

# Portrait of the Movement:

How Charters are Transforming California Education

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# Executive Summary

As the membership and professional organization representing California's 912 charter schools, the California Charter Schools Association (CCSA) endeavors to advance the aim of the charter movement to increase academic achievement, particularly among the most underserved public school students in the state. To fulfill the mandate given by the Legislature when it passed the California Charter Schools Act in 1992, CCSA recognizes the critical need for a more effective performance system that succeeds at holding charter schools accountable for strong academic results, and incentivizes those schools that achieve high results with students traditionally underserved by the public system. Current accountability provisions for charter schools in California, as defined in law, result in an unacceptable number of chronically under-performing charter schools receiving renewals. From CCSA's extensive engagement with charter school leaders across the state, it is clear that our members share a strong commitment to fulfilling the promise contained within the Charter Schools Act.

This **Portrait of the Movement** report introduces a performance framework for charter public schools in California that renders a more nuanced analysis of charter school performance on a variety of academic performance indicators. This framework enables policymakers and CCSA's membership to press for greater accountability for low-performing charter schools and the expansion of schools that are achieving remarkable success with traditionally underserved students. This report is concurrently released with a searchable map that compares all public charter and traditional public schools, a sortable spreadsheet detailing the performance results of every charter in California for which data is available, as well as an interactive scatter-plot that shows the results of charters four years and older on the **CCSA Accountability Framework** described in this publication. This unprecedented level of transparency and access is necessary to contextualize charter successes and challenges, even as we explore new policy and advocacy responses to help support charters in their quest toward ever-higher academic success.

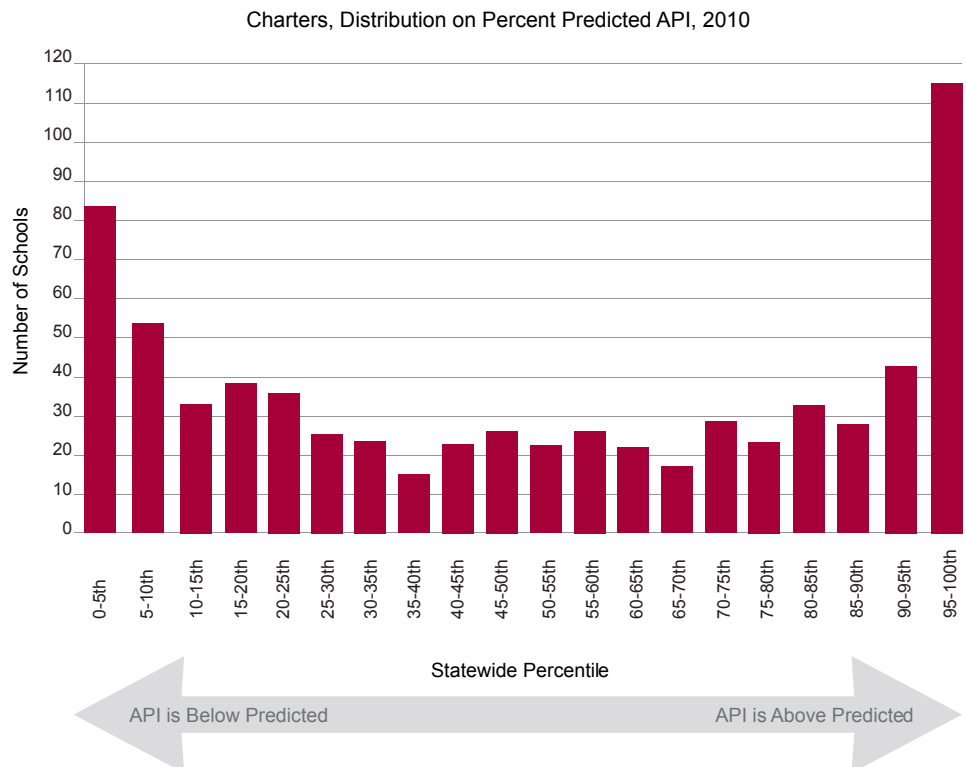
Today, we face a level of inequality within our public education system characterized by a pervasive achievement gap between affluent students and their low-income peers. Far too often, a school's academic performance mirrors the socio-economic status of its student body, with struggling schools disproportionately serving the most disadvantaged students. Of the many findings in this report, perhaps the most significant is that many charters are changing this reality, and achieving success at remarkably high rates, regardless of the socio-economic background of their students. We also recognize that we must address the sustained underperformance of some charters in order to pave the way for growing and replicating successful charter schools.

CCSA's  
Accountability  
Measure

A central purpose of CCSA's academic accountability initiative is to strengthen the academic performance standards to which charter schools are held. One of the challenges we face in this effort is that our state's accountability system does not track individual student progress – a feature that is widely recognized to be the gold standard in school accountability. Recognizing this challenge, CCSA has taken on the goal of making meaningful and substantial improvements to our current system, while maintaining the position that the state should continue to make progress towards adopting an individual student growth model as quickly as possible. CCSA has developed a tool, the **Similar Students Measure (SSM)**, which assesses school performance while filtering out many of the non-school effects on student achievement through the use of regression-based predictive modeling, an approach used by researchers across the field. The measure compares a school's Academic Performance Index (API)<sup>1</sup> to a predicted API that controls for the effects of student background on performance, resulting in a metric called Percent Predicted API. This approach enables researchers to identify schools that perform significantly over and under their prediction on an annual basis, as well as over a period of three years.

Assessing  
a Continuum  
of Performance

Using this tool, we see that charters are much more likely than non-charters to far over-perform their prediction, and to a somewhat lesser extent, are also more likely to under-perform their prediction, thus generating a "U-shaped" distribution of performance.



2009 - 2010	Total, excluding ASAM* + small	Bottom 5% of CA schools	Bottom 10% of CA schools	Top 10% of CA schools	Top 5% of CA schools
Number of Charters (%)	720	83 (11.5%)	138 (19.2%)	157 (21.8%)	115 (16.0%)
Number of Non-Charter (%)	7,454	325 (4.4%)	679 (9.1%)	661 (8.9%)	293 (3.9%)

Looking more closely at patterns of charter school performance using this tool, we arrive at a number of key findings:

- Charters are over four times as likely as non-charters to be among the top 5% of schools statewide in terms of performance relative to a prediction, yet also over twice as likely to be among the bottom 5% of schools statewide.
- There is some evidence that the concentration of over-performing charters is increasing, while the concentration of under-performing charters is decreasing over time.
- Many more students are served by over-performing charters.
- Charters that serve low-income students are over-performing at high rates relative to the traditional system; students at charters serving low-income populations are very likely to be served by an over-performing school.
- Classroom-based charters are over-performing in comparison with traditional public schools, as non-classroom-based charters are more concentrated among under-performing schools.
- Schools operated by Charter Management Organizations (CMOs) are over-performing in comparison with traditional public schools, in terms of their performance relative to a prediction.
- School maturity is not associated with over-or under-performance. Young schools have a similar distribution as mature schools in terms of their performance relative to a prediction.



\*The Alternative Schools Accountability Model (ASAM) provides school-level accountability for alternative schools serving highly mobile and at-risk students.

## CCSA Accountability Framework

In order to broaden our assessment of charter school performance and evaluate performance through multiple lenses, we devised a three-dimensional framework that overlays the **Similar Students Measure** on a grid of **Status** and **Growth** based on the Academic Performance Index (API). We see how charters – particularly those serving disadvantaged students – compare to traditional public schools on measures of academic status and three-year growth, and investigate patterns within the charter movement by school type. Notably, we find that:

- Charters are more likely than non-charters to have high academic status and high growth. Charters are also more concentrated than non-charters among schools with low academic status and low growth, but those charters serve proportionally fewer students than low-performing non-charters.
- Charters serving low-income populations are more likely to be high-performing and less likely to be low-performing than non-charters serving low-income populations.
- The impact of family income on charter schools' performance is four times less than the impact of family income on non-charters' performance.
- Various charter school characteristics are associated with higher and lower levels of academic status and growth. Classroom-based charters are more likely to be high-performing, and non-classroom-based charters are somewhat more likely to have low status and low growth.
- Charter schools that are funded directly from the state are more likely to have high growth than those that are funded indirectly through their district.
- Charters that converted from a traditional public school into a charter school are somewhat over-represented among schools with high academic status.
- Small schools are somewhat over-represented among schools with low academic status and low growth.

The Accountability Framework of Status, Growth, and the Similar Students Measure (SSM) has been a significant vehicle in informing CCSA's efforts to establish minimum performance expectations for charters at the time of renewal. CCSA has adopted minimum performance standards that improve upon current law by creating a clear and transparent benchmark based on status and growth, including the SSM as a way to isolate student demographic factors, relying on multiple years of data, and using the most recently available data. In 2010, 30 charter schools were identified as being below CCSA's Minimum Criteria for Renewal. These schools represent a range of charter types, structures and management models, and serve on average fewer students than the overall charter population. For schools not meeting the

## Setting Minimum Performance Criteria and Targeting "High Impact" Schools

Minimum Criteria, CCSA will not publicly endorse their academic performance with their authorizer, without additional compelling data. CCSA encourages authorizers to take a deeper look at a school's performance to assess what unique facts in each school's data best explain the school's record.

