.24. Academic Growth by Race/Ethnicity & Poverty Status and Charter School Type, Math



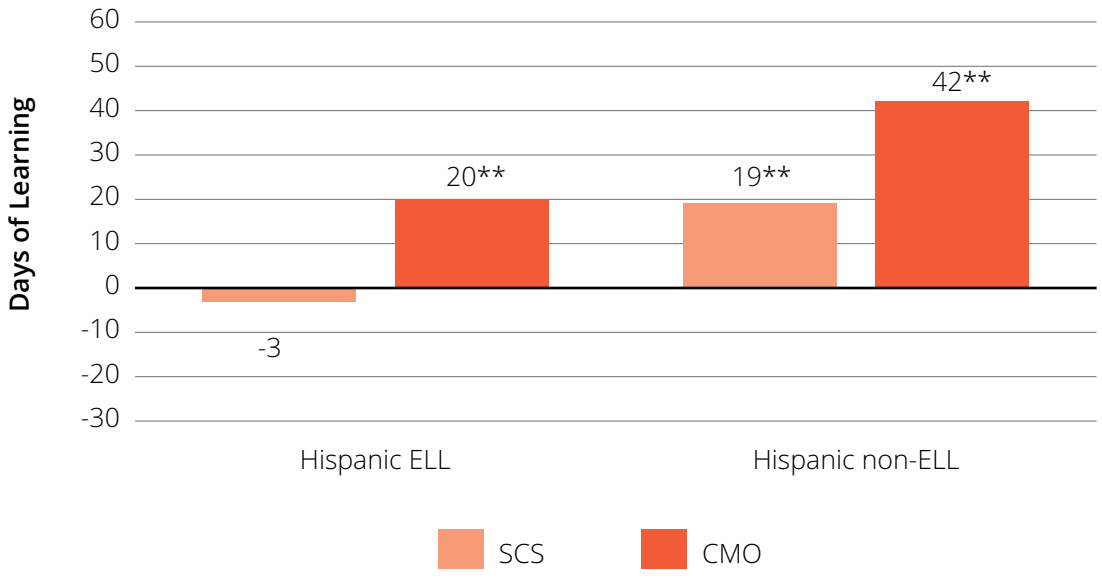
* Significant at the 0.05 level, ** Significant at the 0.01 level

2.4.8.6. Academic Growth by Hispanic & ELL Status

In recent years about 30 percent of Hispanic students identified as English-language learners (ELL), and Hispanic students make up three-quarters of total ELL students in the United States (De Brey et al., 2019). Given the high proportion of Hispanic students in charter schools and the significant share of ELL, we examine the impacts of different types of charter schools on the academic success of Hispanic students with and without ELL status.

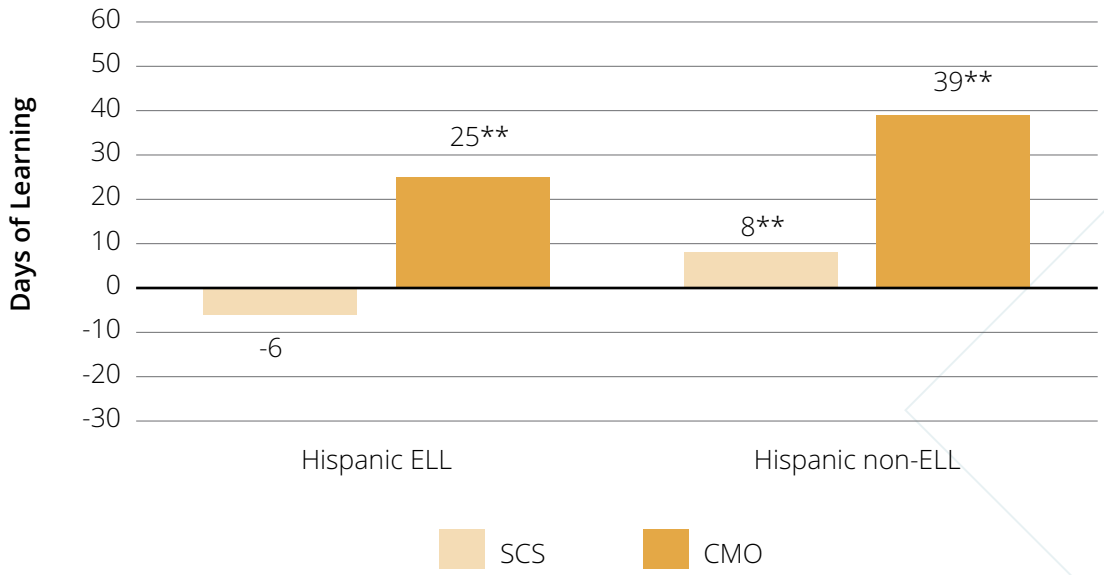
We found a marked difference in the learning impacts for Hispanic ELL students across the two types of charter schools. Figures 2.25 and 2.26 show that CMO-affiliated charters promote higher academic growth for Hispanic students in both subjects, independent of their ELL status. Hispanic ELL students benefit if enrolled in CMO schools; they gain 20 extra days of learning in reading and 25 additional in math. This was not the case if students enrolled in SCS, where their learning was on par with their TPS peers. The magnitude of learning impacts was greater for non-ELL Hispanic students; they made an average of 42 days of learning in reading and 39 days in math more than the TPS peers. Non-ELL Hispanic students attending stand-alone charter schools saw an increase in reading and math learning of 19 and eight days, respectively, relative to those in traditional public schools. The gap between ELL students attending CMO and stand-alone charter schools was statistically significant.

Figure 2.25. Academic Growth by Hispanic Students with ELL Status and Charter School Type, Reading



* Significant at the 0.05 level, ** Significant at the 0.01 level

Figure 2.26. Academic Growth by Hispanic Students with ELL Status and Charter School Type, Math



* Significant at the 0.05 level, ** Significant at the 0.01 level

2.4.9. Operational Analysis of CMOs

In this section of the report, we focus exclusively on CMOs with analyses targeted to their particular operating attributes. A critical interest about CMO networks is how well they maintain academic gains for their students as they grow. This question cuts both ways: Do CMO-affiliated new schools demonstrate equivalent learning gains as the rest of the CMO portfolio? In addition, does adding new schools affect the rest of the schools in the CMO? After presenting the full sample results, we focus on exceptional cases.

2.4.9.1. Does Charter Network Size Matter?

Network size reflects the number of schools for which a charter organization holds the charter and responsibility for operations and performance. We exclude any schools with operating contract arrangements with other educational institutions. The average number of schools managed by CMO networks is 6.96, ranging from three to 73 schools.

We examined the relationship between size and student learning with several measures and proxies for portfolio size. We found a weak correlation between portfolio size and student academic progress. At every increment of size (and similarly of age), we saw roughly the same shares of positive, negative and equal growth CMOs relative to their TPS counterparts, but since the larger portfolios enroll more students, the balance shifts slightly in favor of larger scale.

Earlier CREDO work pointed out that CMOs can only replicate schools at the quality level they already produce. That might explain how some larger CMOs have smaller gains than others. Authorizers need to explain fully how operators with low performance receive permission to expand.

2.4.9.2. Annual Academic Growth in New CMO Schools and Networks

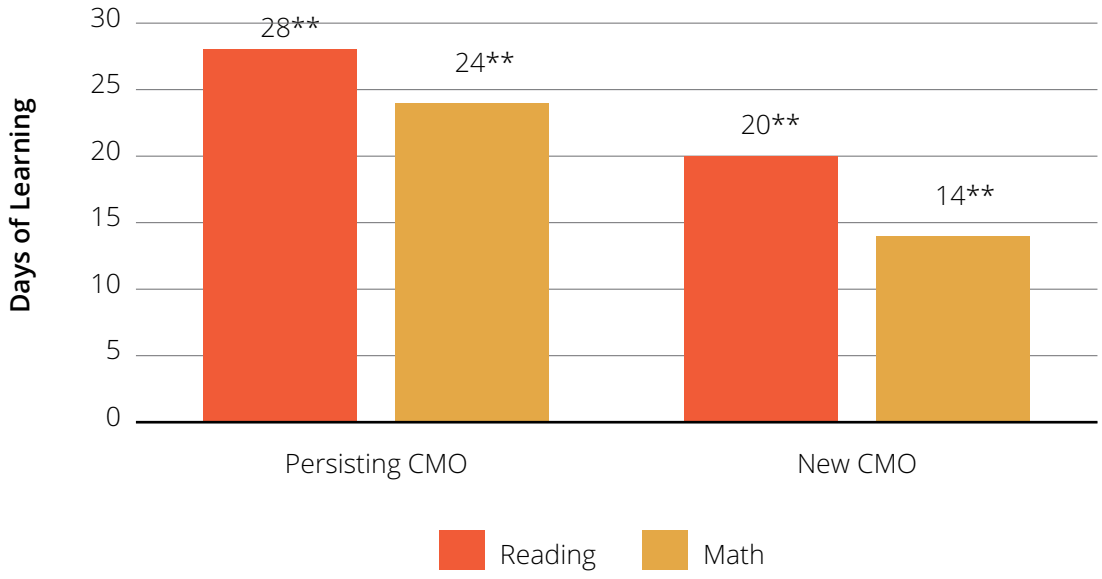
Questions of scale and effectiveness accompany growth in the CMO community. Policy makers and funders have targeted CMO expansion to increase education options for families or shift the proportion of high-quality seats in high-needs areas. Authorizers have faced a degree of scrutiny in their treatment of CMO applications for new schools. The underlying assumption is that CMOs offer better odds of creating strong schools than alternative approaches. This study has a unique vantage point to examine that idea empirically.

2.4.9.2.1. Annual Academic Growth in New CMO Networks

One facet of CMO growth is the emergence of new networks. Recall that we define CMO networks as operating three or more schools. Eighty CMOS, roughly 20 percent of the CMO networks in the study, opened their third (or more) school during our study window. The increase in the number of CMOs allows us to see if newer CMOs "come out of the gates" with student academic learning that supports backing CMOs as strong education instruments.

We compare learning gains for students in newly emerged CMOs to those enrolled in previously existing CMOs. As demonstrated in Figure 2.27, new and existing CMOs had a significantly positive impact on student academic growth compared to their TPS counterparts. New CMOs contribute less to academic gains than older CMOs, but still aid in delivering improved education for their students.

Figure 2.27. Academic Growth in Persisting CMOs and New CMOs



* Significant at the 0.05 level, ** Significant at the 0.01 level

2.4.9.2.2. Annual Academic Growth in New Charter Schools versus Continuing Schools

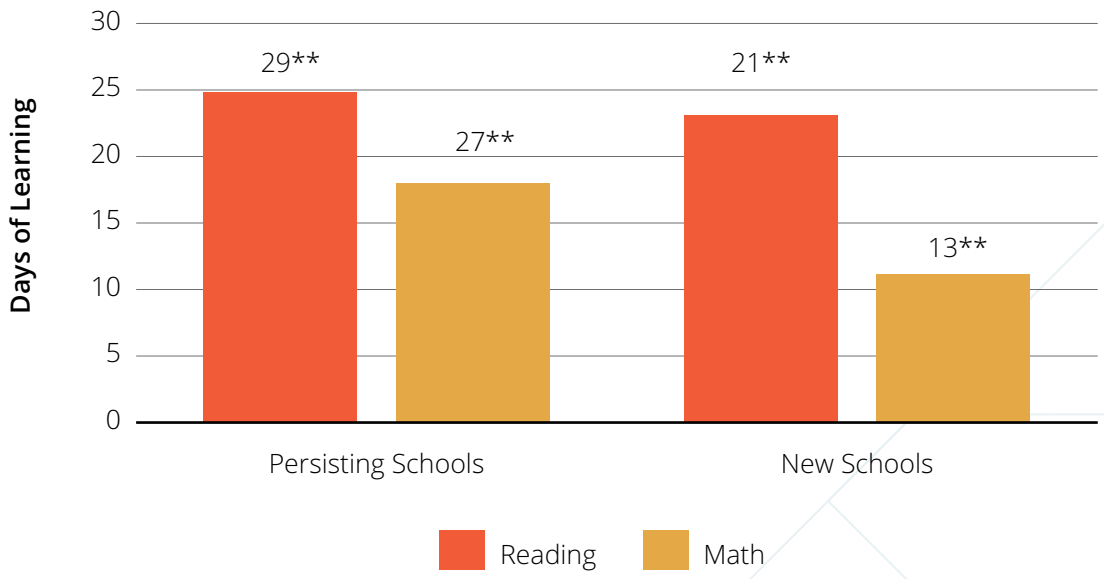
Another way to examine growth among CMOs is to see how well they can replicate and grow new schools. Adding new schools to a CMO portfolio entails two different forms of risk. One is that the school will not fledge successfully, and students will not have strong academic results. The second risk is that launching new schools burdens the CMO and its existing schools to the point that its results suffer.

We regard CMO charter schools established after 2014–15 as new entrants. Sixteen percent of CMO-affiliated schools in our data are new, pointing to significant efforts to grow networks over the years of this study. Persisting schools are those in operation before 2014–15.

Figure 2.28 shows that new and persisting CMO schools have a positive and statistically significant influence on student academic growth on average compared to traditional public school peers.

The academic growth observed in persisting CMO schools was stronger in both subjects than in newer ones. The impacts were 29 additional days of learning for reading and 27 for math in persisting CMO schools versus new school learning of 21 more days in reading and 13 additional days in math. While the differences between persisting and new charter schools are statistically significant for both subjects, newer schools retain a considerable share of their CMO DNA even in their early years.

Figure 2.28. Academic Growth in Persisting CMO Schools vs. New CMO Schools



* Significant at the 0.05 level, ** Significant at the 0.01 level

2.4.9.2.3. New Charter Schools versus Persisting Schools in the Same Network

Pushing the inquiry about new CMO schools further, we probe the relationship between old and new schools within individual CMOs to discern if CMOs are launching schools of equivalent quality. We took the 383 new schools we examined earlier and related their performance to the other schools in the same portfolio. The relative performance of the new school appears in Table 2.3.

Table 2.3. Student Growth in New Schools Compared to Persisting Schools in Same CMO Network

	Percentages of CMOs (with new schools)	
Compared to CMO portfolio, student learning in new school is:	Reading	Math
Better by 13 days or more	32 %	31 %
About the same (+/- 12 days)	23 %	13 %
Smaller by 13 days or more	45 %	56 %
Total	**100 %**	**100 %**

Almost a third of CMOs start schools that are noticeably stronger than the average of their existing schools. Using an arbitrary cut of plus-or-minus 12 days of student learning in the rest of the CMOs schools, 23 percent of CMOs replicate the new school at about the same performance in reading and 13 percent do so in math. The share of CMOs that started new schools with notably weaker student learning (by a shortfall of 13 days or more) was 45 percent in reading and 56 percent in math. That about half of new CMO schools dilute the overall performance of their portfolio with weaker student gains suggests an area for future attention by replicating CMOs.

