

Charter School Growth and Replication

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Executive Summary



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Introduction

In meeting rooms across the United States, education leaders, policy makers and funders ask themselves the same question: "How can we expand the availability of high quality schools for America's children?" After decades of essentially flat performance, the challenges associated with designing, implementing and assessing education reform initiatives are apparent; most efforts to date have not been successful. Increasingly, the list of strategies includes identifying successful high-quality schools and encouraging their replication. In forty-three states, that approach focuses on charter schools -- public schools that are given a fixed-term contract with wider operating discretion than typical public schools and more definite performance review at the end of their term.

The notion of identifying successful schools and encouraging their expansion seems straightforward and logical. But in the charter school context, the desirable goal of better outcomes for students immediately encounters a set of three hurdles. There is a growing body of research, including prior work from CREDO, showing that the performance of charter schools varies widely, even after state policy differences are taken into account. The research shows that to date, high-performing charter schools are in the minority. Since these studies are typically a snap-shot of performance over a period of time, the question of how schools' quality changes over time is left unanswered. This is the first hurdle.

Putting aside the debate of how best to measure the performance of schools, there is an important question about when in a school's history to trust that the performance is sufficiently stable and reliable to serve as a fair gauge of the school's quality. The problem is acute in the charter sector, as charter school authorizers, charter school boards of directors and funders can attest. There is a commonly-held precept that "the first few years are rocky" but that schools eventually "grow out of it" into higher levels of performance. There arises a sort of indulgence for poor or volatile performance in a school's early years. Thus, the second hurdle is the choice of point where school performance is fair and dependable.

The third hurdle is the uncertainty of successful replication. While some of the elements of school start-up may be familiar, the skills and resources required to plan and launch a subsequent school while simultaneously keeping focus and

momentum in the flagship school are complex and challenging. Some operators have suggested that the level of complexity in managing multiple schools doesn't manifest until there are three schools, but the question of school performance -- both level of quality and consistency across the related schools -- applied regardless of the number of replications that are undertaken.

These three hurdles have real and immediate policy implications. A better understanding of each of them can support better planning by charter school operators and charter management organizations, more sensitive monitoring and review by charter school authorizers, and ultimately a healthier charter school sector. They form the basis for the study presented in this report.

Project Approach

In this study, we test the idea that new charters hit their mark early in their operations and do not vary much after that. The notion originated from time spent in young charter schools studying their experience as new organizations and as agents of education reform. Interviews with school staff along with our own observations of school activities and operations have formed the impression that the “rules” of a school get set early on in the life of the school. By rules, we mean the adult and student cultures, the formal and informal procedures for identifying and addressing problems, and the school community's commitment to student learning as the primary focus of the school. These are obviously richly nuanced facets of a school with myriad potential interactions among them, just as with any social organization. Yet, however they come about, we have observed that they are shaped quickly in new schools. Moreover, these norms and behaviors are sturdy and difficult (though not impossible) to change later on.

If our admittedly limited, qualitatively-based conjecture is true and more generally supported, we conjectured that it should be possible to observe the phenomenon quantitatively and test the hypothesis statistically. Using the broad range of data that CREDO has developed in partnership with 25 state education agencies, we follow student-level performance in schools from their opening through their fifth year. Their performance is used as the measure of school quality, and is computed for each charter school by year. Each charter school's performance is mapped against a static set of performance thresholds so that changes in performance over time can be discerned. The variation in performance confirms that historic methods of judging the impact of maturation on charter school quality are of limited value.

As schools mature, some of them elect to replicate; of those, many choose to build their own network of schools as charter management organizations (CMOs). We define for the purposes of this study a CMO to consist of three or more schools. With the cooperation and guidance of the National Alliance of Public Charter Schools

and the Center for Reinventing Public Education, we developed a directory of CMOs and their affiliated schools. While the available data does not extend into the past, far enough to observe the birth of all CMOs, a limited number of CMO "births" are evident in the data window at our disposal and it is possible to observe their flagship school's performance before and after replication.