At the other end of the performance spectrum, the Status, Growth and SSM Framework also provides a guide for identifying "High Impact" schools that persistently exceed a prediction based on student background, while also demonstrating success on other measures of absolute academic performance. CCSA's definition of "High Impact" schools is a high bar; only five percent of traditional schools would qualify under this definition. However, in 2009-10, 77 charters, or 10% of the state's charters, qualified as a "High Impact" school. These schools are varied in curricular approach, management model and geographic location, and much can be learned from what they are doing and what challenges they have had to overcome in order to sustain results that far exceed a predicted performance based on their student demographics. CCSA will continue to orient its outreach and dissemination support to connect membership to lessons learned from these "High Impact" schools.

The findings from this first annual **Portrait of the Movement** report offer much reason for hope and optimism, as well as a realistic picture of the challenges ahead. Charters, as a group, prove that the achievement gap is NOT impossible to overcome; indeed, the most successful charters are significantly accelerating the performance of traditionally underserved students in demonstrable ways. CCSA, along with our membership, is deeply committed to further accelerating these successes and ensuring accountability for all charter schools, in order to deliver on the promise made to California families for high-quality educational opportunities for all.

# Introduction

Since its founding in 2003, the California Charter Schools Association (CCSA) has endeavored to accelerate the policy, research, and membership conversation about the critical matter of academic accountability for charter schools. We have devoted years of rigorous work to this initiative, engaging CCSA members and top researchers to help identify a set of metrics to ensure that the charter movement in California lives up to its promise of flexibility and autonomy in exchange for accountability for better outcomes. However, if we are indeed to make good on this promise, we must demonstrate academic performance outcomes that are not just as good, but **better** than schools in the traditional system. Our mission as charter schools is elegantly simple in its aim, even as it is overwhelmingly difficult to carry out: to provide high-quality educational choices for all children in California, particularly those who are chronically underserved in the traditional system.

This first annual **Portrait of the Movement** report examines the performance of charters and provides a public, detailed view of all charter schools in the state. It is concurrently released with a searchable map that compares all charters and traditional public schools, a sortable spreadsheet detailing the performance benchmarks of every charter in California that has opened prior to 2010, as well as an interactive scatter-plot that shows the results of charters four years and older on the CCSA Accountability Framework described in this publication. We have also prepared one-page summaries of charter performance on our metrics for four key districts: Los Angeles, Oakland, San Diego and Sacramento Unified School Districts. Each of these tools is available on our Web site at [www.calcharters.org/portraitofthemovement](http://www.calcharters.org/portraitofthemovement). This unprecedented level of transparency and access is necessary to contextualize charter successes and challenges, even as we explore new policy and advocacy responses to help support charters in their quest toward ever-higher academic success.

**Portrait of the Movement** compares charter school performance to that of traditional public schools and examines charter school performance by type and population served. Of our many findings, several overarching themes provide reason for hope and celebration: charters as a group prove that the achievement gap is NOT impossible to overcome; charter successes are broadly distributed across the movement by school type; and children in poverty are disproportionately benefitting from greater access to high-quality educational choices, as the California Charter Schools Act of 1992 intended.

From CCSA's extensive engagement with charter school leaders across the state, it is clear that our members share a strong commitment to fulfilling the promise of accountability in exchange for autonomy. It is a commitment that is also deeply held

by our Board of Directors and our Member Council – both of which have formally adopted CCSA's Accountability Framework as Association policy. As a result, CCSA has taken a lead role in assessing charter school performance and ensuring appropriate accountability within the movement. While challenges remain, we are resolved to continue supporting schools in achieving performance gains and decreasing the number of students and schools failing to make the progress we know they can.

## Organization of this Report

The **Portrait of the Movement** comprises a description of CCSA's metric, the Similar Students Measure (SSM), followed by three sections of analysis.

In **Section 1**, we analyze charter school performance using our metric, which measures how each school performs compared to a prediction for its student body. We investigate trends behind the resulting “U-shape” (see page 21) pattern of performance, a concentration of charters among the highest and lowest in the state when using this approach.

In **Section 2**, we introduce the CCSA Accountability Framework, a three dimensional approach that overlays the Similar Students Measure on a grid of academic status and growth based on the Academic Performance Index (API). We see how charters – and specifically those serving disadvantaged students – compare to traditional public schools on measures of academic status and growth, and investigate patterns within the charter movement by school type. We include profiles of four schools that are performing at various levels across the performance continuum.

In **Section 3**, we explain how the Framework guides our efforts to set performance criteria for low- and high-performance, and describe how this shapes our work to press for more rigorous accountability and to support the replication of successful schools.

## California Academic Accountability Measures

Public schools are subject to accountability measures to ensure that schools are responsible for improving student achievement. The **Academic Performance Index (API)** is the cornerstone of California's school accountability system. The API is a single number ranging from 200 to 1,000 that summarizes the performance of students, a school, or a district on California's standardized tests. The statewide target for API is 800, and schools are given growth targets each year to mark progress toward achieving that goal. Schools receive their API score each fall following the testing that occurs each spring. The following spring, schools receive a Statewide Rank, which compares their score to all other schools of the same type (elementary, middle or high), as well as a Similar Schools Rank, which compares their score to 100 other “similar” schools, based on a number of student and school factors, such as socio-economic background and teacher qualifications.<sup>2</sup>

If schools continue to meet API growth targets each year, they may become eligible for certain honors and awards. If schools fail to make progress on the API and are ranked amongst the lowest performing schools statewide, they may be identified to participate in intervention programs designed to help them boost student performance. Meeting API growth targets is also one component of federal accountability required by the Elementary and Secondary Education Act, commonly known as No Child Left Behind. Under this Act, schools are also required to make progress on additional academic performance indicators, including the percent of students scoring proficient or above on state standardized tests in English Language Arts and mathematics.

### Charter Schools and Academic Accountability

As public schools, charter schools are held to the same state and federal accountability requirements as non-charter public schools, and participate in all standardized testing programs necessary to meet those requirements. In exchange for the greater operational flexibility granted to charter schools, charters are subject to even higher levels of accountability than traditional public schools. Schools are granted a five-year “charter,” which details their individual mission, educational program and methods of assessment. Schools are held accountable to their authorizer (the entity granting the charter), as the authorizer may choose to renew a school’s charter based on its record of success. As schools of choice, charter schools are also held accountable to the students and families they serve, who have the ability to choose the best educational options available.

There are currently 912 charter schools in operation in California, and since the passage of the California Charter Schools Act of 1992, between 150 and 200 charter schools have closed.<sup>3</sup> As we discuss in this report, there is evidence that many of the schools that close are low-performing, suggesting that, to some degree, accountability is being upheld. However, we also recognize that there are significant challenges to ensuring appropriate academic accountability for charters. Minimum requirements of academic performance for charter schools are established by guidelines in CA Education Code 47607. Under these provisions, schools must meet minimum performance levels defined by annual API growth and Ranks, which, over time, have proven ineffective in identifying under-performing charter schools.<sup>4</sup> A central purpose of CCSA’s academic accountability initiative is to strengthen the academic performance standards to which charter schools are held. One of the challenges we face in this effort is that our state’s accountability system does not track individual student progress – a feature that is widely recognized to be the gold standard in school accountability. However, recognizing this challenge, CCSA has taken on the goal of making meaningful and substantial improvements to our current system, while urging the state to continue to make progress towards adopting an individual student growth model as quickly as possible.

## Background on CCSA's Accountability Measure

In 2008, CCSA released a new approach to charter school accountability that was heralded by U.S. Secretary of Education Arne Duncan as a model to be watched nationally. The centerpiece of this approach is the **Similar Students Measure (SSM)**, a new tool that assesses school performance while filtering out many of the non-school effects on student achievement. Currently, California's state education data system lacks the ability to assess individual student progress over time, which greatly hinders our ability to do accurate comparisons of school performance across the state. For instance, we have no way of knowing whether a difference in scores between two schools is attributable to the schools themselves or to the external gifts or challenges facing students before they enter the classroom.

Our approach mitigates some of these limitations through the use of regression-based predictive modeling, an approach used by the California Department of Education (CDE) and researchers across the field.<sup>5</sup> We compare a school's Academic Performance Index (API) to a prediction that controls for the effects of student background on performance, thus enabling researchers to identify schools that are significantly over-performing or under-performing, relative to their prediction. Consequently – despite the lack of individual student data required by many value-added measures<sup>6</sup> – we have used publicly-available data to generate a statistically valid measure that approximates the school's value-add.