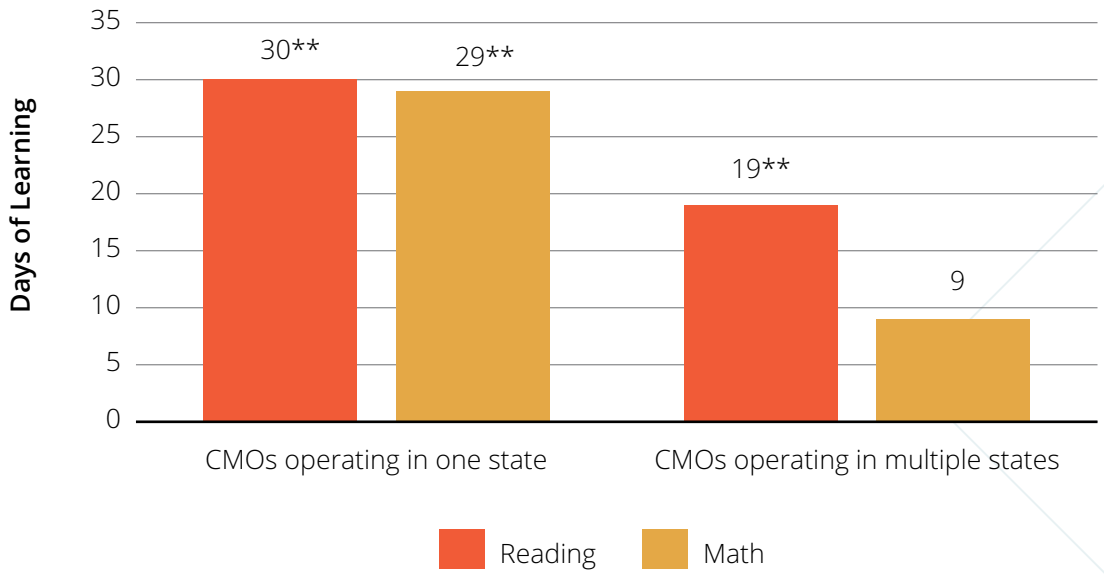
2.4.9.3. Annual Academic Growth of CMOs Operating in Multiple States

A third facet of CMO growth concerns the geographic concentration of networks. The number of CMOs that extend their school networks across state lines has grown since our last study. Managing a CMO portfolio across states might provide diversification of policy and fiscal risks for the better long-term sustainability of the network. On the other hand, dispersed schools might present leadership, operations and reporting challenges that highly localized networks don't need to face. Committing resources to buffer these effects might play out in the student learning experience.

Our test examines whether there are differences between CMOs operating in multiple states and those confining operations to a single state. Our definition of the CMO network used in this analysis is region specific. Some large national CMOs include multiple regional networks that operate in a single state. For example, KIPP New Orleans or KIPP New York City is included in our work as a separate entity that operates in a single state.

Figure 2.29 suggests that students learning in CMOs operating in multiple states have weaker growth than students in single-state CMOs. Single-state CMOs support additional learning of 30 extra days in reading and 29 more days in math. This compares to 19 days of additional reading in multistate CMOs and on-par learning in math. The differences between the two groups of CMOs are large and statistically significant. Assuming that new school start-up is a challenge wherever it occurs, the findings suggest that more tightly clustered CMOs have a better time of it.

Figure 2.29. Annual Academic Growth in CMOs Operating in Single or Multiple States



* Significant at the 0.05 level, ** Significant at the 0.01 level

2.4.9.4. Special Analysis: CMO Growth Accelerator Case Study—Charter School Growth Fund

Expanding the number of high-quality schools and seats in the United States has been a target of considerable interest. One strategy is to foster the growth of successful CMOs. Several CMO growth accelerators operate nationwide, ranging from supporters of single CMOs or networks to public and private programs that support dozens of CMOs. Our broader study of the effectiveness of CMOs provided the opportunity to conduct a case study of one such entity, the Charter School Growth Fund (CSGF). CSGF shared its list of 72 funded CMOs for this analysis.[13]

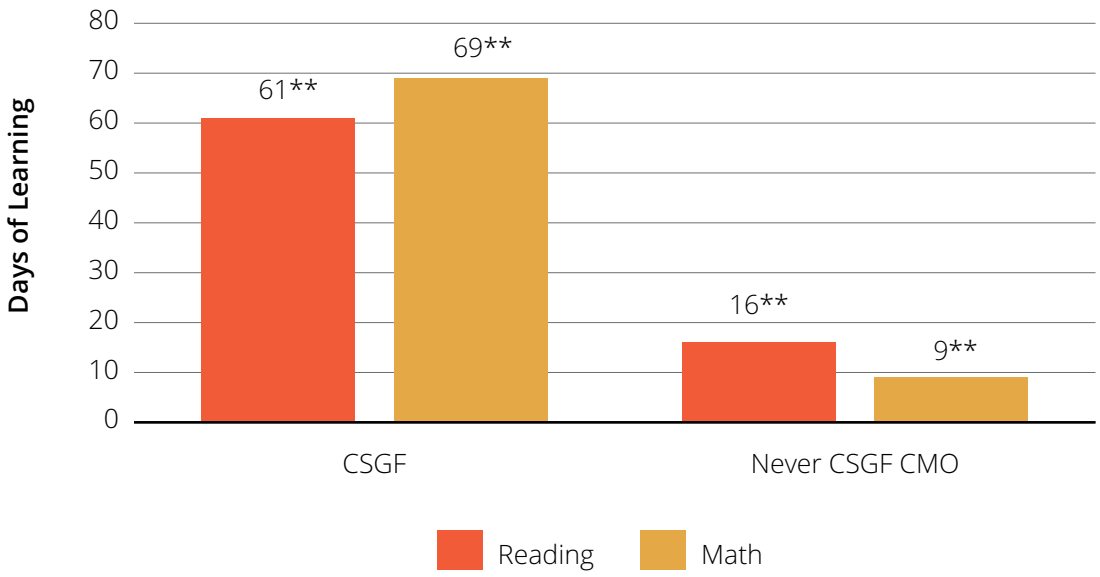
CSGF is a nonprofit organization that makes multiyear investments in charter school networks to grow into multi-school networks. The CSGF is known for selecting high-quality charter schools to receive expansion funds. A related expectation is that the entire portfolio will grow its impact on students. We can test whether student academic performance improves after a CMO receives support from CSGF.

Approximately eight percent of charter schools in this study belong to CSGF-affiliated CMOs. We examined the impact of the Charter School Growth Fund affiliation of CMOs on student academic growth. The estimates of the impact of CSGF appear in Figure 2.30.

13 It bears noting that the Charter School Growth Fund has other strands of work that focus on leaders and organizations at earlier points in their history. This analysis does not assess the results of those endeavors.

CMOs have student progress that outpaces the peers' learning in TPS independent of CSGF designation. This is consistent with CREDO's 2013 and 2017 CMO studies. That said, the strength of CSGF student results cannot be ignored. The advantage of attending CSGF-affiliated schools is quite large for reading (an additional 61 days) and math (an additional 69 days) compared to their TPS peers. It suggests that schools funded by CSGF provide very large academic benefits to student quality. The benefit is also outsized compared to the CMOs that never received funding, despite the non-CSGF CMO schools showing meaningful positive impact in reading (a margin of 18 days) and math (12 more days). There is a statistically significant difference in academic gains between the two groups of CMOs.

Figure 2.30. Student Academic Growth in CMO Schools by Charter School Growth Fund Support, Reading and Math



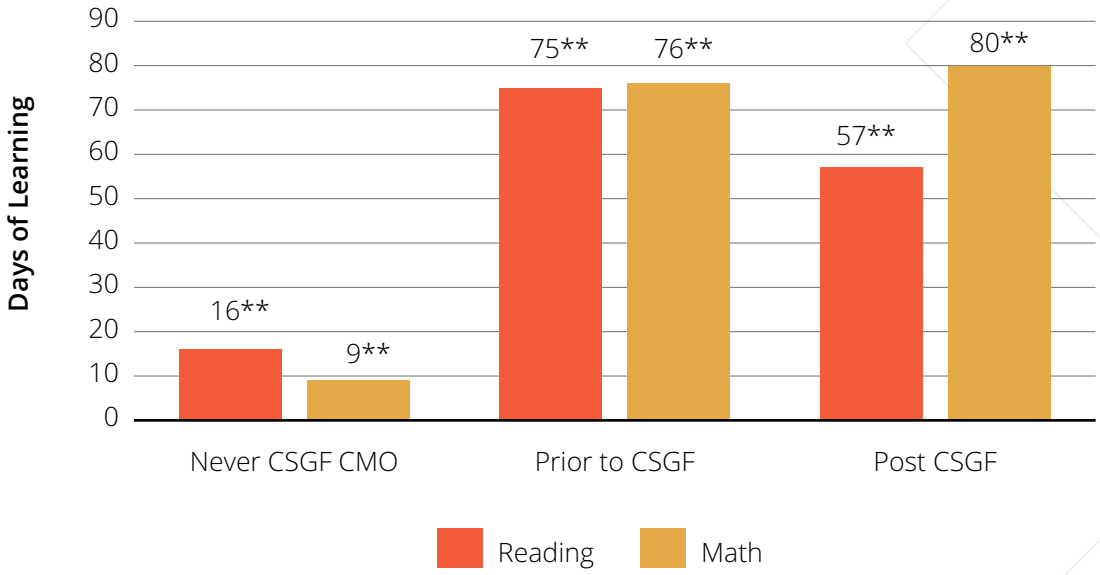
* Significant at the 0.05 level, ** Significant at the 0.01 level

Accelerator programs of all types receive the scrutiny of their results. Curiosity revolves around the relative weights of selecting already high-performing organizations and the lift the program provides from that point forward. Our data can test the relative contributions of these elements.

To address the question, we restrict our analysis to 29 CMOs that received support from CSGF for the first time between 2015–16 and 2017–18. We estimate the average academic growth before and after CSGF affiliation. As shown in Figure 2.31, students attending CSGF-supported schools exhibit much larger academic growth prior to affiliation than students in CMOs that never received funding. In both subjects, CSGF-selected CMOs have student learning 75 days greater than their TPS peers in reading and 76 in math. The striking difference illustrates the CSGF's focus on choosing strong CMOs for investment.

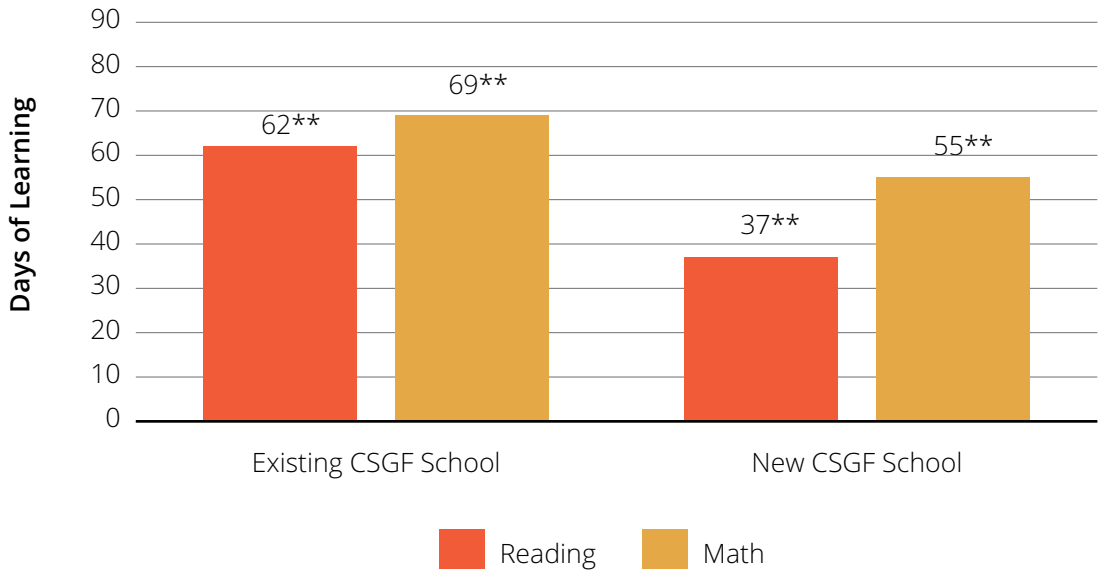
A corollary question is whether the CMOs affiliated with CSGF maintain their high performance levels after selection. The final columns of Figure 2.31 display their post-selection student learning, which covers up to three additional years of operation, depending on when the CSGF selected the CMO in our study window. Three new schools started by the newly funded CMOs are included. After receiving CSGF support, student learning remained significantly stronger than TPS, with 57 additional days of learning in reading and 80 extra days in math. The differences between pre- and post-CSGF support are not statistically significant, showing that the CMOs remain strong but do not quickly improve student learning.

Figure 2.31. Student Academic Growth in CMO Schools, Before and After Charter School Growth Fund Support, Reading and Math



Since the major purpose of CMO growth accelerators is to launch new schools, the most important question is how effective the new schools are. During our years of study, 43 CSGF-affiliated CMOs opened 96 new schools. We compare the newly opened schools' performance to the existing schools in all the CMOs that CSGF has supported. Figure 2.32 shows the comparison. Students enrolled in the new schools in the CSGF sphere produced large gains in reading (37 additional days of learning) and math (55 extra days) compared to their TPS peers. These new starts were dramatically stronger than the performance of the complete set of new schools (13 additional days in reading and one more day in math) reported in the NCSS3. These results, however, were significantly lower than the gains students in the continuing CMO schools had, which were 62 additional days of learning in reading and 69 additional days in math compared to their TPS peers.

Figure 2.32. Student Academic Growth in New CMO Schools, Before and After Charter School Growth Fund Support, Reading and Math



2.4.9.5. Special Analysis: CMOs and Turnaround Schools

Turnaround schools are schools that intentionally change leadership and governance in an effort to improve their effectiveness. Since 2007, billions of dollars from the federal government were funneled through Race to the Top and School Improvement Grant (SIG) programs to divert the learning trajectory of chronically low-performing schools (Corbett, 2015; Legislation, Regulations, and Guidance—School Improvement Fund, 2010). The turnaround typically takes the form of restarting the schools with a new management system (Zimmer et al., 2017). We examine the impact on student learning from a handoff of school operations in a low-performing school (either charter school or TPS) to an existing multi-school charter operator.

Two questions frame this special analysis. Where turnaround schools became part of CMOs, what is the subsequent evidence on students' academic growth? Additionally, what effect, if any, did the CMO's choice to accept a turnaround school have on the other schools in the CMO portfolio?

We are grateful to Public Impact for sharing its extensive data repository on turnaround schools across the country. From its list, we identified 12 underperforming schools with tested students who migrated to CMOs between the 2015–16 and 2017–18 school years.[14] Many others occurred prior to our data window, so their transition is not visible with our available data. With the small set of schools with timely turnarounds, we measure student performance before and after the school is moved to management by a CMO.

14 Two of the 12 schools became the third school operated by their new organization, meeting the minimum criteria for CMO inclusion in this study of three schools.

Figures 2.33 and 2.34 compare turnaround schools' pre- and post turn-around student academic growth. Growth is measured at two points: the academic growth period before CMO takeover and the subsequent period. Before the transfer, students in turnaround schools had 21 fewer days of growth in reading and 35 fewer days in math than their TPS peers. The small number of cases helps to explain why these results were not statistically different from the experience of TPS students. After joining their respective CMOs, average student performance improved compared to their TPS peers: students enrolled after the turn-around were observed to have 21 more days of learning in reading and 38 more days in math. The fact that learning was on par with TPS—i.e., that the difference was not statistically significant—can be viewed as a positive. Even if the learning only rose to equal TPS progress, movement occurred in the right direction.

However, these comparisons at each point only tell part of the story. The change in growth for the turnaround schools over time was statistically significant: student learning increased by 42 days for reading and 73 days for math.[15] These changes appear for "all students" in Figures 2.33 and 2.34.