The study then turns to an analysis of the performance of CMOs as an integral part of the charter sector. One hundred sixty-seven CMOs and 1372 of their schools are included in our evaluation of CMO performance. Using CREDO's Virtual Control Record (VCR) approach, we compare the performance of students in CMOs and independent charter schools to "virtual twins" that attend the same traditional public schools the charter school students would otherwise have attended. We probe a large number of questions about the performance of CMOs to try and determine the extent to which CMOs provide high-quality education outcomes for their students, both relative to independent charter school and to their counterpart traditional public schools. Related questions about their impacts on distinct student groups and their ability to influence the achievement gap are also investigated. In an effort to illustrate the wide range of performance across CMOs, we develop portfolio measures of academic impact and use these to test whether some *a priori* attributes of CMOs, things that might be available to authorizers or parents, associate with better academic success for their students.

For this study, we invent a new term -- super-networks -- to signify CMOs that have some of their member schools themselves develop into CMOs in their communities. Super-networks also have member schools who continue to operate as single schools, but we are interested in the overall results for super-networks because they are both a relatively new organizational form and are the organizations that are leading the sector in trying to take new models to scale.

We also analyze the impact on student learning in charter schools that have affiliated with Education Management Organizations (EMOs). A wide range of definitions exist for EMOs; we define an EMO as an organization that provides school operations to independent charter schools and CMOs under contract. They do not hold the charter and are engaged for a fixed term of service. Our examination of EMOs covers 38 different organizations with 410 schools included in the analysis. EMOs contract with charter school governing boards to handle the operations of the school under a contract. They may also provide contract operations to other traditional public schools, but in this study the focus is on the difference between EMOs and self-run schools, whether independent or CMO charter schools.

Findings

The analysis revealed thirteen major findings:

1. **It is possible to organize a school to be excellent on Day One.** New schools do not universally struggle in their early years; in fact, a surprising proportion in each gradespan produce strong academic progress from the start. Interestingly, the attributes of a school -- urban, high poverty or high minority -- have no relation to the performance of the school. Based on the evidence, there appears to be no structural "new school" phenomenon of wobbly performance for several years.

2. **The initial signals of performance are predictive of later performance.** We use the distribution of schools' value add for all schools in each of our included states, divided into quintiles, to map an individual charter school as being low performing (Quintile 1) or high performing (Quintile 5) or in-between. For middle and high schools, we can obtain an initial signal of performance at the end of the first year for a new school, since their enrolled students have prior test scores. The earliest we can measure an elementary school's quality is in the second year (since it takes two years to create a growth measure.)

Taking the first available performance measure and using it to predict one-year increments going forward, 80 percent of schools in the bottom quintiles of performance remain low performers through their fifth year. Additionally, 94 percent of schools that begin in the top quintile remain there over time.

If we wait until the third year to start the predictions (i.e. use two growth periods as the basis of setting the initial performance for the subsequent conditional probabilities), the patterns are even stronger: 89 percent of low performing schools remain low performing and 97 percent of all the high flyers persist at the top of the distribution.

Only the schools in the 2nd quintile show any substantial pattern of movement, with half of the schools moving to a higher quintile (mostly to the 3rd) and half remaining in the bottom two quintiles.

3. **Substantial improvement over time is largely absent from middle schools, multi-level schools and high schools. Only elementary schools show an upward pattern of growth if they start out in the lower two quintiles.** Elementary schools showed a greater tendency than other grade spans to be strong in one subject and weak in the other. In math, 80 percent of initially lowest-performing elementary schools showed enough improvement to move themselves out of the bottom of the distribution; from the 2nd quintile the share

was about 40 percent. In reading, the rise took longer to manifest, leaving about one-quarter of the schools in the lowest quintiles. About 40 percent of the 2nd quintile elementary schools improved into higher deciles. The elementary schools in the higher quintiles behaved similarly to other schools.

4. The process of morphing into CMOs can be successfully managed. For 21 new CMOs, we were able to observe as they moved from a single school to operating as a CMO. Most of the CMOs that are in operation today began before consistent accountability testing was adopted, but we are able to observe the "birth" of 21 CMOs during our study window. Due to small numbers, we are hesitant to place too much weight on the findings, but they present interesting patterns that merit discussion. Of these, 14 of the 21 have flagship schools with quality in the top two quintiles, with the notable counterpoint that 7 of the 21 flagships had performance that placed them in the bottom three quintiles. The math performance of the flagship school as the first replications occurred held steady or improved in the in 14 of 20 nascent CMOs for whom we have pre- and post-replication data. In reading, 11 of the 21 new CMOs held the flagship performance steady or posted improvements.