## Description of CCSA's Accountability Measure<sup>7</sup>

### 1) Annual School Performance Prediction (ASPP):

The Annual School Performance Prediction (ASPP) uses linear regression models to predict a school's API while controlling for the effects of student background characteristics on performance. The ASPP regression model includes all public schools in California (excluding schools participating in the state's Alternative Schools Accountability Model, or "ASAM",<sup>8</sup> or those with fewer than 20 valid test scores<sup>9</sup>) and controls for a set of publicly-available student background variables, including family income, parent education level, mobility, ethnicity, and percent English Language Learner and Special Education students. The model controls for the level of parent education data reported, as well as the school size and grade span, separating out elementary, middle and high schools.<sup>10</sup> The resulting ASPP is a statistical prediction of a school's academic performance given its student body.

### 2) Percent Predicted API:

The Annual School Performance Prediction is then compared to each school's actual API performance (Actual API ÷ Predicted API), creating a ratio termed the Percent Predicted API this Percent Predicted API is used to answer the question,

“Is this school under- or over-performing their prediction of academic performance?” The Percent Predicted API is then categorized into performance bands. If a school is within 5% of its ASPP, it is categorized as Within Predicted, in order to account for the margin of error associated with the predictions. Schools outside of that range are categorized as Above or Below Predicted, and schools far outside of that range (10% or more) are categorized as Far Above or Far Below Predicted.

### **3) Similar Students Measure (SSM):**

The Similar Students Measure (SSM) uses three years of annual Percent Predicted API results to identify patterns of performance for charter schools. The resulting SSM provides a measure of relative performance, estimating the value that schools add to the gifts and challenges students bring to their school experience. Schools are categorized into **SSM Performance Bands** as follows, based upon their Percent Predicted API over the prior three years:

- **Far Below All Years:** Far Below Predicted for all years which have data
- **Below All Years:** Below Predicted for all years which have data
- **Below Most Years:** Below Predicted two out of the past three years
- **Within/Fluctuating:** Within Predicted for all years which have data, or fluctuating between bands
- **Above Most Years:** Above Predicted two out of the past three years
- **Above All Years:** Above Predicted for all years which have data
- **Far Above All Years:** Far Above Predicted for all years which have data

In conjunction with absolute measure of academic status and growth, the SSM drives CCSA's work to define minimum performance standards for charter schools.

# **Section 1: Assessing a Continuum of Performance**

## Confirming Mixed Performance

As many are aware, several research studies have been released in recent years finding that there is a circumstance of “mixed performance” within the charter school portfolio. These studies tend to lump together all charter schools into one group and find a wide distribution of performance, featuring a number of both high- and low-performing charters. Using this approach of grouping all charter schools together, our accountability instrument reveals similar results. CCSA has conducted analyses on a one-year snapshot of performance with 2010 API Growth data for all public schools, using our ASPP instrument and the resulting Percent Predicted API to generate a picture of school’s performance relative to their predictions. An overlay of charter school performance compared to traditional public schools yields a “U” shaped distribution, illustrating that charters are more likely to both far over-perform and under-perform their predictions than non-charter schools.<sup>11</sup> We further add to existing research by disaggregating the movement by school type and population served, which reveals that charters serving traditionally underserved students are actually achieving significantly better results than their non-charter counterparts.

### Interpreting the Graphs in Section 1

The following explains our methodology for comparing charter schools with all other public schools statewide on Percent Predicted API.

1. We rank all public schools by Percent Predicted API.
2. We divide the list into equal groups of five percent and look at where charters lie on that distribution. In this example graph, the dark and light maroon bars together encompass all CA public schools. There are an equal number of schools in each bin, reflecting their statewide percentile.
3. The dark maroon in this sample graph show where charters rank among all schools statewide for Percent Predicted API. For example, schools in the left bar are among the bottom five percent in the state on Percent Predicted API, while schools in the far right bar are among the top five percent.

Non-Charter and Charter, Distribution on Percent Predicted API, 2010



### *Finding:*

**Charters are more likely to far over-perform their prediction than traditional public schools. To a somewhat lesser extent, charters are also more likely to far under-perform their prediction.**

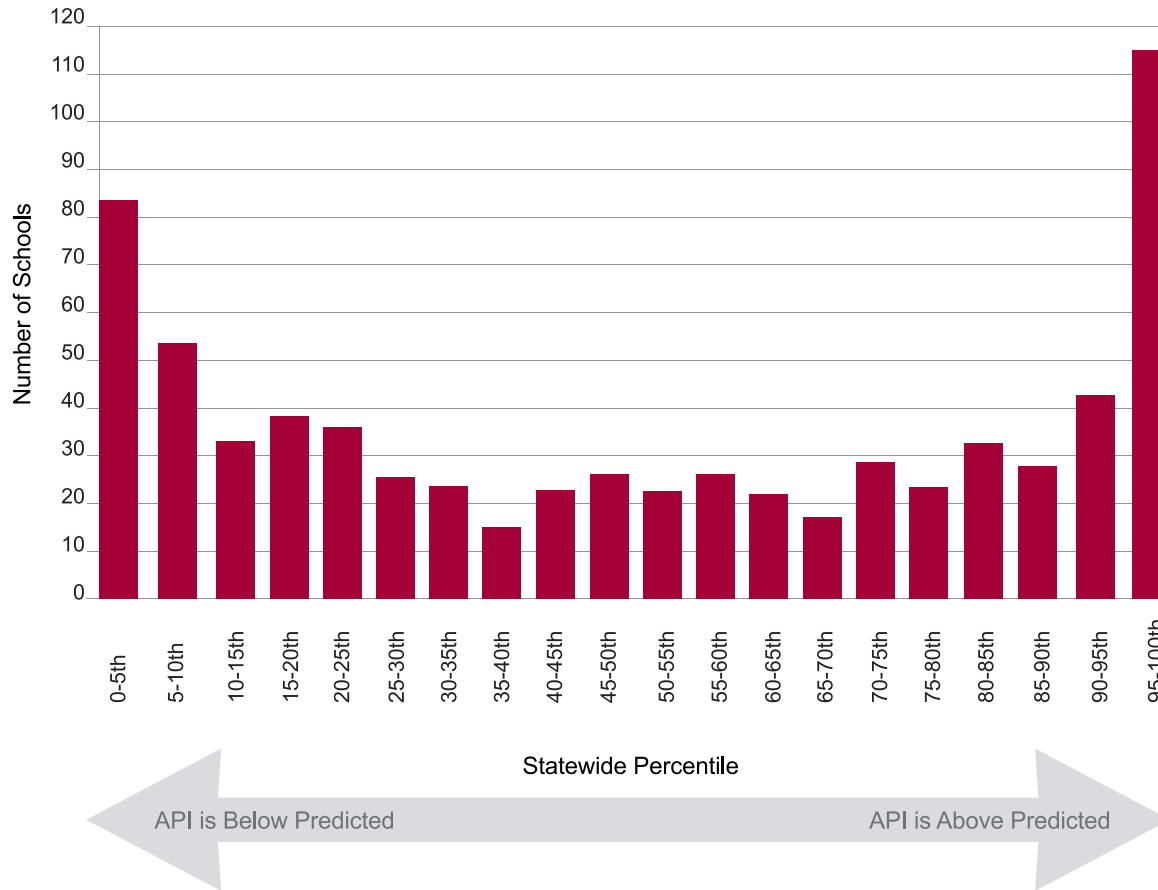
Figure 1 shows a comparison of charter schools to the population of all schools in the state. Using the metric of Percent Predicted API (comparing actual performance to predicted), we find a “U-shaped” pattern with charters more concentrated than non-charters at either end of the distribution. Sixteen percent (16%) of charters fall in the top 5th percentile, while only 3.9% of non-charters fall in the top 5th percentile. On the other side, 11.5% of charters are in the bottom 5th percentile, while only 4.4% of non-charters fall in the bottom 5th percentile. In other words, **charters are over four times as likely as non-charters to be in the top 5th percentile, and also over twice as likely to be in the bottom 5th percentile.**

The preponderance of charter schools in the *top* 5th and 10th percentiles gives us reason to study how these schools are adding value to their students’ education and to support their expansion and replication. The concentration of charter schools in the *bottom* 5th and 10th percentiles gives us reason to look more deeply at their academic records and ensure that appropriate accountability is upheld. In fact, by tracking this distribution over a number of years, as articulated in the next finding, we see evidence that, to some extent, both of these trends are already occurring within the system.

#### ***What do you mean by the term “over-performing?”***

Percent Predicted API is a relative measure of performance, meaning that it shows how schools perform relative to a prediction based on student background. The term “over-performing” does not mean that a school has, in fact, achieved too high of a level of performance; it means that a school has performed significantly higher than its prediction. In schools, high socio-economic status of the student body is associated with high API scores. For over-performing schools, we know that their API is not just reflective of a socio-economically advantaged student body, but rather they are far exceeding a predicted performance.

**Figure 1:** Concentration of Charters at the Top and Bottom of the Statewide Distribution on Percent Predicted API.



2009 - 2010	Total, excluding ASAM + small <sup>12</sup>	Bottom 5% of CA schools	Bottom 10% of CA schools	Top 10% of CA schools	Top 5% of CA schools
Number of Charters (%)	720	83 (11.5%)	138 (19.2%)	157 (21.8%)	115 (16.0%)
Number of Non-Charter Schools (%)	7,454	325 (4.4%)	679 (9.1%)	661 (8.9%)	293 (3.9%)

**Finding:**

There is some evidence that the concentration of over-performing charters is increasing, while the concentration of under-performing charters is decreasing over time.