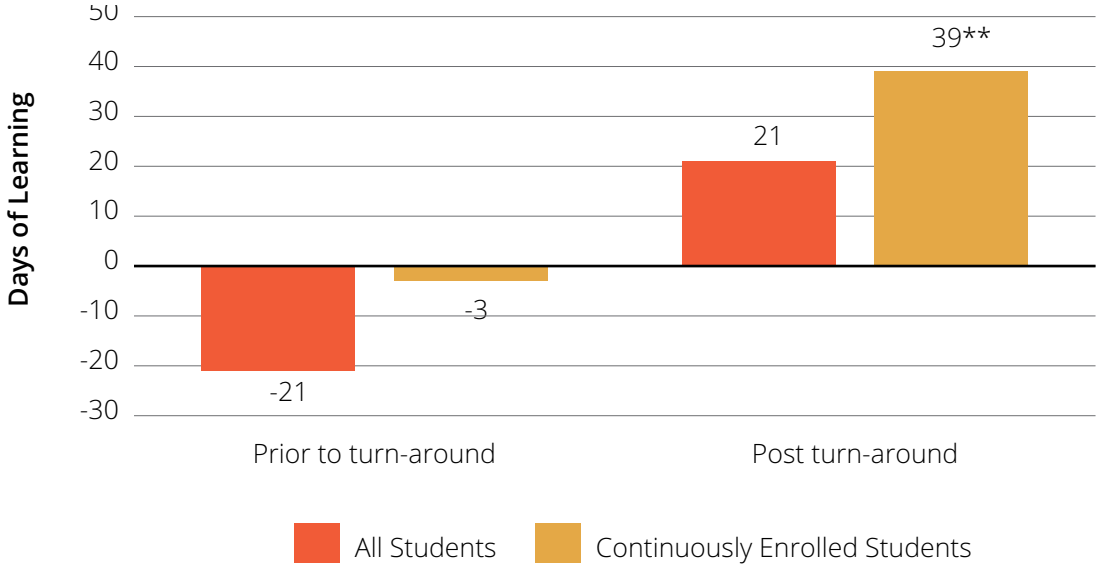
To thoroughly test the strength of improvement, however, we need to consider whether the observed positive academic growth stems from churn in student enrollment after the transfer. Some families may not have supported the newly reconstituted school and moved to other public schools. Some may have read the transfer as a signal of serious failure and left the system entirely. Alternatively, the CMO might have had a waitlist of students wanting to enroll who joined the school after the turn-around. Any of these factors could elevate the post-turnaround results.

As a robustness check, we redo the analysis, only including the students enrolled in the same turnaround school before and after the transfer. These are the students most in need of turnaround efforts. In Figures 2.33 and 2.34, we contrast the academic growth of the continuously enrolled students to the full set of enrolled students in the turnaround before and after the transfer. For students who remained enrolled (that is, continuously enrolled) before and after the transition, we can see 42 days of learning gains in reading between the two periods of transition and 113 days of learning gains in math. The growth we observe for "all students" in the pre-and post-turnaround periods occurs for different sets of students. In the "pre" period, the value includes students who left the school before the CMO took over; the "post" period value includes students who were newly enrolled in the school.

The question of the spillover impact of adding a turnaround school to a CMO's portfolio is more straightforward. Looking only at the CMO schools that existed before the transfer, Figure 2.35 shows that compared to their TPS peers, the academic growth for students prior to the addition of the turnaround school is positive and statistically significant at 39 additional days of learning in reading and 28 more days in math. After the turnaround school joined the CMO, academic growth in the pre-existing portfolio declined by 12 days of learning in reading but remains positive and statistically significant at 27 more days of learning compared to their TPS peers. In math, student academic learning increases by three days to 31 days of learning. Between the two periods, neither the change in reading gains nor the change in math gains is statistically significant. These results indicate that adopting turnaround schools is not injurious to the performance of the rest of the CMO portfolio.

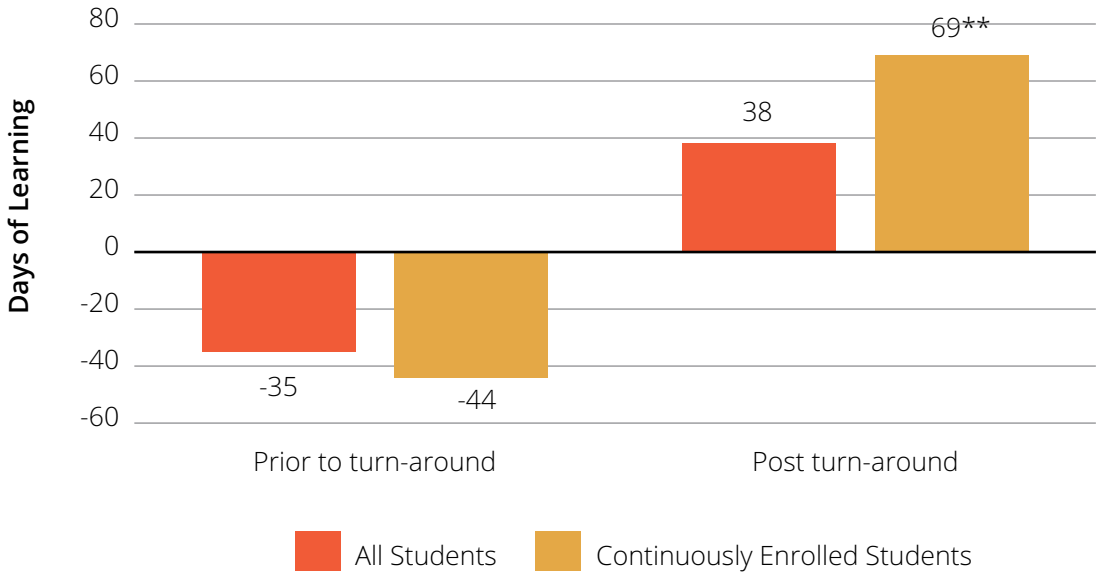
15 The pre-, post-turn difference was statistically significant at the 5 percent level in reading and the 10 percent level in math.

Figure 2.33. Academic Growth in Turnaround Schools: All Students vs. Continuously Enrolled Students, Reading



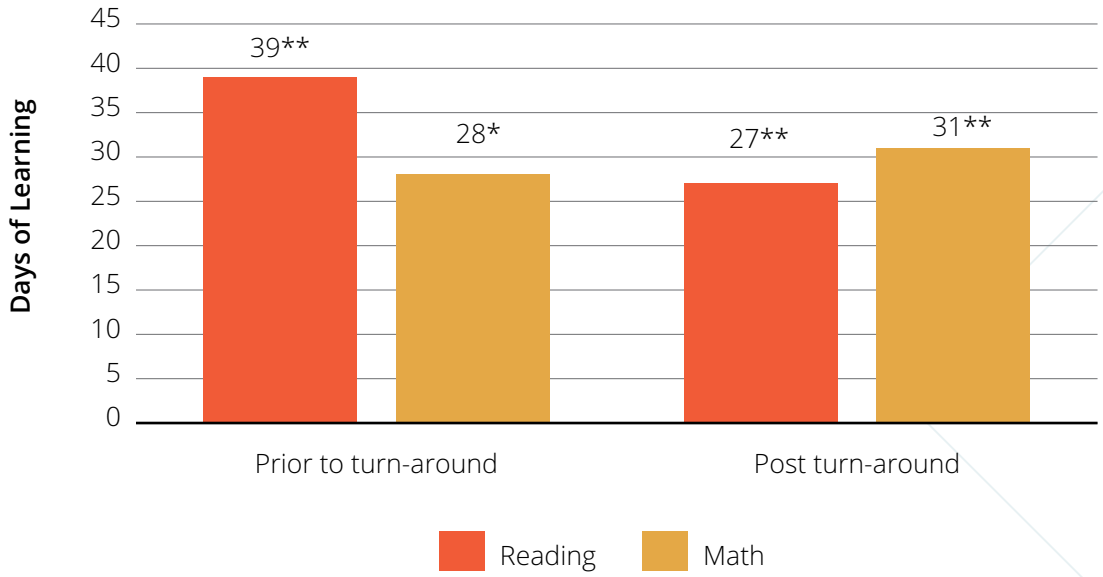
* Significant at the 0.05 level, ** Significant at the 0.01 level

Figure 2.34. Academic Growth in Turnaround Schools: All Students vs. Continuously Enrolled Students, Math



* Significant at the 0.05 level, ** Significant at the 0.01 level

Figure 2.35. Impact of Acquiring Turnaround Schools on Other Schools in CMO Networks



* Significant at the 0.05 level, ** Significant at the 0.01 level

2.4.9.6. Comparison of Average Academic Growth of Charter Schools and Their Local TPS

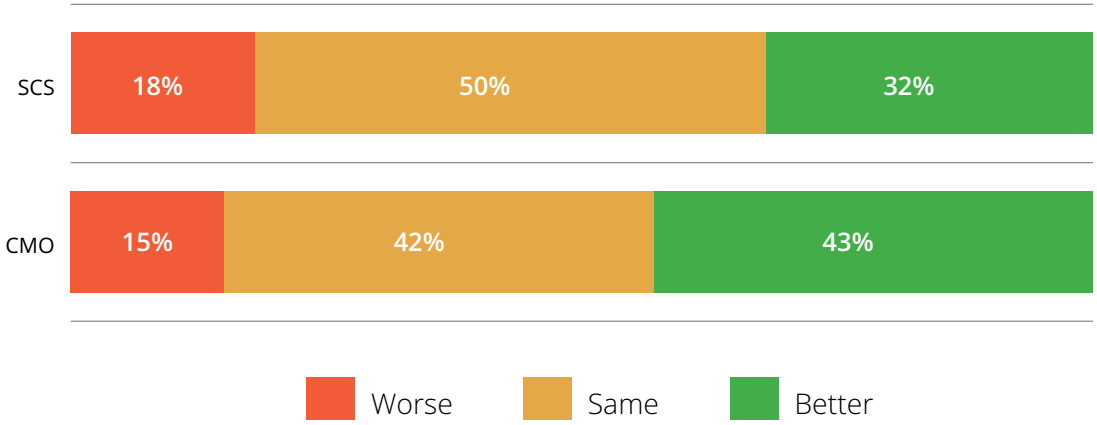
In this section, we examine school-level performance to assess the effectiveness of schools by charter group. The evidence presented in the prior sections showing a positive impact on student academic performance displays the average growth, which is the correct way to gauge the impact of each type of school.

However, this does not mean that all CMO-affiliated or stand-alone charter schools perform better than their TPS counterparts. For each type of charter school, we identify the proportion of schools that perform better, the same and worse than their TPS comparison group. The approach mirrors prior studies and the companion CSP31. However, the reader should be aware that the values for CMO schools and SCS will not necessarily sum to the totals in the CSP31 report due to the exclusion of several states from this CMO analysis.

Figure 2.36 presents the comparisons for reading. The analysis shows that 42 percent of CMO-affiliated charter schools have statistically significantly greater reading gains than their TPS peers. In comparison, 15 percent have statistically significantly smaller academic growth than their TPS peers. Forty-three percent of the remaining schools advance their students in reading similarly to their TPS counterparts. When considering the relative performance of stand-alone charter schools, the results in Figure 2.36 show that 32 percent of these schools have statistically significantly greater gains in reading than their TPS alternatives. We find that 18 percent of stand-alone charter schools have reading gains that are statistically significantly smaller than their local TPS. The remaining 50 percent of stand-alone charter schools have no difference in

reading gains compared to local TPS. The graphs make clear that for reading, the CMO advantage compared to stand-alone charter schools applies top to bottom: larger shares of CMO schools are stronger performing than their local TPS and smaller shares are on par or posting smaller gains.

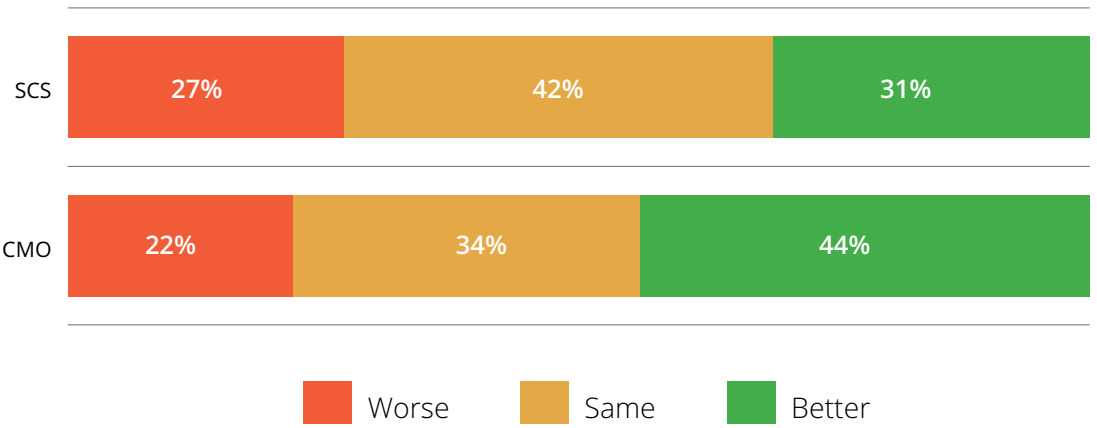
Figure 2.36. School Comparisons of Charter School vs. Local TPS Average Academic Growth by Charter School Type, Reading



In terms of math results, the difference between CMO schools and independent charter schools is much more notable. As Figure 2.37 displays, 44 percent of CMO schools have statistically significantly larger academic gains in math, 22 percent have statistically significantly smaller learning gains and 34 percent are not markedly different from the TPS alternatives.

The results for stand-alone charter schools in math run parallel to their reading results. Figure 2.37 shows that 31 percent of stand-alone charter schools have statistically better gains than TPS. The proportion with statistically significantly smaller math gains than TPS is 27 percent in math. Of the rest of the stand-alone charter schools, 42 percent demonstrate equivalent academic gains as their local TPS.

Figure 2.37. School Comparisons of Charter School vs. Local TPS Average Academic Growth by Charter School Type, Math



One final note about these results: For CMO schools and stand-alone alike, the share of schools with stronger learning impacts is larger, and the share of schools with less academic progress is smaller than seen before in any of CREDO's studies. In both spheres of charter schools, the record of performance is improved.

These results are encouraging but require a note of caution in interpretation. Since the reference point in these comparisons is the growth that equivalent students in the local TPS realize, this comparison does not reveal where in the range of absolute achievement the difference occurs. Positive differences at the lowest levels of achievement may not be sufficient to move students ahead fast enough to result ultimately in constructive long-term outcomes such as academic proficiency or post-secondary readiness. Similarly, a charter school may post growth results that are considered outsized for any school but still lag their community schools in achievement. Simultaneous consideration of student academic growth and achievement is the only way to get the full picture of charter school performance.

2.4.9.7. The Relationship of Academic Growth and Achievement

Student academic growth measures how much students advance their learning in a year, and student achievement measures the stock of their knowledge at the end of the year. In this section, we integrate the findings about growth and achievement to show comprehensively the results that charter schools deliver for their students.

We need both dimensions of student performance to situate charter schools both in their local community contexts and within the larger K-12 mission of preparing students with knowledge and skills for future success. Importantly, considering growth and achievement simultaneously also gives us a basis for making predictive statements about how charter schools are likely to support their students in the future.

To ground this presentation, it is useful to consider four basic categories of school performance. This construct applies to all schools: CMO-affiliate charter schools, stand-alone charter schools, district schools and others.

We can classify any school based on whether and by how much its average academic progress in a year compares to the other TPS options. Schools that do not advance student learning as much as the comparison are considered "low growth." Those that exceed the local standard are deemed "high growth." These differences can be mapped on a continuum from "very low growth" to "very high growth." We use the growth of the local TPS alternative as the standard in this demonstration.

Looking at absolute achievement—the measure of what students know at the end of a school year—we use the achievement scores that students get on state performance tests as a measure of achievement and place schools along that distribution based on school-wide averages. Schools that mirror the state average are designated "50th percentile."[16] Schools with an average performance at lower (or higher) points of the achievement range are situated below (above) the average; we use the 25th percentile and the 75th percentile as additional reference points.[17]

16 The 50th percentile is the point value in a range of scores—in this case, achievement for each state—that splits all the scores so that 50 percent are above and 50 percent are below the point.