5. CMOs on average are pretty average. The growing focus and importance of CMOs in education reform discussions leads to questions about their contributions in the aggregate. To be included in our CMO impact analysis an operator needed to have at least three schools operating in our participating states during our study period. Across the 25 states in the study, a sample of 167 operating CMOs were identified for the years 2007 - 2011. **CMOs on average are not dramatically better than non-CMO schools in terms of their contributions to student learning. The difference in learning compared to the Traditional Public school alternatives for CMOs is -.005 standard deviations in Math and .005 in reading; both these values are statistically significant, but obviously not materially different from the comparison.**

6. CMOs post superior results with historically disadvantaged student subgroups. They produce stronger academic gains for students of color and student in poverty than those students would have realized either in traditional public schools (TPS) or in many categories what would have learned in independent charter schools.

7. The real story of CMOs is found in their range of quality. The measures of aggregate performance, however, mask considerable variation across CMOs in terms of their overall quality and impact. Across the 167 CMOs, 43 percent outpace the learning gains of their local TPS in reading; 37 percent of CMOs do so in math. These proportions are more positive than was seen for charter schools as a whole, where 17 percent posted better results. However, about a third (37%) of CMOs

have portfolio average learning gains that are significantly worse in reading, and half lag their TPS counterparts in math.

Interestingly, across the range of performance, the range of quality around the CMO's portfolio average is the same, regardless of the nominal value of the average. This finding holds regardless of the size or age of the portfolio.

8. CMO-affiliated new schools on average deliver larger learning gains than independent charter schools. However, both types of new charter schools still lag the learning gains in the average TPS. These effects were consistent for reading and math.

9. Two thirds of CMOs start new schools that are of the same or slightly better quality as the existing portfolio. This demonstrates the feasibility of replication, but also highlights that the resulting schools for the most part still mirror the overall distribution in CMO quality. The finding takes on more importance when considered in concert with the fact that the lowest third of CMOs replicate more rapidly than middling or high-performing CMOs. Of the 245 new schools that were started by CMOs over the course of this study, 121 (or 49 percent) were begun by Organizations whose average performance was in the bottom third of the range. Another 19 percent (47 schools) were started by CMOs in the middle third of the quality distribution. The final 77 new schools (31 percent) were opened by CMOs in the top third of the distribution. This finding highlights the need to be vigilant about which CMOs replicate; CMOs with high average learning gains remain high performers as they grow and CMOs with poor results remain inferior.

10. Few observable attributes of CMOs provide reliable signals of performance. We sought to identify attributes of CMOs that were associated with the overall quality of their portfolio. For the most part, most of the factors we examined had no value as external signals of CMO performance. Specifically, there is no evidence to suggest that maturity, size (by either number of schools or total enrollment) or the spatial proximity of the schools in the network have any significant relationship to the overall quality of the CMO portfolio. Operating in multiple states dampened a CMO's results on average. One bright signal was found in having a CMO be the recipient of a Charter School Growth Fund; those CMOs that were supported by the Charter School Growth Fund had significantly higher learning gains than other CMOs or independent charter schools.

11. CMOs that are driving to scale show that scale and quality are not mutually assured. Some CMO networks have grown to the point that some of their member schools have in turn replicated in their local communities; we refer to these federated entities as *super-networks*. Performance as measured by student

academic growth differs strikingly across the four super-networks we identified. Strong and positive learning gains were realized for students in the Uncommon Schools and KIPP super-networks. The other two, Responsive Education Solution (ResponsiveEd) and White Hat Management, had less favorable results.