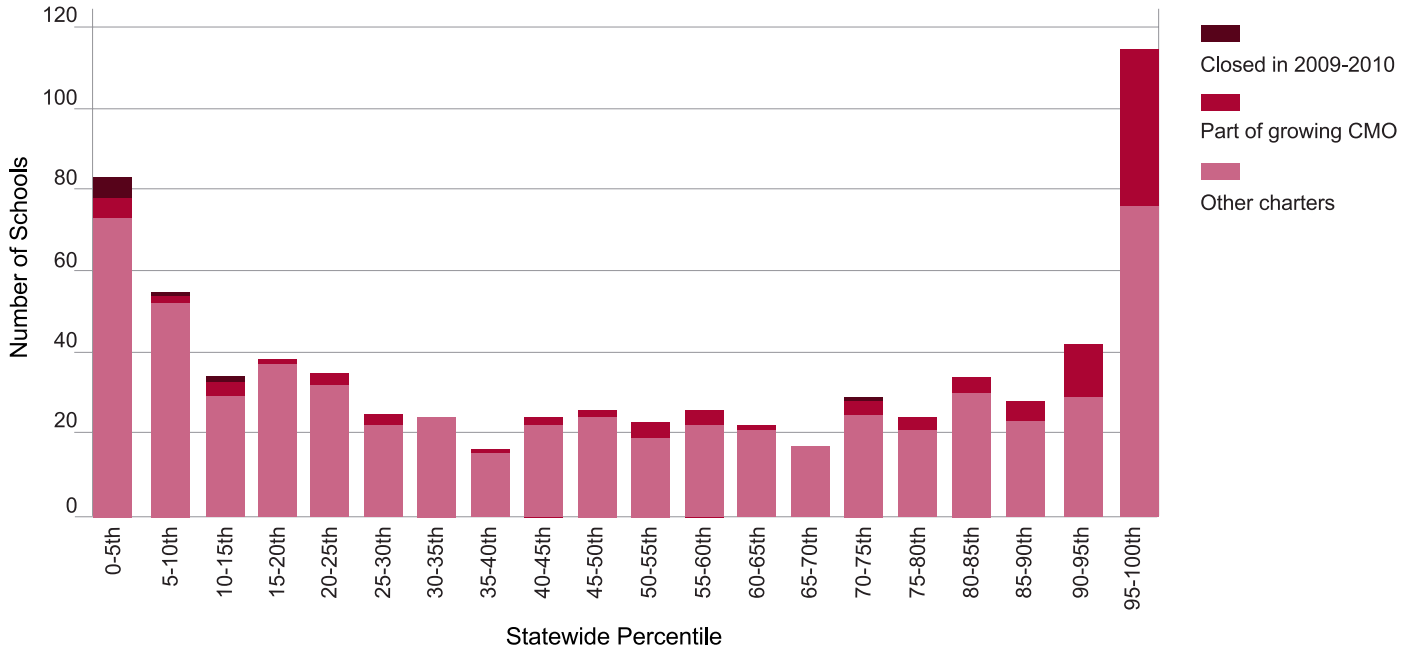
Table 1 shows that from 2008 to 2010, the concentration of charters in the bottom 5th percentile decreased from 16% to 11.5%, while the concentration of charters in the top 5th percentile increased from 14.8% to 16%. While these data constitute a small change, this is evidence of a promising trend that we will continue to monitor and analyze more deeply.

**Table 1:** Percent of Charters in the Top and Bottom of the Statewide Distribution on Percent Predicted API, 2008 through 2010.

	2007-2008		2008-2009		2009-2010	
	Number	(%)	Number	(%)	Number	(%)
Percent of charters in the <b>bottom 5%</b> of CA schools	95	<b>16.0%</b>	88	<b>13.4%</b>	83	<b>11.5%</b>
Percent of charters in the <b>bottom 10%</b> of CA schools	128	<b>21.5%</b>	128	<b>19.5%</b>	138	<b>19.2%</b>
Percent of charters in the <b>top 10%</b> of CA schools	126	<b>21.2%</b>	135	<b>20.6%</b>	157	<b>21.8%</b>
Percent of charters in the <b>top 5%</b> of CA schools	88	<b>14.8%</b>	96	<b>14.7%</b>	115	<b>16.0%</b>

While that shift partly reflects improvement in existing schools' performance, it is also reflective of another observation: the closure of schools in the bottom 5th percentile and the replication of schools in the top 5th percentile.

**Figure 2:** Closures and Replicating Charter Schools, Distribution of Performance on Percent Predicted API, 2009-10.



2009 - 2010	Total Schools	Total, excluding ASAM + small	Bottom 5% of CA schools	Bottom 10% of CA schools	Top 10% of CA schools	Top 5% of CA schools
Number of Charters part of a CMO that opened a school in fall 2010 (%)	108	101	5 (5.0%)	8 (7.9%)	52 (51.5%)	39 (38.6%)
Number of Charters that closed in 2009-10 (%)	11	8	5 (62.5%)	6 (75.0%)	0 (0.0%)	0 (0.0%)

Though only eleven charters closed in 2009-10, five out of the eight with data (62.5%) were in the bottom 5th percentile, suggesting a connection between charter school closures and under-performance. At the same time, charters operated by Charter Management Organizations (CMOs) that opened a school in the fall of 2010 are largely concentrated at the top of the distribution. Thirty-eight point six percent (38.6%) of schools affiliated with a CMO that opened a new school in fall 2010 were in the top 5th percentile. Over half of them were within the top 10th percentile. In fall 2010 alone, 20 schools opened that were replications of schools performing in the top 10th percentile, which suggests we could expect to see an increase in the number of charters performing at the top end of the statewide distribution.

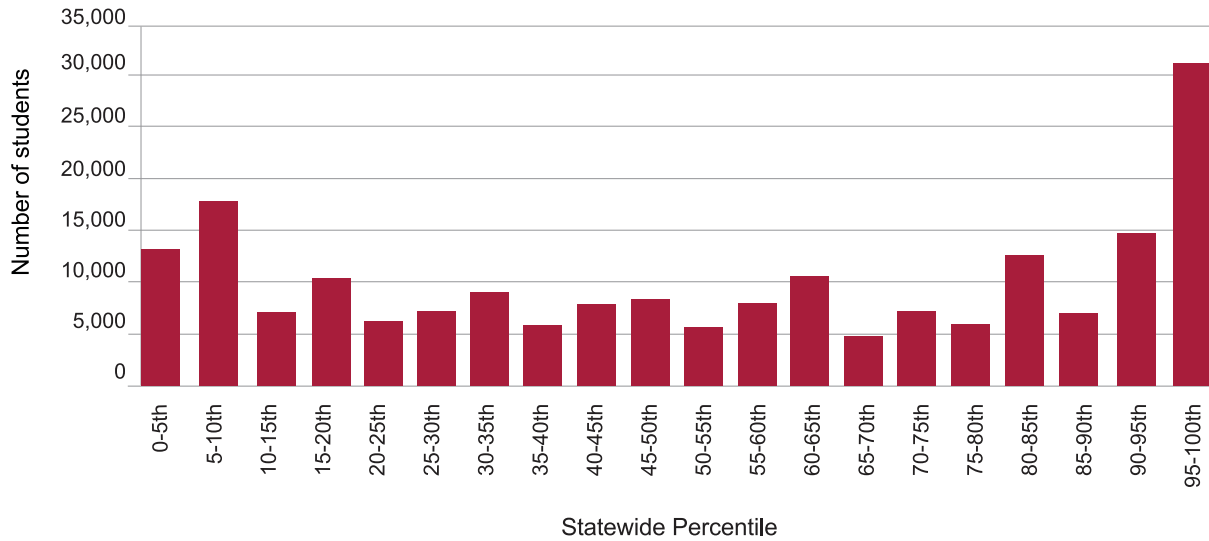
*Finding:*

**Many more students are served by over-performing charters.**

Our analyses reveal that far under-performing charter schools on average serve fewer students than the average number served in the overall population of charter schools. Thus, when we look at the distribution of performance in terms of number of students served, it is clear that the movement has larger numbers of students attending over-performing schools than under-performing schools. While 11.5% of charter schools perform in the bottom 5th percentile, they account for only 6.5% of students tested. In comparison, the 16% of charter schools that are in top 5th percentile serve 15.5% of total students tested.