17 The measures of achievement show student learning after enrollment in a charter school.

If we map the growth and achievement dimensions together, four groups result:

High Growth—High Achievement: schools with larger growth than their local alternative and whose students are above the state average in overall achievement

High Growth—Low Achievement: schools that exceed the growth of their local options but with overall student achievement below the state average

Low Growth—High Achievement: schools whose students exceed the state average on achievement but do not advance as much yearly as their comparisons

Low Growth—Low Achievement: schools with lower academic growth than their local alternatives and whose students' achievement is lower than the state average at the end of a school year

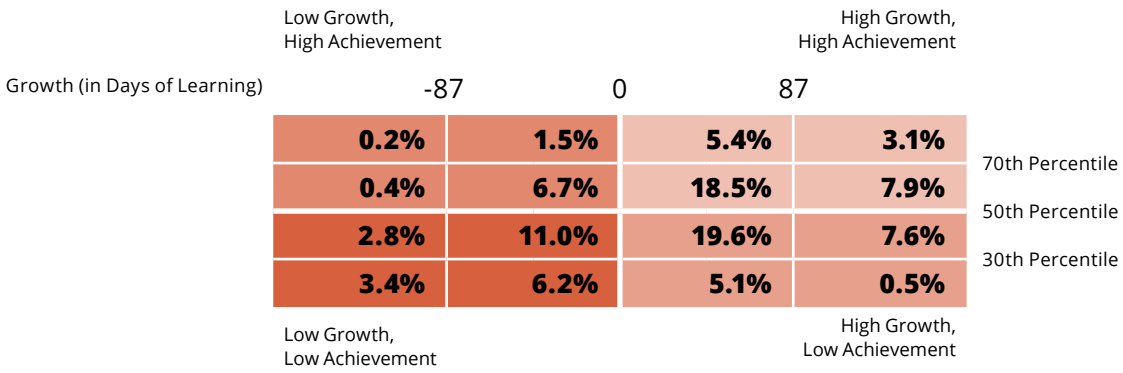
We mapped the charter schools in this study onto the structure described above using the last two years of school. (For reliability, we included only schools with 30 tested students.) We subdivided each quadrant into four smaller groups, yielding 16 cells within the map. The results appear in Figures 2.38 and 2.39 for reading and Figures 2.40 and 2.41 for math.

NOTE TO READERS:

The thumbnail table below presents the total proportion of students in each major quadrant in Figure 2.38. These values appear on the study website as a layer of the chart—the user can see the quadrant totals and then drill down to see the inner-quadrant values.

8.8	34.9
23.4	32.8

Figure 2.38. Academic Growth and Achievement in CMO-affiliated Charter Schools, Reading

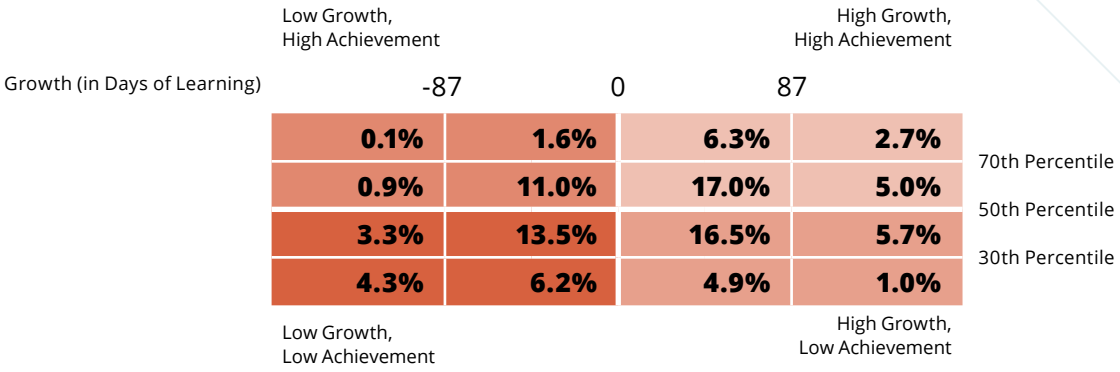


NOTE TO READERS:

The thumbnail table below presents the total proportion of students in each major quadrant in Figure 2.39. These values appear on the study website as a layer of the chart—the user can see the quadrant totals and then drill down to see the inner-quadrant values.

13.6	31.0
27.3	28.1

Figure 2.39. Academic Growth and Achievement in Stand-alone Charter Schools, Reading



The stronger growth of CMO-affiliated schools finds a parallel in achievement patterns. As illustrated in Figure 2.38, 68 percent of CMO-affiliated charter schools have average reading growth above their comparison groups (sum of two right columns) and 32 percent below. For reading achievement, 44 percent of charter schools have average student achievement above their state's average (sum of top two rows) and 56 percent below. In Figure 2.39, the chart shows 59 percent of students enrolled in stand-alone charter schools show stronger growth than their TPS comparisons in reading, with 41 percent of schools having weaker growth. Fifty-five percent of students in SCS had average student achievement below their state's average, and 45 percent of charter schools had an above-average performance.

Schools in the High Growth—High Achievement quadrant of Figure 2.38 can expect to remain in that part of the map if their reading growth continues at the current pace. Thirty-five percent of CMO-affiliated charter schools and 31 percent of stand-alone charters appear in this quadrant. There is no meaningful difference between the two types of charters in creating outstanding academic results. At current levels of performance, these schools will likely increase their students' achievement levels over time. The gap-busting schools and networks reside in this quadrant. Of particular interest is the subset of High Growth—High Achievement schools that advance students of any academic background to high levels of achievement; their operations and practices could help inform improvements in lower-performing charter and traditional schools.

Schools in the Low Growth–High Achievement quadrant can expect to drift downward in the achievement ratings if they maintain their current pace of growth since other schools with higher growth rates will eventually surpass them. Nine percent of CMO charter schools and 14 percent of stand-alone charter schools sit in this quadrant. Since student achievement in these schools is above state averages, the impact of lower growth may not be as concerning as for students at lower levels of achievement. Since many of the schools in this quadrant are close to average in both growth and achievement, modest improvements in student learning each year could move those schools into the upper right quadrant.

The remaining charter schools are situated in the lower two quadrants with achievement below the state average. For CMO charters, this amounts to 56 percent; for stand-alone charters, 55 percent are below the state average. This is consistent with the earlier findings that charter schools enroll both a larger share of lower-decile students and a smaller share of high-decile achievers Their position and prospects are distinguished by their students' growth.

The High Growth—Low Achievement quadrant displays the results for 33 percent of all CMO charter schools and 28 percent of stand-alone charter schools. Though these schools serve students with current achievement weaker than the average in their states, they have demonstrated success with students of modest or challenged academic backgrounds. With higher-than-average yearly growth, their students will elevate their achievement over time. In theory, given enough time, the students in the lower right quadrant would move up to the upper right quadrant.

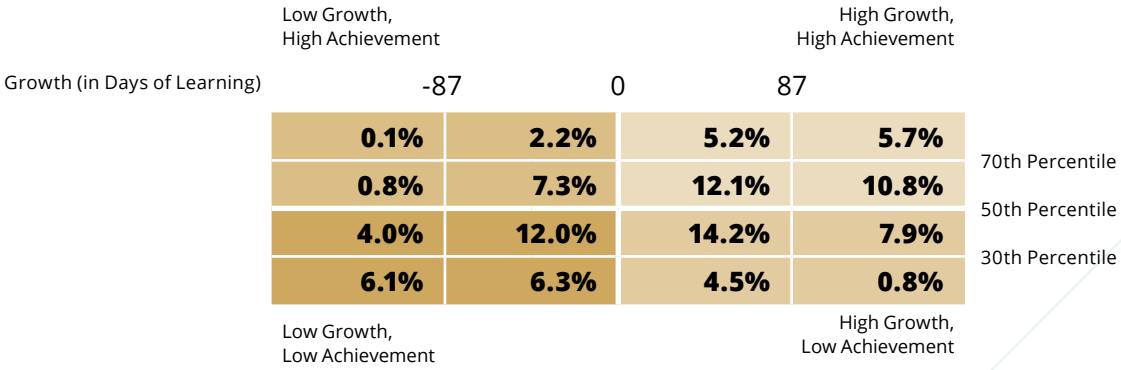
The share of schools in the **Low Growth—Low Achievement** quadrant is of greatest concern. These schools serve academically challenged students and produce weaker growth than their TPS comparisons. The proportions of schools in this quadrant are similar for the two types of charter schools. For CMO charter schools, the performance of 23 percent of schools maps to this quadrant. For stand-alone charter schools, the share is 27 percent. Given the substantial difference in average growth in reading between CMO-affiliated and stand-alone charter schools, it is surprising to see the proportions in this quadrant be so similar. Should the performance of these schools remain unchanged, their students will drift further behind over time, even if all the other schools on the map remain stable. Increases in growth are within reach for many of these schools, which would migrate them to the lower right area. Especially concerning at the moment are outcomes for the students attending schools in the cell with the lowest growth and achievement. This group represents charter schools in need of immediate attention.

NOTE TO READERS:

The thumbnail table below presents the total proportion of students in each major quadrant in Figure 2.40. These values appear on the study website as a layer of the chart—the user can see the quadrant totals and then drill down to see the inner-quadrant values.

10.4	33.8
28.4	27.4

Figure 2.40. Academic Growth and Achievement in CMO-affiliated Charter Schools, Math

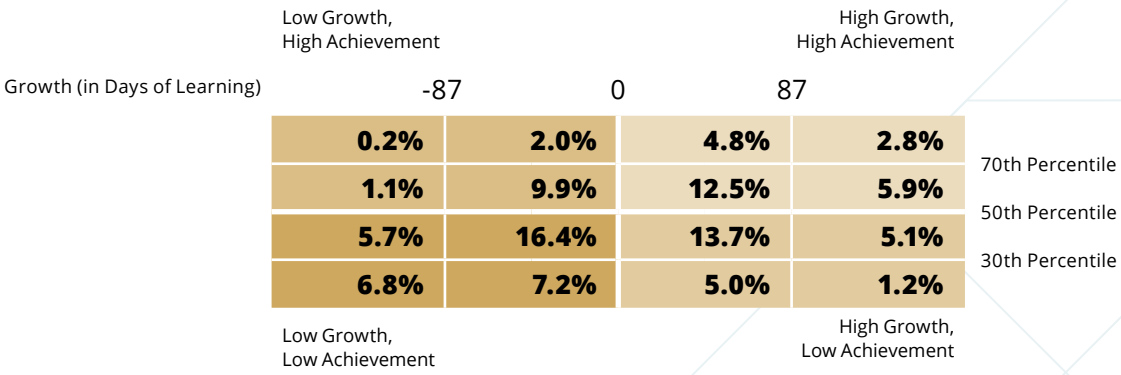


NOTE TO READERS:

The thumbnail table below presents the total proportion of students in each major quadrant in Figure 2.41. These values appear on the study website as a layer of the chart—the user can see the quadrant totals and then drill down to see the inner-quadrant values.

13.2	26.0
36.1	25.0

Figure 2.41. Academic Growth and Achievement in Stand-alone Charter Schools, Math



The inferences for math are the same as for reading, albeit with different percentages (Figures 2.40 and 2.41). In 61 percent of CMO schools, their growth outpaced their TPS comparisons, with 39 percent having weaker growth. Forty-four percent of CMO-affiliated charter schools had average student achievement larger than their state's average. Fifty-six percent of CMO charter schools had a below-average performance.

Regarding math performance in stand-alone charter schools, about 51 percent of schools show stronger growth than their TPS comparisons, with 49 percent having weaker growth. Thirty-nine percent of stand-alone charter schools had average student achievement above their state's average; 61 percent of stand-alone charter schools had average achievement below their state averages. The data indicates that, similar to the CMO charters, stand-alone charters tend to serve lower-performing students but grow them more than their TPS peers.

The High Growth—High Achievement quadrants contain 34 percent of CMO charter schools, a slightly smaller share than appeared for reading. Among stand-alone charters, the share was 26 percent. Maintaining the current pace of growth would result in these schools moving higher in the achievement range.

The High Growth—Low Achievement quadrant in the lower right reflects schools that deliver stronger growth to below average achieving students. This quadrant contains 26 percent of all CMO charter schools and 25 percent of all stand-alone charter schools. Both proportions are smaller than occurred in the same reading quadrant. Their students will move higher in the achievement range if these schools maintain or improve their growth.

Ten percent of CMO-affiliated charter schools land in the **Low Growth—High Achievement** quadrant in the upper left, schools with high average achievement but below average growth. Thirteen percent of stand-alone charter schools appear in the same quadrant. The majority of schools in this quadrant could either move down into the lower achievement quadrant if they remain static or move to the High Growth—High Achievement area with improved growth.

The left-hand-side lower quadrant, representing **Low Growth—Low Achievement**, contains 28 percent of CMO charter schools and 36 percent of stand-alone charter schools. The CMO-affiliated percentage is substantially smaller than for stand-alone charter schools. This is a noticeably larger share of CMO and stand-alone schools than in the analogous quadrant for reading. The greatest worry is the schools situated in the lowest performing cell. They offer the weakest growth to students with constantly low achievement levels.

2.4.9.8. Gap-Closing CMOs

In the companion report, CSP31, we highlight the dramatic performance of thousands of charter schools with outstanding progress for minority and poverty students. These "gap-busting schools" show that disparate student outcomes are not a foregone conclusion: people and resources can be organized to eliminate these disparities. The fact that thousands of schools have done so removes any doubt.

How do we know these results are not simply the fortunate alignment of events at these individual schools? Is there evidence that the practice can be systematic? We looked at CMOs' impacts on growth for minorities and students in poverty compared to their White student counterparts.

Table 2.4. CMOs with Above Average Achievement Portfolios and Equitable Learning, Reading

CMOs where:	Number	Percentage
Black outperforms White	65	**18%**
Hispanic outperforms White	95	**26%**
Lunch outperforms no-lunch	122	**33%**
ELL outperforms non-ELL	128	**35%**
Total	368	❑

Note: ❑ Percentages do not sum to 100% since a CMO could be included in multiple rows.

Table 2.5. CMOs with Above Average Achievement Portfolios and Equitable Learning, Math

CMOs where:	Number	Percentage
Black outperforms White	51	**14%**
Hispanic outperforms White	72	**20%**
Lunch outperforms no-lunch	97	**26%**
ELL outperforms non-ELL	115	**31%**
Total	368	❑

Note: ❑ Percentages do not sum to 100% since a CMO could be included in multiple rows.

Tables 2.4 and 2.5 present the numbers of CMOs with student achievement that exceeded the state average ("High Achievement") and in whose schools Black and Hispanic students had learning gains on par or better than the White students. The tables also present the number of CMOs with students in poverty making larger gains than their non-poverty peers or English-language learners who outpace their non-ELL classmates.[18]

The importance of these findings is obvious: when dozens of schools and networks can prevent differences in learning across student groups while also delivering learning above their state averages, they are forestalling and even reversing the achievement gap that has persisted for decades in our country. The discovery that this is prevalent in numerous CMOs suggests that these entities have found a way to implement and disseminate this transformative knowledge on a large scale.