12. Some CMOs get better over time. Besides replication, the alternate path to higher quality results is to improve all schools within the CMO portfolio. Tracking how the portfolio-wide average student learning gain in each CMO changes over time reveals the proportions of CMOs that have positive, negative or flat trajectories to their performance. Using statistical tests of differences, the trend analysis showed that about a third of CMOs has significant and positive growth in performance over time. In one quarter of CMOs, the average learning gain declines significantly over time. The rest of the CMOs remain stable. These findings illustrate that it is possible for CMOs to evolve their performance to higher levels. At the same time, the portfolio growth findings show that the largest share of CMOs do not change much from their initial levels of performance, which again returns to the underlying range in quality.

13. The average student in an Education Management Organizations (EMOs) posted significantly more positive learning gains than either CMOs, independent charter schools or the traditional public schools comparisons. Their results were also relatively more positive for black and Hispanic students and English Language Learners.

Implications

The implications from the study are presented separately for each volume.

Charter School Growth Implications

1. There is a great need for careful due diligence by authorizers during the approval process. The results also suggest that regular and uniform monitoring of charter school performance can lead to early identification of underperforming schools. While we worry that a shorter first term for charters would adversely affect the incentives to operators to open schools, the findings support the use of performance data at the end of the third year of operation to, if warranted, put schools on notice and to begin to document the case for action in the fourth or fifth year.

2. The lessons of this study also include the notion of authorizer triage. Most authorizers have limited resources, so deploying them where they have the highest impact is desirable. The temptation to focus on the lowest performing schools is not supported by this analysis, but attention to the schools in quintile two (or quintiles 1 and 2 for elementary schools) holds out more promising effects.

At the other end of the spectrum, these findings begin to make the case for additional leeway to be granted to high-performing schools, especially after two years of such performance. These schools, with nearly incredible reliability, are likely to remain high performing in future years. Their early track record of success is highly predictive of future performance.

3. Poor first year performance simply cannot be overlooked or excused. For the majority of schools, poor first year performance will give way to poor second year performance. Once this has happened, the future is predictable and extremely bleak. For the students enrolled in these schools, this is a tragedy that must not be dismissed.

4. Permission to replicate should be based on absolute performance of the flagship school, not its performance relative to the existing stock of public schools. The evidence shows that authorizers allow charters in all but the lowest quintile of performance to grow into CMOs. We are cautious about pushing the limited analysis of schools evolving into CMOs beyond its limits, which are admittedly weakened by the small number of cases we can observe, but there is suggestive evidence that some authorizers are approving expansion applications on fragile grounds.

CMO implications The findings about CMO development, replication and performance presented create a number of implications for funders, policy makers and authorizers going forward.

1. Addressing the information barrier that prevents regular assessment of CMO performance should be a priority for states. Many CMOs have different authorizers and schools in different states, so aggregating the data to see the overall performance of CMOs requires agreements across boundaries.

2. CMOs have shown dramatically better results with critical subpopulations; this wisdom should be captured and shared to provide even wider education opportunities for underserved students. CMOs with focused attention to underserved student groups have proven that strong outcomes in both growth and achievement are possible. Those like KIPP and Uncommon Schools have shown that it is possible to be effective at scale.

3. Who is permitted to replicate matters enormously. Since improvement over time is not assured, great care is needed when considering requests for

expansion. CMOs seeking to expand should be required to fully disclose the performance of all their schools in a consistent and comprehensible format.

4. Consistent replication of schools is possible, but not assured; one-third do not do it well. The findings show that when it comes to replication, “what you see is what you get”. A minor fraction of CMOs open schools that are better than their existing portfolio. Unless the CMO is high quality to begin with, there is only a small chance that better schools will be born.

5. Scale and quality are not synonyms. Today, less than 6 percent of schools are charter schools and CMOs comprise about one-fifth of the total. To get the leverage from CMOs into the larger education community, CMOs must proliferate in number and size. To get the high quality instruction for students via CMOs, it is important to focus support and attention on those CMOs that are proven providers. Such an approach places quality as a pre-requisite for quantity.

6. As for individual schools, what matters most for eventual CMO quality is to assure that the schools that are started have high performance early. The story that is revealed by the study of CMOs is analogous to that for individual charter schools: successive additions to a charter portfolio tend to hover around the existing average, regardless of the nominal level of performance. Early performance of the CMO is related to later performance, so attention in each and every school to a high quality launch is essential, not just for the students in each new school but for the history that is created for the remaining life of the CMO.