**Figure 3: Number of Students Tested in Charters, Shown by Statewide Distribution of Percent Predicted API, 2010.**



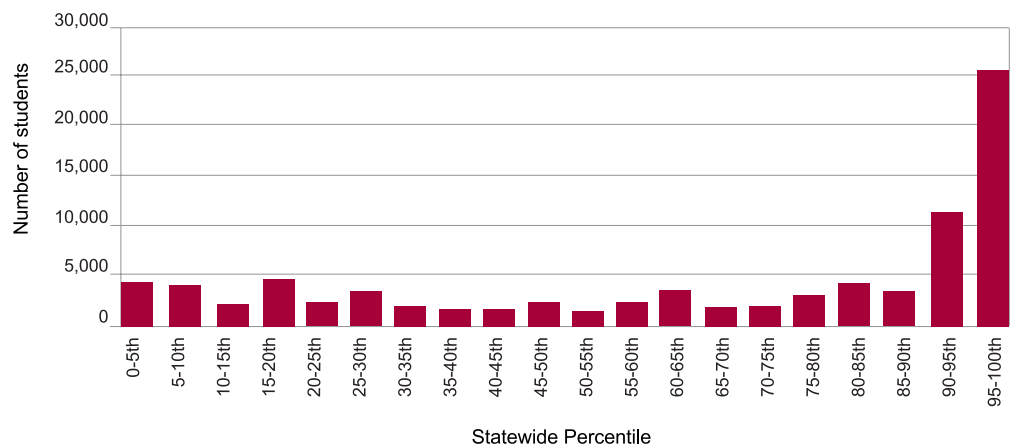
2009 - 2010	Total students tested, excluding ASAM + small	Bottom 5% of CA schools	Bottom 10% of CA schools	Top 10% of CA schools	Top 5% of CA schools
Total Students Tested in Charters (%)	200,960	13,114 (6.5%)	30,969 (15.4%)	45,905 (22.8%)	31,162 (15.5%)
Total Students Tested in Non-Charter (%)	4,030,912	146,315 (3.6%)	324,341 (8.0%)	295,918 (7.3%)	119,796 (3.0%)

**Finding:**

**Charters that serve low-income students are over-performing at high rates relative to the traditional system; students at charters serving low-income populations are very likely to be served by an over-performing school.**

When looking at students attending schools that serve low-income populations, we see that these students are much more likely to be served by schools in the top 10th percentile.<sup>13</sup> Thirty-six point eight percent (36.8%) of those students attend schools in the top 10th percentile, as compared to 16.3% attending schools in the bottom 10th percentile.

**Figure 4:** Number of Students Tested in Charters Serving a Low-Income Population, Shown by Statewide Distribution of Percent Predicted API, 2010.



2009 - 2010	Total students tested, excluding ASAM + small	Bottom 5% of CA schools	Bottom 10% of CA schools	Top 10% of CA schools	Top 5% of CA schools
Total Students Tested in Charters with ≥50% FRPL Eligibility (%)	87,014	4,341 (5.0%)	8,463 (9.7%)	36,741 (42.2%)	25,464 (29.3%)
Total Students Tested in Non-Charters with ≥50% FRPL Eligibility (%)	2,280,825	120,593 (5.3%)	256,753 (11.3%)	241,519 (10.6%)	100,585 (4.4%)

This clear and unmistakable pattern reveals that charters – and particularly those that are serving low-income communities – are delivering significant value to their students' education at disproportionately high rates when compared to schools in the traditional public school system.

While we celebrate this reason for optimism, we cannot lose sight of the urgency with which we must confront sustained under-performance of some of our schools. We believe in quality education not just for most students, but for all students, as a necessary precondition for our continued existence and success.

Charters are extremely diverse in school design and approach, and we can explore this picture of performance in greater detail by disaggregating the whole by various school characteristics. We analyzed the relationship between 10 different school characteristics and their Percent Predicted API to identify which characteristics are significantly associated with over-and under-performance, and how this impacts the distribution of performance for various school subgroups.<sup>14</sup> See Appendix A for complete results. In Figures 5 and 6, we cite two characteristics that have a statistically significant relationship with schools' statewide distribution of performance using our model: site type and management model.

*Finding:*

**Classroom-based charters are over-performing in comparison with traditional schools, as non-classroom-based charters are more concentrated among under-performing schools.**

While charters make up 5% of schools statewide, they make up more than 50% of all non-classroom-based schools statewide.<sup>15</sup> Given the relative over-representation of non-classroom-based schools in the charter movement, it is useful to disaggregate classroom-based schools to see how they are performing relative to all schools statewide. When we do so, we see the emergence of a “J-shaped” distribution, with 23.9% of site-based charters performing in the top 10th percentile, versus 16.8% in the bottom 10th. Of course, the other side of that trend is that non-classroom-based charters are more concentrated at the low end of performance, with 29% of non-classroom-based schools performing in the bottom 10th. Unfortunately, a more accurate comparison of charter non-classroom-based versus traditional non-classroom-based is not possible using this metric, since 92% of traditional non-classroom-based schools are classified as ASAM, and thus not subject to any of these measures.<sup>16</sup>

**Site Types**

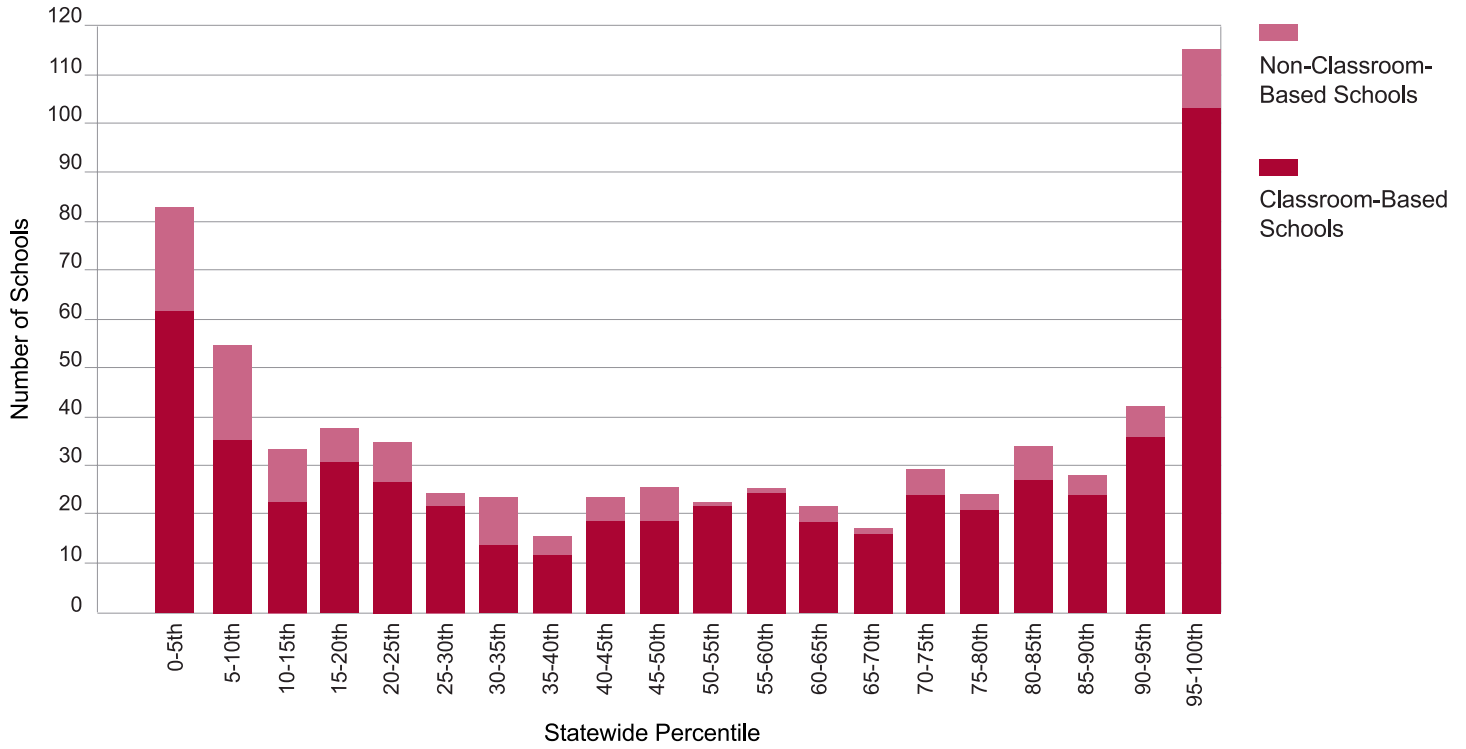
**Non-classroom-based Schools:**

Schools where less than 80% of instructional time is offered at the school site when students are “engaged in educational activities required of those pupils and are under immediate supervision and control of an employee of the charter school who possesses a valid teaching certificate.” (Education Code 47612.5)

**Classroom-based Schools:**

Schools where at least 80% of instructional time is offered at the school site.

**Figure 5:** Charter Site Type, Distribution of Performance on Percent Predicted API, 2010.



2009 - 2010	Total, excluding ASAM + small	Bottom 5% of CA schools	Bottom 10% of CA schools	Top 10% of CA schools	Top 5% of CA schools
Number of Classroom-Based charters (%)	582	62 (10.7%)	98 (16.8%)	139 (23.9%)	103 (17.7%)
Number of Non-Classroom-Based charters (%)	138	21 (15.2%)	40 (29.0%)	18 (13.0%)	12 (8.7%)

### *Finding:*

## CMO schools are over-performing in comparison with traditional public schools.

Charters that are operated by Charter Management Organizations (CMOs)<sup>17</sup> over-perform relative to traditional public schools. Forty point one percent (40.1%) of CMO charter schools are in the top 10th percentile, while 12.2% are in the bottom 10th percentile. Alternatively, freestanding charters are more concentrated among under-performing schools. Twenty point five percent (20.5%) of freestanding charters are in the bottom 10th percentile, while 13.4% are in the top 10th percentile. Network charter schools are equally represented at the ends of the distribution, with 22.4% of network charters in both the top and bottom 10th percentile.