18 CMOs that are included in the results of Tables 2.4 and 2.5 are flagged in Appendix A.

Appendix

Appendix A. Average Annual Academic Growth of CMOs and Networks, Reading and Math

	Reading			Math		
	Estimate	Significance	Gap Buster	Estimate	Significance	Gap Buster
A+ Charter Schools, Inc.	-0.063	**		-0.040		
Academics Plus	0.040			0.023		
Academy of Academic Excellence	-0.347	**		-0.485	**	
Academy of Mathematics and Science, Inc.	0.058	*		0.085	**	✓
Academy of Tucson	0.059	**	✓	-0.052		
ACCEL Schools	-0.006			-0.014		
Accelerated Intermediate Academy	0.129	**		0.205	**	
Accelerated School, The	0.062		✓	-0.011		
ACE public charter schools	0.001		✓	0.102	**	✓
Acero schools	-0.025			0.031		
Achievement First NY	0.114	**	✓	0.253	**	✓
Achievement First RI	0.189		✓	0.270		✓
Albert Einstein Academies	-0.101	**		-0.056		
Algiers Charter School Assoc.	-0.145	**		-0.054	*	
Alliance for College-Ready Public Schools	0.185	**	✓	0.167	**	✓
Alpha Public Schools	0.055	**	✓	0.108	**	✓
Alta Public Schools	-0.181	**		-0.178	**	
Altus Institute Network of Charter Schools	-0.044			-0.032		
America CAN!	-0.229	**		0.036		✓
American Indian Public Charter School	0.124	**	✓	0.189	**	✓
American Leadership Academy Inc.	-0.030			-0.001		
American Paradigm	0.013		✓	0.038		✓
American Preparatory schools	0.040	**	✓	0.060	**	✓
American Promise Schools (now known as Promise Schools)	0.041		✓	0.014		✓
American Quality Schools	0.011		✓	-0.049		

	Reading			Math		
	Estimate	Significance	Gap Buster	Estimate	Significance	Gap Buster
AmeriSchools (Ideabanc, Inc.) (The Charter Foundation, Inc.)	0.085	**	✓	0.112	**	✓
Amethod Public Schools	0.050		✓	0.103	**	✓
Archimedean Academy	0.157	**	✓	0.242	**	✓
Arizona Agribusiness & Equine Center	0.102	**	✓	0.084	**	
Arizona Community Development Corporation	-0.062	**		0.016		
Arlington Classics Academy	0.039	**		-0.032		
Arrow Academy, Inc.	0.071		✓	0.035		
Ascend Learning	0.077	**	✓	0.209	**	✓
Ascent Academies of Utah	-0.017			-0.026		
Aspira Inc. of Illinois	-0.078	**		-0.104	**	
Aspira Inc. of Pennsylvania	-0.074	*	✓	-0.027		✓
ASPIRA of Florida, Inc.	-0.028		✓	-0.039		✓
Aspire Public Schools	0.052	**	✓	0.073	**	✓
ASU Preparatory Academy	0.047		✓	0.135	**	✓
Athlos Charter Schools	0.031		✓	-0.053		
BakerRipley-TX	-0.006		✓	0.048		
Ball Charter Schools	0.073	*	✓	0.111		✓
BASIS Schools, Inc.	0.104	**		0.094	**	
Bay Haven Charter Academy Inc.	-0.011			0.063		✓
Beginning with Children Foundation	0.007		✓	-0.019		
Ben Gamla Charter School Foundation	0.073	**	✓	0.034		✓
Benjamin Franklin Charter Schools	0.016	*		0.022		
Betty Shabazz International Charter School	0.092	**			-	
Blackstone Valley Prep Mayoral Academy	0.171	**		0.269	**	✓
Blueprint Education	-0.160	**		-0.193	**	
Bob Hope School	0.118	**	✓	0.217	**	✓
Brazos School for Inquiry & Creativity (BSIC) - Democratic Schools Research Inc.	-0.145			-0.137	**	

	Reading			Math		
	Estimate	Significance	Gap Buster	Estimate	Significance	Gap Buster
Bright Star Schools	0.083		✓	0.085	**	✓
Brighter Choice Charter Schools	0.740	**			-	
Brooke Charter Schools	0.096		✓	0.126		
Burnham Wood Charter Schools	0.057	*		0.078	*	✓
CAFA, Inc.	-0.016		✓	-0.066		
California Montessori Project	-0.025	*		-0.019		
Calvin Nelms Charter Schools	-0.019			0.051		✓
Camden's Charter School Network	0.008		✓	-0.031		
Camino Nuevo	0.069	**	✓	0.078	**	✓
Capital City Public Charter School	0.002		✓	0.034		✓
Capstone Education Group	0.023		✓	0.055		✓
Career Success School District	-0.149			-0.106		
Carl C. Icahn Charter Schools	0.109	**		0.256	**	
Carmen Schools of Science & Technology	-0.055	*		0.056	**	
Carpe Diem (IN)	-0.123	**		-0.315	**	
Catalyst Schools	-0.002			0.015		
Celerity Educational Group	0.046		✓	0.095	**	✓
Celerity Schools Louisiana, Inc.	0.039	**		0.294	**	
Center City Public Charter Schools	0.027		✓	0.052		✓
Center for Academic Success	0.004		✓	0.046		✓
Cesar Chavez Academy	-0.181	**		-0.100	**	
Cesar Chavez PCS for Public Policy	0.005		✓	-0.049		
Champion Schools	0.120	**	✓	0.074	**	✓
Championship Academy of Distinction	-0.058	**	✓	-0.119		
Chandler Park Academy	-0.018			0.007		
Chicago International Charter Schools	-0.044			-0.010		
Choice Foundation	0.083			-0.036		
Christel House Academy	0.028		✓	0.049		
Citizens of the World	0.092	**	✓	0.116	**	✓

	Reading			Math		
	Estimate	Significance	Gap Buster	Estimate	Significance	Gap Buster
City Center for Collaborative Learning	0.002			-0.049		
City University-TN	-0.061			0.159	**	
Civitas Schools	-0.059	**		0.059	**	
Classical Academies (Colorado)	0.024			0.047		
Classical Charter Schools	0.136	**		0.291	**	✓
College Achieve Public Schools	-0.091			-0.084		
Collegiate Academies	-0.138	**		0.113	**	
Colorado Early College	0.045	*		0.099	**	
Community Day	0.230	**	✓	0.265	**	✓
Community School for Apprenticeship Learning	-0.068			-0.028		
Compass Charter Schools	-0.124	**		-0.291	**	
Concept Schools	0.047		✓	0.075	*	✓
Confluence Academies	-0.054			-0.047		
Coral Education Corporation	-0.013			0.034		
CORE Butte	-0.092			-0.078		
Cornerstone Charter Schools	0.081	*		0.097	*	✓
Crescent City Schools	0.071	**	✓	0.050		✓
Cumberland Academy Schools	-0.031	**		-0.032		✓
Da Vinci Charter Schools	0.062			0.165	**	✓
Daisy Education Corporation (DEC) (now Sonoran Schools)	0.076	**	✓	0.100	**	✓
DC Prep Charter Schools	0.073	**		0.228	**	
Delta Charter Schools	-0.133	**		-0.040		✓
Democracy Prep Public Schools	0.045		✓	0.147	**	✓
Denver School of Science and Technology Public Schools	0.083	*	✓	0.170	**	
Distinctive Schools	-0.008			-0.016		
Doral Academy	0.104	**	✓	0.122	**	✓
Downtown College Prep Charter Schools	-0.165	**		-0.189	**	
E.L. Haynes Public Charter Schools	-0.019			0.058		✓

	Reading			Math		
	Estimate	Significance	Gap Buster	Estimate	Significance	Gap Buster
e-Institute	-0.119	**	✓	0.008		
ECI Academy	-0.027			-0.072		
Edkey Schools	-0.058	**		-0.071	**	
Education for Change	0.099		✓	0.172	**	✓
Einstein Schools (New Orleans)	0.041	*	✓	-0.022		
Energized for Excellence	0.114	*	✓	0.357	**	✓
Environmental Charter Schools	0.084		✓	0.079		✓
Envision Schools	0.115	**	✓	0.034		✓
Equitas Academy	0.063		✓	0.156	**	✓
Espiritu Community Development Corp.	0.011			-0.076		
eStem Public Charter Schools	0.107	**	✓	0.059		✓
Evolution Academy	-0.430	**		-0.348	**	
Excel Academy (TX)	-0.335	**		-0.452	**	
Excellence Community Schools Inc.	0.020	**		0.178	**	✓
Explore Schools Inc.	0.037	*	✓	0.136	**	✓
Faith Family Academy Charters	-0.185			-0.172	**	
Fenton Charter Public Schools	0.062	*	✓	0.116	**	✓
FirstLine Schools (formerly Middle School Advocates, Inc.)	0.033	*		0.109	**	✓
Five Keys Public Schools	-0.055	**			-	
Family Life Academy Charter Schools (FLACS)	0.028			0.110	**	✓
Foundation for Behavioral Resources	0.012		✓	-0.007		
Founders Classical Academy	0.023	**		-0.046	*	
Franklin Academies	0.016		✓	0.028		✓
Freedom Preparatory Academy	0.065		✓	0.154	**	
Freire Schools	0.185	**	✓	0.282	**	✓
Friendship Schools	-0.001			0.134	**	
Frontier Schools	0.049		✓	0.104	**	✓
Gateway Community Charters	-0.020			-0.043		

	Reading			Math		
	Estimate	Significance	Gap Buster	Estimate	Significance	Gap Buster
GEO Foundation	0.023		✓	0.058	*	✓
Gestalt Community Schools	0.008			-0.016		
Global Education Collaborative	0.056	**		0.076		✓
Golden Rule Charter Schools	0.088	**		0.165	**	
Goodwill Education Initiatives (Goodwill Excel Center)	-0.132			-0.074		
Great Hearts Academies	0.029	**		0.043	**	
Great Oaks Foundation	0.062		✓	0.123	*	✓
Green Apple School Management, LLC	-0.009		✓	0.048		✓
Green Dot Public Schools CA	0.035		✓	0.021		✓
Green Dot Public Schools TN	-0.059			-0.011		✓
Green Dot Public Schools WA	-0.228	**		-0.138	*	
Guadalupe Centers	-0.028			-0.029		
Gulf Coast Council of Raza	0.044	**		-0.236	**	
Haas Hall Academy	0.209	**	✓	0.346	**	✓
Harmony Schools (Cosmos Foundation, Inc.)	0.061	**	✓	0.126	**	✓
Harvest Network of Schools	0.065	**	✓	0.019		✓
Harvest Power Community Development	-0.042	**	✓	-0.013		✓
Hebrew Public	0.077		✓	0.059	**	✓
Heritage Academy	0.106	**	✓	0.160		✓
Heritage Academy AZ	0.008			-0.167	**	
Hiawatha Academies	0.014		✓	0.052		✓
Hickman Community Charter District	0.037	*	✓	0.052		✓
High Tech High CA	-0.012			-0.022		
Hogan Preparatory Schools	-0.020			-0.037		
Honors Academy	-0.091	**			-	
Hope Online	-0.116	**	✓	-0.077		✓
Houston Gateway Academy	0.150	**	✓	0.364	**	✓
Humanities and Sciences Academy of the United States, Inc.	0.085	*	✓	0.047		

	Reading			Math		
	Estimate	Significance	Gap Buster	Estimate	Significance	Gap Buster
I CAN Schools	-0.160	**		-0.368	**	
IDEA Public Schools	0.145	**	✓	0.130	**	✓
iLEAD Charter Schools	-0.047		✓	-0.095	**	
iLearn Schools	-0.034	**	✓	-0.003		
Imagine Schools	-0.016		✓	0.001		
Influence 1 Foundation	-0.009			-0.097	**	
Ingenium Schools	-0.112	**		-0.054		
Inner City Education Foundation (ICEF)	-0.004		✓	-0.016		✓
Innovative Education Management	-0.079	*		-0.101	**	
Innovative Teaching Solutions	-0.057			-0.004		
Inspire charter schools	-0.146	**		-0.245	**	
InspireNOLA Charter Schools	-0.001			0.166	**	✓
IntelliSchool Charter High Schools	-0.177	*		0.183	**	
International Leadership of Texas (ILT)	0.005			-0.033		
iSchool High	-0.030			-0.318	**	
James Irwin Charter Schools (CO)	-0.016			0.055		
Jefferson Chamber Foundation Academy (JCFA)	-0.116	**			-	
John Adams Academies	0.002			-0.010		
John H. Wood Jr. Public Charter District	-0.116			-0.371	**	
Jubilee Academic Center, Inc.	-0.068	**		-0.156	**	
K12 curriculum only (Virtual)	-0.067			-0.119	*	
K12, Inc.	-0.138	**		-0.201	**	
Kaleidoscope Charter Schools	0.055		✓	0.105		
Kid's Community College	-0.067	*		-0.163	**	
King-Chavez	-0.022		✓	0.010		✓
Kingman Academy of Learning	-0.010			0.024	*	
Kingsburg Elementary Charter School District	0.043	**	✓	-0.011	**	✓
KIPP Austin	0.110	**	✓	0.044		✓
KIPP Bay Area	0.122	**	✓	0.137	**	✓

	Reading			Math		
	Estimate	Significance	Gap Buster	Estimate	Significance	Gap Buster
KIPP Chicago	0.132	**	✓	0.203	**	✓
KIPP Colorado	0.061		✓	0.084		✓
KIPP Dallas-Fort Worth	-0.005		✓	0.029		✓
KIPP DC	0.063	**	✓	0.144	**	
KIPP Delta	0.003			-0.038		
KIPP Eastern North Carolina	0.026	*	✓	0.005		✓
KIPP Houston	0.095	**	✓	0.050	*	
KIPP Memphis	-0.056	*		-0.036		
KIPP Nashville	0.143	**	✓	0.321	**	✓
KIPP National	0.06	*	✓	0.102	**	✓
KIPP New Jersey	0.118	**	✓	0.127	**	✓
KIPP New Orleans	0.074	**	✓	0.051	**	
KIPP New York City	0.124	**	✓	0.238	**	✓
KIPP Philadelphia	0.023		✓	0.064		
KIPP San Antonio	0.037	*	✓	-0.016		✓
KIPP SoCal	0.110	**	✓	0.151	**	✓
KIPP St. Louis	0.092	**		0.180	**	
La Amistad Love & Learning Academy (L Lowell Byrd Memorial Education and Community Dev. Corp.)	-0.040	**			-	
LEAD Public Schools	0.055	*	✓	0.092	*	✓
Leadership Public Schools	0.309	**	✓	0.313	**	✓
Leading Edge Academy	-0.014			0.014		✓
Learn Charter School	0.094	**	✓	0.122	**	✓
Legacy Preparatory	-0.104	*		-0.199	**	
Legacy Traditional Schools	0.095	**	✓	0.092	**	✓
Leman Academy of Excellence, Inc.	0.069	**		0.019		✓
Life Schools	0.013		✓	-0.051		✓
Life Skills Centers	-0.293	*		-0.147		
Lighthouse Academies	0.016		✓	0.036		✓

	Reading			Math		
	Estimate	Significance	Gap Buster	Estimate	Significance	Gap Buster
Lighthouse Academy (Michigan)	-0.308	**			-	
Lincoln-Marti management services, LLC	0.148	**	✓	0.259	*	✓
Lionsgate Academy	0.044	**		-0.076	**	
LISA Academies	0.094	**		0.131	**	
Magnolia Science Academy (Magnolia Foundation)	0.032	*	✓	0.042		✓
Manara Academy, Inc.	0.047		✓	-0.169	**	
Mastery Charter Schools	0.080	**	✓	0.088	**	✓
Mastery Learning Institute (Arthur Academy)	0.184	**	✓	0.095		✓
Match Charter Public School	0.093	**		0.214	**	
Matchbox Learning	-0.072		✓	-0.114	**	
Mater Academy of Nevada, Inc.	0.215	**		0.243	**	
Mater Academy, Inc.	0.055	**	✓	0.062		✓
Mavericks in Education, LLC	-0.122	**	✓	-0.244	**	
McKeel Academies	-0.004		✓	0.024		✓
Memphis Business Academy	-0.025			-0.038		
Memphis Scholars	-0.090	**		-0.129	*	
Milwaukee College Prep	0.189	**		0.184	**	
Minnesota Internship Center	-0.213				-	
Minnesota Transition Schools (MTS)	-0.038		✓	-0.009		✓
Muskegon Heights Public School Academy	-0.202	**		-0.218	**	
MYcroSchool	-0.185	**		-0.424	**	
National Heritage Academies	0.079	**	✓	0.120	**	✓
National University Academy	0.054	**		-0.013	**	✓
Natomas Pacific Pathways Prep	0.027		✓	0.015		✓
New America Schools	-0.269	**		-0.181	**	
New Beginnings Schools Foundation	-0.071			-0.022		
New Orleans College Prep Academies	-0.122	**		-0.086		
New Paradigm for Education	0.199	**	✓	0.187	**	

	Reading			Math		
	Estimate	Significance	Gap Buster	Estimate	Significance	Gap Buster
New Tech Network	-0.020			0.021		
New Technology Foundation	-0.017			0.036		
New Visions for Public School	0.226	**	✓	0.021		
Newman International Academy	-0.002			-0.067		
Noble Network of Charter Schools	0.148	**	✓	0.291	**	✓
North Texas Collegiate Academy	-0.039			-0.074		
NorthStar Academies	-0.527	**			-	
Nova Academy	0.087	**	✓	0.052	*	✓
Oasis Charter Schools	-0.017		✓	0.000		✓
Ombudsman Educational Services, Ltd., a subsidiary of Educational Services of America	-0.397	**		-0.360	**	
Open Sky Education	-0.018	*	✓	-0.006		✓
Opportunities for Learning	-0.108	**		-0.165	**	
Options for Youth	-0.119	**		-0.184	**	
Orenda Education-TX	0.014			-0.019		
Oxford Preparatory Academies	0.134	**	✓	0.212	**	✓
Pacific Charter Institute	-0.098	**		-0.100	**	
Panola Schools	-0.125	**		-0.337	**	
Para Los Ninos	-0.061		✓	-0.090		
Parnassus Preparatory	0.028			0.067	*	
Partnerships for Uplifting Communities (PUC)	0.041		✓	0.090	**	✓
Performance Academies (formerly EdVantages Academies)	-0.056		✓	-0.074		
Perspectives Charter Schools	0.031	*	✓	-0.021		
Phalen Leadership Academy - IN Inc.	0.006			-0.003		
Pinecrest Academy	0.072	**	✓	0.097	**	✓
Pineywoods Community Academy	0.027	**	✓	0.020		✓
Pinnacle Charter Academies (SC)	-0.206			-0.125		
Pinnacle Charter School (CO)	-0.076	**		0.001		✓
Pinnacle Education, Inc.	-0.343	**		-0.358	**	

	Reading			Math		
	Estimate	Significance	Gap Buster	Estimate	Significance	Gap Buster
Pivot Charter School (Roads Education Organization)	-0.215	**		-0.312	**	
Plato Academy Schools	-0.021		✓	-0.007		✓
Pointe Schools	-0.070	**		-0.148	**	
Pontiac Academy for Excellence	-0.065	*		-0.047		
Por Vida, Inc.	-0.172	**		-0.114		
Portable Practical Educational Preparation Training for Employment Centers (PPEP § Affiliates)	-0.297	**		-0.065		
Prairie Seeds Academy	-0.087		✓	-0.144	**	✓
Premier High Schools	-0.108	**		-0.238	**	
PrepNet LLC	-0.176	**		-0.102	**	
Priority Charter Schools	-0.058	**		-0.037	*	✓
Propel Schools	0.073	**	✓	0.049	*	
Public Preparatory Network, Inc.	0.100	**	✓	0.116	**	✓
Quest Middle Schools	0.006			-0.029		
Rapoport Academy Public School (East Waco Innovative School Development Inc.)	-0.046			-0.060		
Raul Yzaguirre School for Success	0.050		✓	0.129		✓
ReGeneration Schools	0.174	**		0.150	**	✓
Renaissance Charter School, Inc.	0.023		✓	0.009		✓
ReNew Schools	-0.036			-0.015		
RePublic Charter Schools	0.064		✓	0.096		✓
ResponsiveEd Classical Academies	0.058	**	✓	0.053		✓
Richard Milburn Academies	-0.403	**		-0.475	**	
River City Science Academy	0.011		✓	0.048	**	✓
Rocketship Education	0.166	**	✓	0.239	**	✓
Rocklin Academies	0.024	**		0.051	**	
Rocky Mountain Prep	0.075	*		0.331	**	✓
Roger Bacon	0.051	**	✓	0.048	**	✓

	Reading			Math		
	Estimate	Significance	Gap Buster	Estimate	Significance	Gap Buster
Rose Management Group	-0.134			0.126		
Scholar Academies	0.121	*	✓	0.027		
School of Excellence in Education (SEE)	-0.027		✓	-0.044		✓
School of Science and Technology	0.054	*	✓	0.104	*	✓
Seeds of Health Inc.	-0.040			0.039		
SER-Ninos, Inc.	0.023		✓	0.160	**	
Shekinah Learning Institute, Inc.	-0.037		✓	0.017		✓
Sherman Thomas Public Charter Schools	-0.090			0.096		
Skyline Schools, Inc.	-0.198	**		-0.120	**	
Somerset Academy	0.021		✓	0.033		✓
South Texas Education Technologies, Inc.	0.044	*	✓	0.029		✓
Southwest Schools (Educational Leadership Inc.)	-0.092	**		-0.049		
Southwest Winners Foundation, Inc.	-0.115	**		-0.147	**	✓
Springs Charter Schools (SCS)	-0.012		✓	-0.035	*	✓
St. Croix Preparatory Academy	0.135	**	✓	0.107	**	
St. Hope Public Schools	0.149	**	✓	0.193	**	✓
Strive Prep Charter Schools	-0.003		✓	0.031		
Student Alternatives Program Incorporated	-0.241	**		0.110		✓
Success Charter Network	0.185	**	✓	0.357	**	✓
Summit Academies Utah	-0.059	**		0.035		✓
Summit Academy of Schools	0.016			0.027		
Summit Public Schools	0.055			0.083	*	✓
Superior Schools Corporation	0.048	**	✓	0.054		✓
Synergy Academies	0.008			0.052		✓
TeamCFA	0.013		✓	0.000		✓
Tekoa Academy of Accelerated Studies	0.157			0.363	**	
Texas Boys Choir	0.062	**		-0.006		
Texas Education Centers (Salvaging Teens at Risk)	0.016		✓	-0.127		

	Reading			Math		
	Estimate	Significance	Gap Buster	Estimate	Significance	Gap Buster
Texas Leadership Public Schools	-0.091	**		-0.193	**	
The Charter Schools of Excellence	0.064		✓	0.066		✓
The Classical Academies	-0.024			0.035		✓
The Foundation for Hispanic Education	-0.063	*		0.086	**	✓
The Odyssey Preparatory Academy Inc.	0.035		✓	-0.022		
The Rhodes School	-0.024	*		-0.023		
UT Tyler University Academy	0.017			-0.093		
The W.E.B. Du Bois Consortium of Charter Schools, Inc.	-0.038			-0.136	**	
Tindley Accelerated Schools	0.126	**	✓	0.223	**	✓
Tracy Learning Center	-0.084			-0.059		
Tri-Valley Learning Corporation	-0.056			-0.149	*	
Trinity Charter Schools	-0.085		✓	-0.172		
Tucson International Academy	-0.035		✓	-0.043		
Two Dimensions Preparatory Charter	0.140	**		0.042	**	
UCP Charter Schools	-0.248	**		-0.166	**	
Uncommon Schools Boston	0.05		✓	0.083		✓
Uncommon Schools New York City	0.034	**		0.115	**	
Uncommon Schools Newark	0.169	**	✓	0.220	**	✓
Uncommon Schools Rochester	0.138	**	✓	0.188	*	
United Schools of Indianapolis	0.012			0.046		
Universal Education Management Company	0.037		✓	0.058		✓
University Academy Missouri	0.099	**		0.160	*	
University of Chicago Charter School Corporation	-0.059	**		0.095	**	
University of Texas - University Charter School	-0.186	*		-0.295	**	
University Preparatory Academy	-0.011			0.045		
UP Education Network	-0.048	**	✓	-0.028		✓
Uplift Education	0.049	**	✓	0.046		✓

	Reading			Math		
	Estimate	Significance	Gap Buster	Estimate	Significance	Gap Buster
Urban Prep Academies	0.032		✓	0.014		
Value Schools	0.181	**	✓	0.176	**	
Vanguard Academy, Inc.	0.112	**		0.091	**	✓
Vanguard CO	0.072			0.109	**	
The Varnett Public Schools	-0.006			0.049		✓
Vista Academies	-0.089	**		-0.140	**	
Voices College-Bound Language Academies	0.076	**		0.135	**	
Wayside Schools	-0.080	**		-0.129	*	
Widening Advancements for Youth	-0.531	**				
Winfree Academy Charter School	-0.341	**		-0.653		
YES Prep Public Schools	0.089	**		0.175		✓
Youth Connections Charter Schools	-0.197	**		-0.279		
Zoe Learning Academy, Inc.	-0.043			-0.039		

* Significant at the 0.05 level, ** Significant at the 0.01 level; The & symbols in GB column indicates the "gap-busting" CMOs described in section 2.4.9.8.

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As a Matter of Fact:

The National Charter School Study III 2023

As a Matter of Fact:
The National Charter
School Study III 2023

Volume 3
Summary of Findings, Conclusions and Implications

Authors
Margaret E. Raymond, Ph.D.
James L. Woodworth, Ph.D., Lead Analyst- 31 State Study
Won Fy Lee, Ph.D., Lead Analyst- CMO Study
Sally Bachofer, Ed.M.

Contributors
Meghan E. Cotter Mazzola, M.S.
William D. Snow
Tzvetelina Sabkova, M.A.

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Center for Research on Education Outcomes
Stanford University
Stanford, CA
https://credo.stanford.edu

CREDO, the Center for Research on Education Outcomes at Stanford University, aims to improve empirical evidence about education reform and student performance at the primary and secondary levels. CREDO at Stanford University supports education organizations and policy makers in using reliable research and program evaluation to assess the performance of education initiatives. CREDO's valuable insight helps educators and policy makers strengthen their focus on the results of innovative programs, curricula, policies and accountability practices.

Acknowledgments

CREDO gratefully acknowledges the support of the state education agencies that contributed their data to this partnership. Our data access partnerships form the foundation of CREDO's work, without which studies like this would be impossible. We strive daily to justify the confidence placed in us.

The research presented here uses confidential data from state departments of education. The views expressed herein do not necessarily represent the positions or policies of the organizations noted above. No official endorsement of any product, commodity, service or enterprise mentioned in this publication is intended or should be inferred. In addition:

- The research presented here utilizes SLDS Data from the Idaho State Board of Education (SBOE) and the Idaho State Department of Education. Any research errors are the sole responsibility of the author(s).
- This research result used data structured and maintained by the MERI-Michigan Education Data Center (MEDC). MEDC data is modified for analysis purposes using rules governed by MEDC and is not identical to data collected and maintained by the Michigan Department of Education (MDE) and/or Michigan's Center for Educational Performance and Information (CEPI). Results, information and opinions solely represent the analysis, information and opinions of the author(s) and are not endorsed by, or reflect the views or positions of, grantors, MDE and CEPI or any employee thereof.
- Data for this report was provided by the Missouri Department of Elementary and Secondary Education.
- 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, or the State of Texas.

The analysis and conclusions contained herein are exclusively those of the authors and are not endorsed by any of CREDO's supporting organizations, their governing boards, or the state governments, state education departments or school districts that participated in this study. All errors are attributable to the authors.

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3.1 Summary of Findings

As a Matter of Fact: The National Charter School Study III 2023 (NCSSIII) is the third national study by CREDO evaluating the academic progress of students enrolled in charter schools in the United States. The current report presents findings from 2014 to 2019, which yields four periods of year-to-year student growth as measured by state achievement tests. It includes data from 29 states plus Washington, D.C., and New York City, which for convenience we report as 31 states. In addition, because we have used a common methodology across the three studies, we can combine results into trends to support insights of the performance of students enrolled in charter schools over the past 15 years.

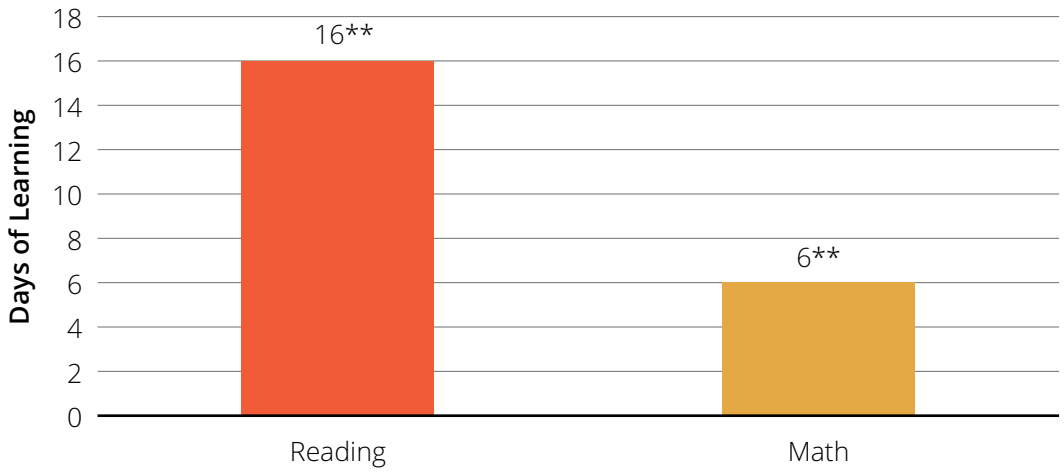
To organize the extensive body of this current research effort, CREDO separated the analysis into two parts and produced two reports: (1) *Charter School Performance in 31 States (CSP31)* and *(2) Charter Management Organization 2023 (CMO23)*. CSP31 examines the performance of the full set of charter school students and schools, while CMO23 analyzes the difference in academic growth between students attending charter schools associated with charter management organizations (CMOs) and those attending stand-alone charter schools (SCS).[1] In this volume, we integrate the Summary of Findings, Conclusions and Implications sections from both reports to ensure we present the fullest picture of performance in charter schools.

Our work deliberately focuses on a specific outcome: the annual progress that students make over an academic year. In this report, we look at students in charter schools compared to the experience they would have had in the traditional public schools (TPS) they would otherwise have attended. One notable limitation of this approach is that we have limited line of sight "under the hood" and into the role that localized environmental, regulatory and organizational factors play in individual school performance. Our contribution to the K–12 education research and practice landscape is to test fundamental questions of the effectiveness of charter schools and highlight outcomes and trends rooted in academic progress.

Looking at year-to-year academic progress from 2015 to 2019, **the typical charter school student in our national sample had reading and math gains that outpaced their peers in the traditional public schools (TPS) they otherwise would have attended.** We report these differences as marginal days of additional (or fewer) days of learning on a learning benchmark of 180 days of learning each school year for matched TPS students. In math, charter school students, on average, advanced their learning by an additional six days in a year's time, and in reading added 16 days of learning.

1 The CMO study does not include Idaho, Maryland, and Ohio.

Figure 3.1: RECAP – Annual Academic Growth of Charter School Students, Reading and Math



* Significant at the 0.05 level, ** Significant at the 0.01 level
This figure originally appears as Figure 1.7 in CSP31.

These average effects are across all students, all schools, for all time periods. There is considerable variation around these averages and this variation forms the foundation for additional analyses and findings in our two papers.

This growth represents accelerated learning gains for tens of thousands of students across the country. Each student and each school is a proof point that shows that it is possible to change the trajectory of learning for students at scale, and it is possible to dramatically accelerate growth additional students who have traditionally been underserved by traditional school systems.

3.1.1 Do All Students Benefit?

When we probe these results to determine if all students benefit, we find positive results are not only present in the aggregate, but also across student race/ethnicity groups:

- **Black and Hispanic students** in charter schools advance more than their TPS peers by large margins in both math and reading.
- **Multiracial, Native American, and White students** in charter schools show equivalent progress to their TPS peers in reading, but had weaker growth than their TPS peers in math.
- **Asian students** in charter schools showed similar growth to their TPS peers.