## Management Models

### **CMO School:**

School that is part of a Charter Management Organization (CMO), which is an organization that operates three or more schools linked by a common philosophy and centralized governance or operations.

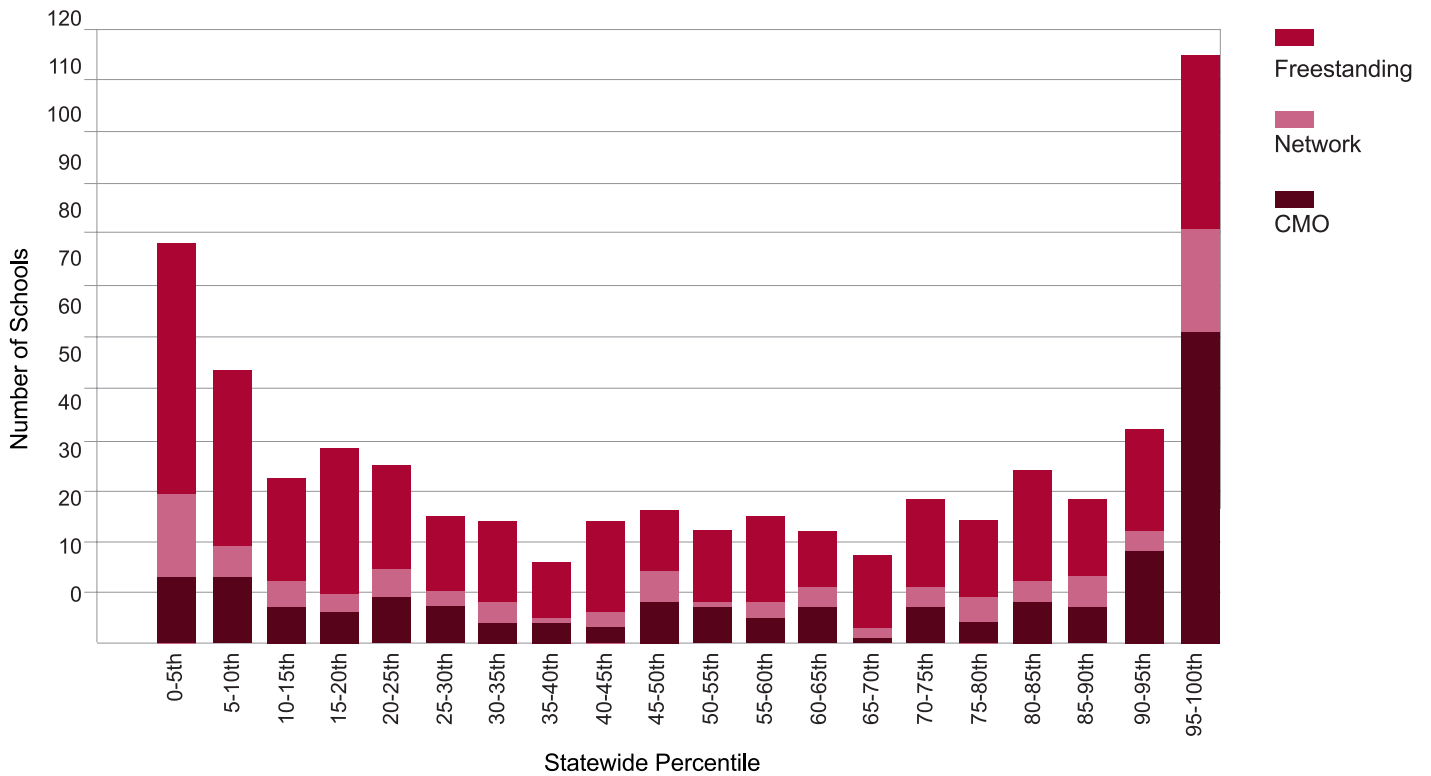
### **Network School:**

School that is part of a Network, which is a group of schools linked by a common philosophy but not centralized governance or operations. Networks are also entities that would otherwise fit the definition of CMO but have fewer than three schools.

### **Freestanding School:**

Freestanding schools include both start-up single-site schools and traditional district schools that have converted to charters that are not part of a network of CMO affiliation.

**Figure 6:** Charter Management Model, Distribution of Performance on Percent Predicted API, 2010.

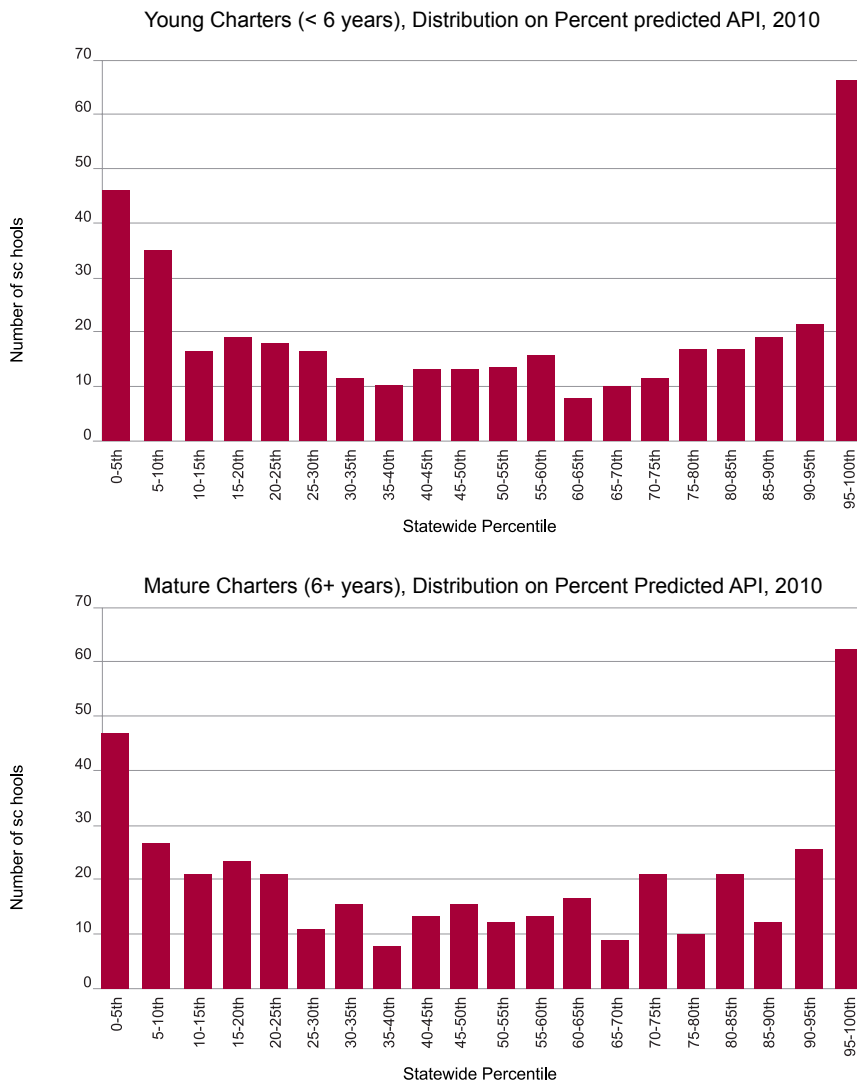


2009 - 2010	Total, excluding ASAM + small	Bottom 5% of CA schools	Bottom 10% of CA schools	Top 10% of CA schools	Top 5% of CA schools
Number of CMO charters (%)	197	13 (6.6%)	24 (12.2%)	79 (40.1%)	61 (31.0%)
Number of Network charters (%)	107	16 (15.0%)	24 (22.4%)	24 (22.4%)	20 (18.7%)
Number of Freestanding charters (%)	404	49 (12.1%)	83 (20.5%)	54 (13.4%)	34 (8.4%)

**Finding:**  
**School maturity is not associated with over- or under-performance. Young schools have a similar distribution as mature schools.**

One commonly held assumption is that many of the charters in the bottom 5th and 10th percentiles are new charters that have not had ample time to “get up to speed.” To the contrary, the distributions of young schools (0-5 years) and mature schools (6+ years) are virtually the same.