When we examined academic growth for special populations of students, we found that, compared with their TPS peers:

- Charter school **students in poverty** had stronger growth
- **English-language learner students** attending charter schools had stronger growth
- **Students receiving special education services** had significantly weaker growth in both math and reading on average, though CMO-affiliated students with Special Education needs have learning on par with their TPS Special Education peers.

In the past, a common claim asserted that positive academic results in charter schools arise from advantages that their students bring to their schooling. In some cases the claim focus on students having more motivated parents. Another version suggests targeting behavior on the part of the school results in a student body that is better prepared academically, a practice commonly referred to as "cherry picking" or "cream skimming". If true, the students in charter schools would show higher academic achievement at the point of enrollment. In multiple analyses, we do not see significant evidence of an undue advantage to charter schools. In fact, we find the opposite is true: charter schools enroll students who are disproportionately lower achieving than the students in their former TPS.

3.1.2 Where Is Positive Academic Growth Happening?

Deeper into our analysis, we examine where student learning gains are occurring, and find that positive and strong effects exist in charter schools that vary widely by location and configuration.

- **States** – 18 states in the NCSS3 study produced significantly stronger growth for students enrolled in their charter schools when compared with their TPS peers; in 12 states, growth was similar to TPS peers. Students attending charter schools had weaker reading growth than their TPS peers in only one state, Oregon. In 12 states, charter school students had significantly stronger growth in math than their peers in TPS. In 16 states, math growth was similar between charter students and their TPS peers. Only three states showed weaker growth for charter students compared to their peers.
- **Locale** – compared to their TPS peers, urban charter school students had 29 additional days of growth per year in reading and 28 additional days of growth in math, both of which were significant. Suburban charter school students also had stronger growth in reading (+14 days) and in math (+3 days). Rural students enrolled in charter schools had the equivalent of five additional days of learning in reading, but 10 days less growth in math than their TPS peers. These results are strongly hampered by the performance of virtual charter schools; despite having only six percent of charter school students enrolled, their impact on student progress of 58 fewer days of learning in reading and 124 fewer days in math has damaging consequences for students and exerts a outsized drag on overall national results.
- **Grade configuration** – charter schools serving elementary, middle, and high school students had statistically positive growth in both reading and math. Results for multilevel charter schools were negative in math and similar to the TPS comparison groups in reading. Seeing growth in all grade spans helps us understand that trends in the national aggregate performance are not concentrated in particular grades.

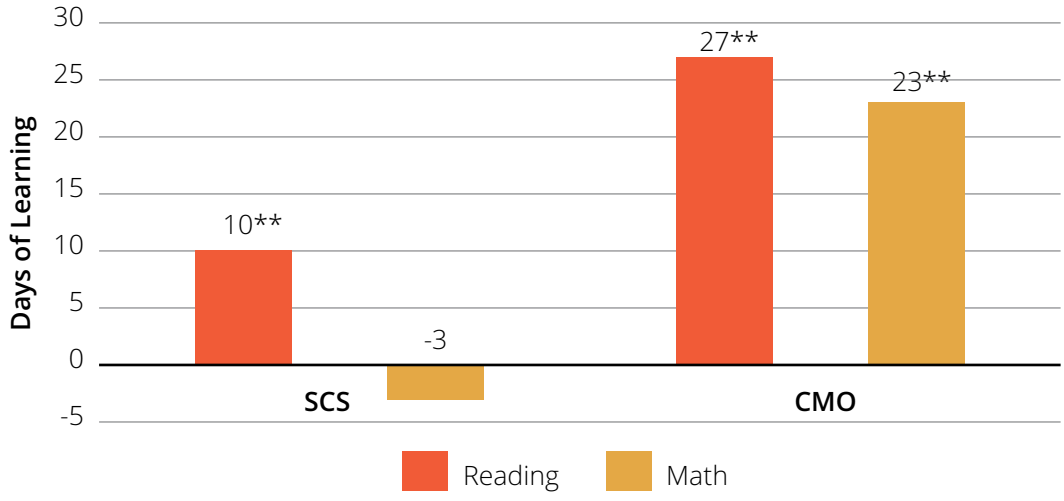
- **Continuous Enrollment** – charter students overcome an initial learning dip associated with a school change, and by their fourth year in their charter school, they show 45 days stronger growth in reading than their TPS peers and 39 additional days of learning per year in math. The longer a student stays enrolled in a charter school, the better the student's academic outcomes are.
- **School Management** – students who attend a charter school that is part of a charter management organization (CMO) experience significantly accelerated growth compared to students enrolled in stand-alone charter schools (SCS). Even so, CMO schools and SCS provide stronger learning than TPS in reading, and CMOs do so in math. CMO-affiliated students advanced by 27 additional days in reading and 23 more days in math over TPS, both of which are statistically significant. Stand-alone charter schools still grew significantly more than TPS in reading by 10 additional days of learning, but were no different in math. Given that SCS serve two-thirds of all students enrolled in charter schools, soft math performance in these schools taints the otherwise decisive results in other parts of the study.

3.1.3 What Can We Learn from CMOs?

Comprising one-quarter of the schools, but serving 37 percent of students in our national data set, Charter Management Organizations (CMOs) are producing much of the learning gains we observed for charter school students.

As with our national top-line results, we find robust results for CMOs when we grouped their students by race/ethnicity, special populations, where the CMOs are located, grade spans of the schools in the network and how long a student enrolls in the school. As with all schools, there is a range of performance for CMOs, and we share their student impacts in Appendix A.

Figure 3.2: RECAP – Annual Academic Growth of Charter School Students by Charter School Type, Reading and Math



** Significant at $p \leq 0.01$
This figure originally appears as Figure 2.3 in CMO23.

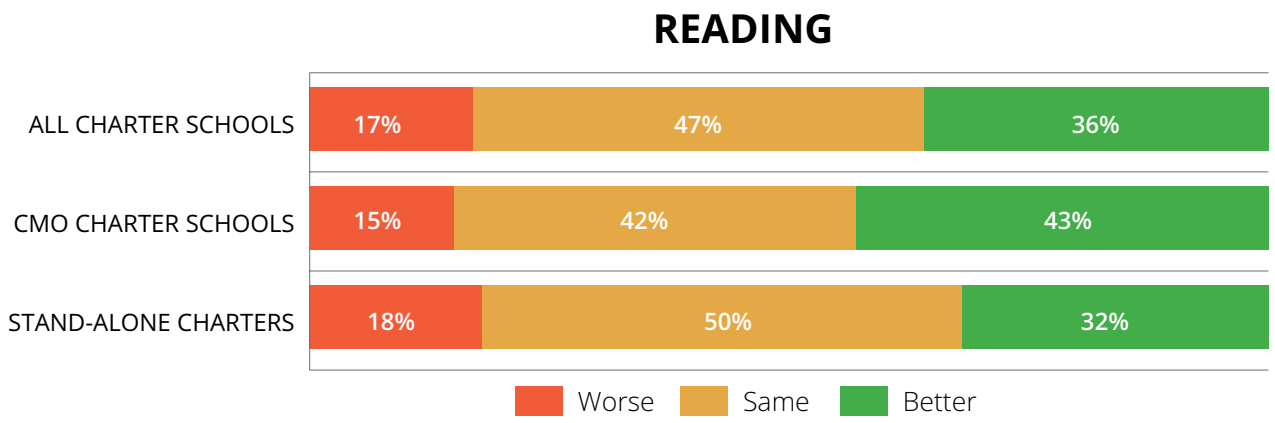
Our analysis uncovered additional ways that CMOs are returning more positive, and often gap-busting, results:

- **New CMOs and new schools in existing CMOs** open with strong results, in both cases delivering stronger average gains for their students than their local TPS. The student gains in new CMOs are not as strong initially as that of their older CMO peers. New schools started by mature CMOs deliver positive gains in their early years that were none the less smaller than the older CMO schools.
- **Size or age of a CMO does not relate to their quality**—which means some CMOs are growing poorly performing networks of schools.
- **Clustering of CMOs' schools within a single state** returns significantly more days of learning for their students than in CMOs that operate schools in more than one state.
- **CMOs that took on "turn-around" schools**, absorbing those schools into their portfolios, positively impacted results for students who remained enrolled in the turn-around school. In addition, the balance of the CMO portfolio did not experience a downturn in student learning.
- **The Charter School Growth Fund** serves as a case study of charter school growth accelerators. CMOs that the Growth Fund chooses to support have dramatically larger pre-funding learning gains than other CMOs. The schools that existed at the time of selection remain strong. New CMO schools also open with dramatically larger learning gains in both subjects judged against their TPS comparisons.
- **Excellence at Scale** puts dozens of CMOs at the forefront of efforts to provide education that is both equitable and effective in moving student achievement to give their students full preparation for their next steps.

3.1.4 Variations in Charter School Performance

In our reports, we analyze school-level performance, in addition to student-level performance, continuing to report on growth as the outcome variable. Not every charter school provides quality academic programming or an effective learning environment for students. Across all charter schools in our study, 36 percent have greater growth, 47 percent have equivalent growth and 17 percent have lower growth relative to their local TPS. CMO-affiliated charter schools display stronger performance, with 43 percent having greater growth, 42 percent having equivalent growth, and 15 percent having lower growth in comparison to their local TPS. Stand-alone charter schools have slightly more moderate results.

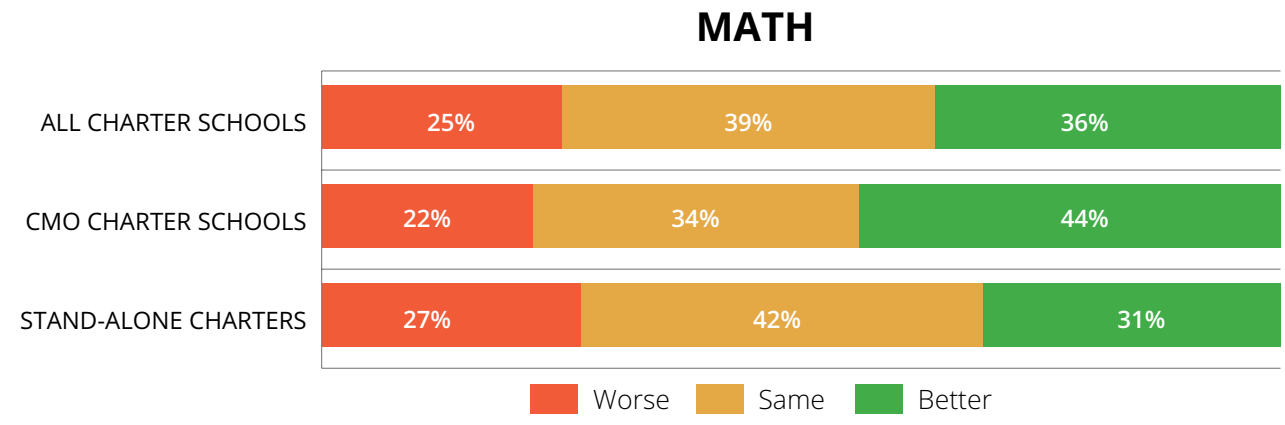
Figure 3.3: RECAP – Academic Growth of Charter Schools Compared to Their Local TPS, Reading



This figure combines findings that originally appear as Figures 1.22 in CSP31 and Figure 2.36 in CMO23.

In math, more charter schools have weaker results than they do in reading, as presented in the figure below. As the share of charter schools with growth greater than their TPS peers is comparable with the same growth in reading across all categories, the driver of the overall weaker performance in math is the greater percentage of charter schools (all, CMO-affiliated and stand-alone charter schools) that perform worse than their TPS peers. Stand-alone charter schools have the largest share of schools with lower growth in math in comparison to their local TPS.

Figure 3.4: RECAP – Academic Growth of Charter Schools Compared to Their Local TPS, Math



This figure combines findings that originally appear as Figures 1.22 in CSP31 and Figure 2.37 in CMO23.

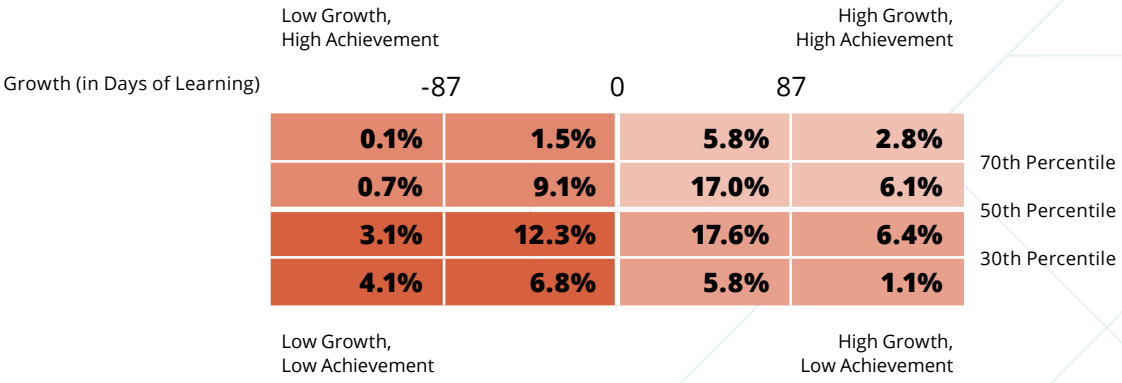
These encouraging results require a note of caution. Since the reference point in these comparisons is the growth that equivalent students in the local TPS realize, this comparison does not reveal if the difference is modest or large, nor does it indicate where in the range of absolute achievement the difference occurs. Positive differences at the lowest levels of achievement may not be sufficient to move students ahead fast enough to reach long-term outcomes such as academic proficiency or post-secondary readiness. Similarly, a charter school may post growth results that are considered outsized for any school but still lag behind the community schools in achievement. Simultaneous consideration of student academic growth and achievement is the only way to get the complete picture of charter school performance.

3.1.5 Charter School Growth and Achievement

Student academic growth measures how much students advance their learning in a year's time, and student achievement measures the stock of their knowledge at the end of the year. We believe it is critical to examine both growth and achievement in order to understand how well schools prepare students for next steps in school and life. We map each school's average growth and average achievement against the growth of matched TPS students and average state performance. Examining both measurements for all schools in our national data set during the most recent growth period, we present findings in four basic categories of school performance:

- **High Growth—High Achievement:** schools that exceed the growth of their local options and whose students are above the state average in overall achievement
- **High Growth—Low Achievement:** schools that exceed the growth of their local options but with overall student achievement below the state average
- **Low Growth—High Achievement:** schools whose students exceed the state average on achievement but do not advance as much yearly as their comparisons
- **Low Growth—Low Achievement:** schools with lower academic growth than their local alternatives and whose students' achievement is lower than the state average at the end of a school year.

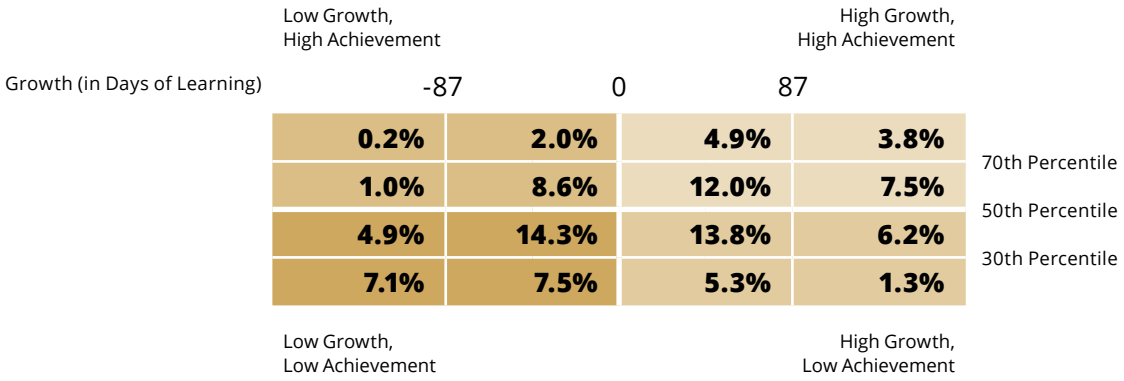
Figure 3.5: RECAP – Academic Growth and Achievement 2015 to 2018, Reading



This figure originally appears as Figure 1.25 in CSP31.