**Figure 7:** Young and Mature Charters, Statewide Distribution on Percent Predicted API, 2010.



2009 - 2010	Total, excluding ASAM + small	Bottom 5% of CA schools	Bottom 10% of CA schools	Top 10% of CA schools	Top 5% of CA schools
Number of Young charters (5 years and younger) (%)	355	41 (11.5%)	72 (20.3%)	78 (22.0%)	59 (16.6%)
Number of Mature charters (6 years and older) (%)	365	42 (11.5%)	66 (18.1%)	79 (21.6%)	56 (15.3%)

## Conclusion

We have identified a number of patterns within the distribution of charter performance on Percent Predicted API. Classroom-based schools and CMO schools are more likely to be over-performing, while non-classroom-based schools and freestanding schools are more likely to be under-performing. We also see that small schools are more likely to be under-performing, leading to a smaller percentage of students served in under-performing schools.<sup>18</sup> Schools serving low-income students are more likely to be over-performing, leading to a larger percentage of low-income students served by over-performing schools. The data shows that young schools are performing at comparable levels compared to mature schools, and that as more charter schools open each year, many of these new schools are replications of over-performing schools. We see that over the past three years, the overall distribution has shifted towards an increased concentration of charters in the top 10th and 5th percentiles, a trend we expect to continue, given the replication of over-performing schools and the closure of under-performing schools.

With that said, neither CCSA nor our members would posit that there is sufficient academic accountability within the existing system. To the contrary, our conversations with members give us great confidence that there is a strong consensus that we need even higher academic accountability for California’s charter schools. Our members strongly support the belief that the aggregate charter school portfolio must generate academic results that are clearly and unmistakably better than those being generated by traditional public schools. In order to achieve this, our members understand that we must become better able to address this “U-shape” of performance. Our membership shares a broad overarching goal of reducing the number of schools that are significantly under-performing while increasing the number of schools that are over-performing. By following this two-pronged approach, we are confident that we can, and will, change the shape of the charter school portfolio of performance from the current “U” (roughly equally percentage of over-performing and under-performing schools) into a “J” (much greater percentage of over-performing than under-performing schools).

## **Section 2: An Accountability Framework**

The concentration of charters at the top and bottom of the statewide distribution is cause for both great optimism and great urgency. CCSA has used this data to direct our efforts to ensure that rigorous accountability standards are uniformly established and upheld, and that those standards are adequate to the broad diversity of the charter school movement. We aim to use this data to promote unprecedented levels of common understanding and transparency about the performance of charter schools.

**The Similar Students Measure (SSM)**

In addition to being a tool for assessing movement-wide performance, the Annual School Performance Prediction (ASPP) has been a significant vehicle to inform CCSA’s work to establish minimum performance standards for charter schools at their time of renewal. As previously explained, the **Similar Students Measure (SSM)** uses three years of Percent Predicted API results to classify patterns of performance with the focus of identifying schools that persistently under- and over-perform relative to their predictions. Schools are categorized into one of seven bands. (See the description on page 18 for a list of the SSM Performance Bands).

**Table 2:** SSM Performance Bands, 2010: Non-charters and Charters Four Years and Older.

	Non-Charter		Charters 4 years and older	
	Number	(%)	Number	(%)
Total (excluding ASAM + small)	7,454		485	
Far Below All Years	91	1.2%	21	4.3%
Below All Years	307	4.1%	36	7.4%
Below Most Years	374	5.0%	33	6.8%
Within / Fluctuating	5,970	80.1%	298	61.4%
Above Most Years	333	3.5%	21	4.3%
Above All Years	306	4.1%	42	8.7%
Far Above All Years	73	1.0%	34	7.0%
Combined: Below and Far Below All Years	398	5.3%	90	11.8%
Combined: Above and Far Above All Years	379	5.1%	97	15.7%

Table 2 shows that the majority of schools are within predicted all years, or are fluctuating between bands. However, charters are more likely as non-charters to both over-perform or under-perform their predictions over a three-year period. We look at the pattern of performance of charters that are four years and older, which for the purposes of this report, we refer to as “established” charters.<sup>19</sup> Fifteen point eight percent (15.8%) of established charters are Above or Far Above Predicted All Years, in comparison with 5.1% of non-charters. Eleven point eight percent (11.8%) of established charters are Below or Far Below Predicted All Years, in comparison with 5.3% of non-charters. In other words, established charters are over three times as likely as non-charters to persistently over-perform their prediction over a three-year period, yet also over twice as likely to persistently under-perform their prediction over a three-year period. These findings highlight the work we need to do to address the persistence of under-performing charters. However they also underscore the fact that charter schools are doing a better job of achieving high results with students who have been chronically underserved by the traditional system. As we see in the next section, these findings are corroborated by our analyses using absolute measures of academic status and growth.

Building an  
Accountability  
Framework: Status,  
Growth and the SSM

The SSM is more useful to classify persistently over-performing and under-performing schools than a relative measure that controls for student background; however, it does not account for other important measures of the school academic record, such as absolute status and growth over time on API. Thus, CCSA devised a framework that combines the SSM with these elements in order to create a more comprehensive approach to classifying the performance of charters four years and older. In building a comprehensive accountability framework, we added the SSM to the existing measures of API status and growth in order to achieve a three-pronged metric that accounts for three core principles of accountability – rigor, momentum, and value-add.

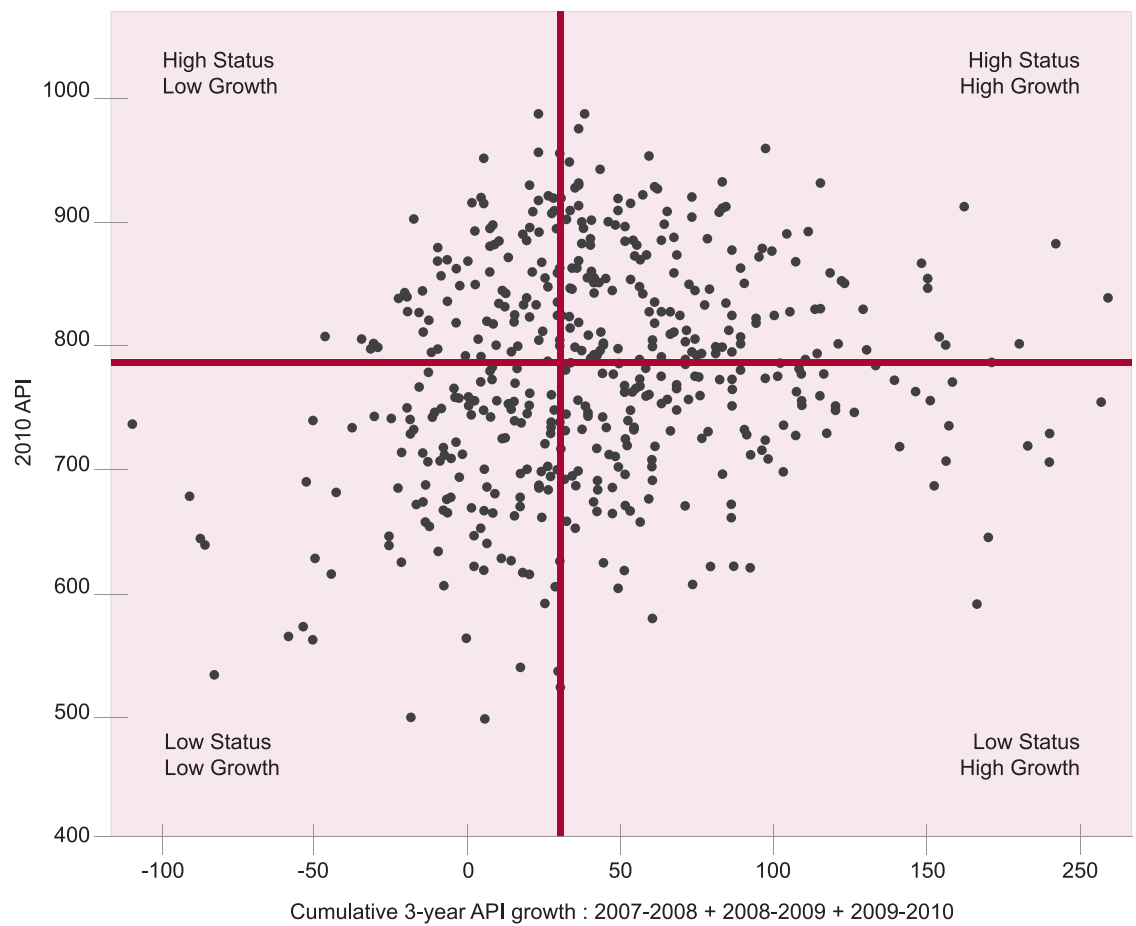
- **API Status:** Absolute academic status in the form of the API score provides for a measure of *rigor*.
- **Three-Year Growth:** Growth in API over a three-year period provides for a measure of *momentum*.<sup>20</sup>
- **Similar Students Measure:** Comparing schools’ performance to their prediction provides for an approximation of the school *value-add*.

Several states and Charter Management Organizations (CMOs) are applying a model of “status and growth” to measure charter progress toward higher quality – our model also incorporates the SSM as a proxy “value added” measure to generate a three-dimensional approach for assessing performance and establishing minimum performance standards for charter renewal based on this approach.