Schools that have average student achievement above the state average (above the 50th percentile) are presented in the top half of the figure. In reading, 43 percent of all schools have average performance in the upper half in their respective states, with a majority of those high achievement schools also having stronger growth than their local TPS. Zeroing in on the low-growth/low-achievement quadrant, 207 schools (4.1 percent) in our study have lower academic growth than their local alternatives and have student achievement that is below the 30th percentile of state achievement at the end of the school year.

Figure 3.6: RECAP – Academic Growth and Achievement 2015 to 2018, Math



This figure originally appears as Figure 1.26 in CSP31.

In math, above average achievement exists in 40 percent of charter schools, while 60 percent of schools have achievement that is lower than their state averages. Twenty-eight percent of schools in the data set are high-growth/high-achievement schools, returning great gains for their students. Zeroing in again on the low-growth/low-achievement quadrant, 348 schools (7.1 percent) have lower academic growth than their local alternatives and have student achievement that is below the 30th percentile of state achievement at the end of the school year.

The number of schools in the low-growth/low-achievement quadrant, though smaller in reading than in math, remains a key concern.

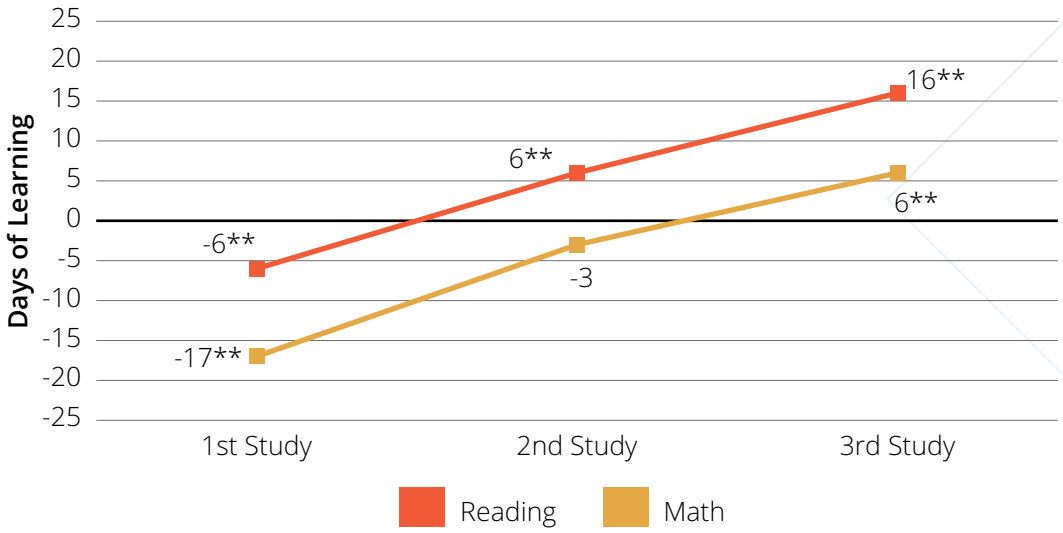
3.1.6 Exceptional Performance in Charter Schools

Perhaps the most revealing finding of our study is that more than 1,000 schools have eliminated learning disparities for their students and moved their achievement ahead of their respective state's average performance. We refer to these schools as "gap-busting" charter schools. They provide strong empirical proof that high-quality, high-equality education is possible anywhere. More critically, we found that dozens of CMOs have created these results across their portfolios, demonstrating the ability to scale equitable education that can change lives.

3.1.7 Evidence of Improvement over Time

Findings from this study take on even more weight when considered in the historical context of the 15 years of CREDO studies on student academic progress in charter schools. Between the 2009 and 2023 studies, against a backdrop of flat performance for the nation as a whole, the trend of learning gains for students enrolled in charter schools is both large and positive.

Figure 3.7: RECAP – Annual Academic Growth of Charter School Students across Three National Studies



** Significant at $p \leq 0.01$
This figure originally appears as Figure 1.8 in CSP31.

3.2 Conclusions

The outcomes of these studies are largely positive and support several conclusions about the current landscape of charter schools across America. Perhaps more importantly, the opportunity to position these findings in the larger body of research leads to a number of implications about the fundamental policies and practices of charter schooling at a more global level.

1. In both reading and math, charter schools provide students with stronger learning compared with the learning in the traditional public schools that are otherwise available to them.

Across the broad range of charter schools, the evidence suggests that they are a robust education option under many conditions. Whether stand-alone or networked, charter schools operate by law mainly on their own, making decisions they expect will serve their students well. According to our latest findings, the autonomy given to them usually yields positive results. The majority of charter schools provide better year-to-year outcomes for students compared to their traditional public-school options. Most of these schools perform better to such a degree that the difference is statistically significant.

The results stand up to deeper investigation. Charter schools produce superior student gains despite enrolling a more challenging student population than their adjacent TPS. They move Black and Hispanic students and students in poverty ahead in their learning faster than if they enrolled in their local TPS. They are more successful than the local public school alternatives across most grade spans and community settings. These results show that charter schools use their flexibility to be responsive to the local needs of their communities.

These findings generalize into lessons for policy leaders, educators, and funders. Knowing that the average student in the average charter school can outperform their TPS peers raises important questions about the priority placed on student outcomes in education decisions in many communities.

2. Some charter schools provide less student learning than their local district schools, although a larger proportion delivers better learning outcomes. The latter group includes over 1,000 charter schools managing staffing and resources to deliver superior academic results that eliminate the learning gap across student groups.

Vital lessons also come from the distribution of school performance around the average. Over the past 30 years, small, large, urban, rural, networked or stand-alone charter schools, autonomous and independent of each other, have arrived at their own solutions for giving their students stronger learning experiences. The discretion that charter schools enjoy does not guarantee that each school or every charter network realizes strong student outcomes. Our study illuminated the range of learning across schools.

Despite declining shares, there remain a concerning number of charter schools with weaker student outcomes. While lower-performing schools make up a larger share of stand-alone charter schools, CMOs and networks also have a substantial share that produces low gains for their students. This study has profound implications for charter schools and charter networks that do not support student learning. Charter boards and authorizers are the accountability side of the charter school equation. They evaluate school performance and, if necessary, dictate remedies. As our analysis shows, disturbing numbers of charter schools and networks have low learning levels. There are brick-and-mortar, online, networked, and stand-alone charter schools with sub-par results.

The number of school closures we observed in the years of this study was small compared to the counts of schools with the lowest student growth and academic achievement. Since primary and secondary education is essential to the social contract, providing a foundation for future opportunities, the claim of "choice" cannot justify derailing students' preparation. Especially in the post-COVID era, the need for charter boards and authorizers to address under-performance in their schools has never been more critical.

Closure is not the sole remedy. As we learned from our special investigation, the "takeover" of underperforming schools by strong CMOs led to improved student learning for the students who remained enrolled before and after the transfer. The gains did not adversely affect student academic progress in the rest of the CMOs' schools. This policy tool may have broader utility than previously realized.

At the high end of the performance range, good news exists in the growing share of schools outpacing learning in their local TPS. In both subjects and for both CMO and stand-alone schools, larger shares are "better than" and a smaller share is "weaker than" compared to earlier work.

The real surprise of the study is the number of charter schools that have achieved educational equity for their students: we call them "gap-busting" schools. Ensuring equivalent yearly growth across student groups has two critical consequences. First, ensuring minority and poverty students learn on par with or better than their White peers interrupts or reduces the achievement gap. It happens regularly in a large swath of charter schools. More critically, there is strong evidence that these gap-busting schools can be scaled. Added to the traditional district schools that achieve similar results, this is the life-transforming education that so many students need. Second, these schools deliver hundreds of independent proof points that learning gaps between student groups are not structural or inevitable; better results are possible.

Charter schools function as a portfolio, and their varied impacts on student learning are expected. Charter school boards and authorizers are responsible for ensuring students perform well. Evidence shows that the charter school enterprise benefits students, and its positive outliers (e.g., gap busters) can pressure the rest of the system.

The near-term implication for charter school boards and authorizers is two-pronged. Addressing chronic and/or severe underperformance is necessary and imperative in the current education climate. Identifying high-impact exemplars for probationary charter schools to study and emulate is possible. Transfer of sub-par schools to higher-performing operators could be part of a larger incentive for growth and replication. At the same time, authorizers might consider longer charter terms for charter schools that consistently demonstrate outstanding student learning success.

Education leaders and policy makers need to understand that in efforts to improve, some failure is inevitable. Any subsequent failure to address the poor performance compounds the damage. It also blocks constructive learning for the future. Strong examples of authorizing exist and should be emulated.

Leadership and responsibility demand embracing practices and policies that lead to better results for students, not maintaining the status quo.

3. The larger scale of Charter Management Organizations does not guarantee high performance—but on balance, it helps.

When taken as a whole, schools managed by Charter Management Organizations and charter networks bring a greater learning benefit to students compared to stand-alone charter schools. Despite the differences, both groups of charter schools have had larger student success than traditional public schools with respect to reading. We note, however, that math gains in stand-alone charter schools were equivalent to TPS learning.

Our analysis highlights attributes of higher-performing CMOs and networks that could be useful in future discussions. Size or age of the CMO does not relate to student learning: at every increment of CMO age or portfolio size, we see high- and low-impact CMOs and networks. This further supports earlier CREDO research that showed that CMOs only replicate the quality they already have. The implications of replicating schools with weak results is clear. The big upside is the ability of dozens of CMOs to scale their gap-busting performance. Additionally, CMOs that concentrate their operations within a single state have stronger gains than multistate CMOs, though both groups do well by their students.

Programs of external funding and support to CMOs to grow their networks, represented here by the Charter School Growth Fund, focus on some of the stronger CMOs and networks in our study. After high-performing CMOs receive endorsement, the learning of students in those CMO schools rises in reading but holds steady in math.

The majority of new CMO schools are no better or worse than the parent organization has already produced, so decisions to approve applications by CMOs to open new schools must consider the contributions to student learning of schools in the existing portfolio.

CMO growth accelerators help augment board and authorizer reviews through their extensive selection process; the growth of their grant-receiving CMOs maintains the strong student learning that led to their selection. The expansion of these high-quality schools and networks benefits more students and communities.

4. Charter schools and networks improve over time, as do the systems that oversee them.

Insights about improvement in schools and networks stem from this study and CREDO's prior multistate studies.

In the years of this study, student growth in charter schools was the strongest observed in any of CREDO's multistate studies. Added to the results from the previous two studies, a strong trend of improvement becomes clear. We see substantial increases in student learning in CMOs in both tested subjects and in reading for stand-alone charter schools. Even the finding of no difference in math learning in stand-alone charter schools vis a vis TPS, a decline from the 2017 study results, still marks an improvement from the statistically significant negative results in the first CMO vs. stand-alone comparisons in 2013.

A better understanding of the improvement in the sector comes from two different findings. The first is that the largest share of improvement comes from existing charter schools. Compared to the National Assessment of Education Progress (NAEP) trend, evidence of schools getting better over time is welcome news.

Second, new schools opened with stronger results than at any time in the past. Growth in the number of CMOs since the last study plays a role. Many stand-alone charter schools also pushed their results upward. Strengthening authorizer standards and practices, a drive that took root in the 2010s, also sets a higher bar that resulted in better schools opening.

Finding ways to improve student academic outcomes is an ambition shared by policy and community leaders, educators, funders and parents. Charter school results show that change for the better is possible in the larger education system. The key to improvement lies outside any particular school or network model, though many are worthy of emulation. It is simply not possible to drive single solutions through the diverse landscape that is U.S. public education. Lessons from the charter school experience and results may be helpful in charting a future course in public education.

3.3 Implications

The **charter school policy framework** sets the conditions for charter schools' growing positive outcomes. It is the fundamental common denominator in every case, and its role is powerful.

The framework offers a divergent approach from the conventional strategy for public schools. The "flexibility for accountability" construct is not just a catchphrase. It is a distinctly different mode of operation. The "loose-tight" parameters of the framework create incentives to which schools and networks respond. The incentives find positive support in this study's findings and the broader trends. While our study design cannot make causal claims (because randomly assigning schools to the traditional or charter school approach has yet to happen), it can deliver a plausible argument of the value of the policy based on available evidence.

On the "loose" side of the approach, the framework establishes a **policy of possibility** where educators, leaders and boards of directors have the discretion to build and deliver curriculum and instruction that meets high standards for learning and is responsive to local needs.

According to this study, there are a lot of positive possibilities. The process has led to many successful schools nationwide, often with meaningful innovations. The diversity of schools illuminates an important feature of the framework: success is attainable via **many paths**. Over time, many have sought and gained permission to expand and then shown the ability to create strong student learning at scale.

Students in these schools, especially minority students and those in poverty, make larger advances than in local public schools. Beyond the benefits for their students, successful charter schools deliver **critical proof points** of ways to improve outcomes for students. In the current regulatory climate, it is difficult to imagine how similar efforts could become conventional among traditional public schools.

Beyond flexibility in school design, school teams have the leeway to tinker with their operations. The results show that existing charter schools have improved over time. The proportion of charter schools with superior results is on the rise. The share that lags behind the local TPS alternatives is also shrinking. This means schools and networks use their discretion and autonomy to foster a **standing capacity to adapt over time.**[2]

Accordingly, the framework also aims to be "tight" at key points as schools open and mature. Authorizers are expected to behave as **governors of quality**. They set the bar to receive initial permission to operate, which exerts quality and safety controls at the outset. Others have documented stronger standards among authorizers in the review and approval of new applications (Mumma & West, 2018). The findings of stronger new schools in this study compared to earlier results attest to the effort and to the CMO replications and new charter schools that meet the higher bar.

2 We saw that capacity in stark terms when we examined how charter schools in three states responded to the COVID-instigated school closure orders (CREDO, 2022). Rapid transformation into remote instructional mode; acquisition and distribution of food, technology, or internet access; and strengthening of personal supports were widespread. Return to in-person instruction in the fall of 2020 was nearly universal. These points rest admittedly on smaller bases of qualitative evidence, but they provide human dimensions to the point that the present quantitative analysis illuminates nationally. See also: Boast et al. (2020); Henderson et al. (2021); Childs et al. (2022).

Authorizing is a delicate job that requires resources, expertise and substantial political acumen and courage. There is growing attention to authorizers adopting rigorous standards and practices and using a variety of performance data to evaluate schools that apply for renewal (NACSA, 2016).

Poorly performing charter schools are often ignored. A number of these schools were observed during this study window. There is data to assess policy leaders and authorizers to hold them accountable for protecting children's futures. As tough as closing schools is, the disservice of not closing poorly performing schools has large and lingering ripple effects.

Our results show that the framework of charter schools helps current students and strengthens public education overall. We contend these incentives have broader applicability in public schools and see signs of their spread. Collaborations between charter schools and local district schools have grown over time. Some states, including Kentucky and Maine, have adopted policies to give educators freedom in adjusting instruction and boosting performance. However, uptake is slow.

In the year 2023, the importance of strong academic achievement among America's students has never been greater. The students hit hardest by school closures during the coronavirus pandemic are precisely those whom this research illuminates as being able to benefit the most from charter schools. In this study thousands of charter schools have proved that we can do better for our students. The current number of students benefiting from these schools is 3.7 million, but the number could drastically increase if more schools agreed to the same arrangement. Whether it be termed "charter school" or something else, the deduction from this data is that when both sides of the equation—flexibility and accountability—are working together for more schools, more students' academic results will improve.

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