For the remainder of Section 2, we discuss how these three concepts intersect to form a framework that we use to classify “established” (i.e., four years and older) charter schools into various levels of performance. We focus on charters four years and older because these schools have been open long enough to generate three years of growth. However, this framework can be used in other ways as well, such as targeting specific types of school support, identifying best practices and connecting schools to one another to develop intentional communities of practice.

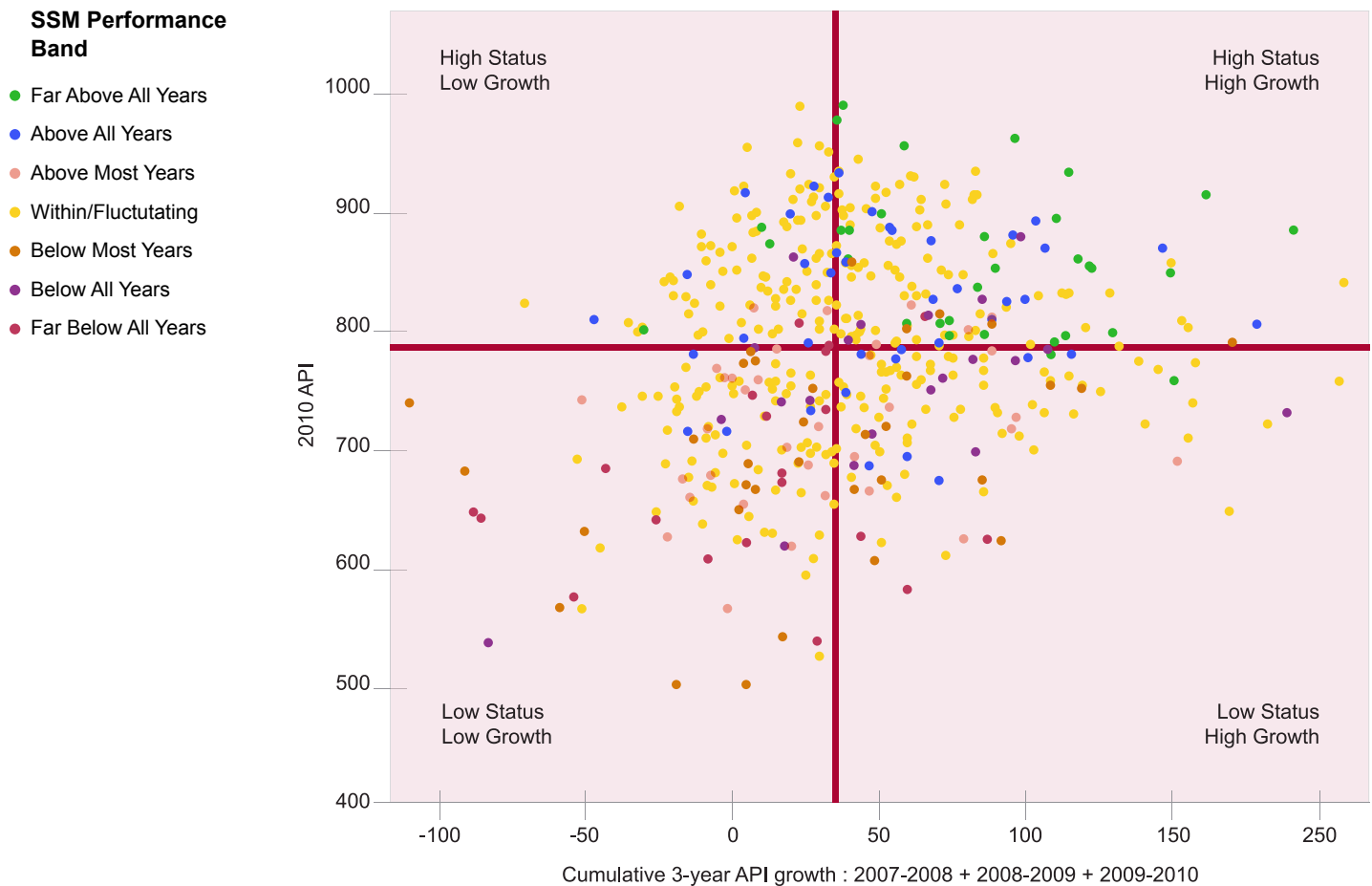
In forming the framework, we create a four-quadrant graph of API status and cumulative three-year growth in API, by dividing the group along the median API and median growth. For 2010, the median API was 787 and the median cumulative growth was 35. The result is a four-quadrant graph that characterizes schools by both their absolute academic status and their pattern of growth over time.<sup>21</sup>

**Figure 8:** Status and Growth for Charter Schools, Four 4 Years and Older, 2010.



The next step in building the framework is to overlay the Similar Students Measure (SSM) on top of the grid of Status and Growth, resulting in one graph that encompasses the combined framework.

**Figure 9:** Status, Growth and SSM Performance Bands for Charter Schools Four Years and Older, 2010.



This graph displays three things about schools' performance over the past three years:

- Their current academic status (API)
- Their cumulative growth
- Their performance relative to predicted, as measured by the SSM

For example, a blue dot in the lower right quadrant represents a school with a below average API and above average growth that has performed above its prediction all years, as measured by the SSM. A yellow dot in the upper left corner represents a school with above average API and below average growth, and on SSM that has performed similarly to its prediction, or has fluctuated without a consistent trend. By combining these three concepts, the framework provides a more comprehensive performance management construct to assess progress toward high academic performance.

**Performance Trends Across the Status, Growth, and SSM Framework**

We use this framework of status, growth, and SSM to assess the performance of schools, identify patterns of performance, and to compare the performance of “established” charters with non-charter schools.<sup>22</sup>

***Finding:***

**Charters are more likely than non-charters to have high academic status and high growth. Charter schools are also more concentrated than non-charters among schools with low academic status and low growth, but they serve proportionally fewer students.**

Twenty-eight point nine percent (28.9%) of established charters have high academic status and high growth, representing 31.3% of students tested. In comparison, 25% of non-charters have high academic status and high growth, representing 22.7% of students tested. At the low end, 26.9% of established charters have low academic status and low growth, representing 21.3% of students served. In comparison, 23.6% of non-charters have low academic status and low growth, representing 24.3% of students served. The concentration of charters at either end of the performance spectrum on absolute measure of status and growth represents a similar pattern when compared to our findings using the relative measure of Percent Predicted API. We also see the same pattern with Percent Predicted API when looking at the percentage of students served; the concentration of charters at the high end increases, and the concentration at the low end decreases.

**Table 3:** Status/Growth Quadrants for Non-Charterers and Charters, 2010.

		Charters 4 years and older		Non-Charterers	
		Schools	Students Tested	Schools	Students Tested
Low Status / Low Growth	Number	130	33,057	1,751	973,428
	Percent	26.9%	21.3%	23.6%	24.3%
Low Status / High Growth	Number	117	43,136	1,821	1,139,156
	Percent	24.2%	27.8%	24.6%	28.4%
High Status / Low Growth	Number	97	30,771	1,980	983,960
	Percent	20.0%	19.8%	26.7%	24.6%
High Status / High Growth	Number	140	48,316	1,854	910,176
	Percent	28.9%	31.3%	25.0%	22.7%
Total (excluding ASAM + small)		485	155,280	7,454	4,006,720

***Finding:***

**Charters serving low-income populations are more likely to be high-performing and less likely to be low-performing than non-charters serving low-income populations.**

There is evidence to support that charters serving a low-income population, defined as having at least half of their student body qualifying for the Free or Reduced Price Lunch program (FRPL), are achieving higher results than non-charters that are also serving a low-income population.

First, we compare charters serving low-income populations to non-charters serving low-income populations and find that 29.3% of these charters have high academic status and high growth, compared to only 18.9% of these non-charters. At the bottom end, 29.8% of charters serving low-income populations have low academic status and low growth, compared to 33.5% of non-charters serving low-income populations.

**Table 4:** Status/Growth Quadrants for Non-Charter and Charter Schools Serving a Low-Income Population, 2010.

	Charters 4 years and older with $\geq 50\%$ FPRL		Non-Charter with $\geq 50\%$ FPRL	
	Number	(%)	Number	(%)
Low Status / Low Growth	67	29.8%	1,495	33.5%
Low Status / High Growth	79	35.1%	1,652	37.0%
High Status / Low Growth	13	5.8%	443	9.9%
High Status / High Growth	66	29.3%	841	18.9%
Total (excluding ASAM + small)	225		4,461	

Second, we look within each Status/Growth quadrant at the concentration of schools serving low-income populations in each, which reveals that there is a larger performance gap based on income for non-charters than for charters. Forty-seven point one percent (47.1%) of charters in the highest performing quadrant serve low-income populations, and 51.5% of charters in the lowest performing quadrant serve low-income populations. Alternatively, 45.4% of non-charters in the highest performing quadrant serve low-income populations, but 85.4% of non-charters in the lowest performing quadrant serve low-income populations. While the distribution of schools based on student family income is more evenly spread for charters, non-charters serving low-income populations are nearly twice as likely to have low status and low growth as they are likely to have high status and high growth.

In other words, the likelihood that a “low status, low growth” school also serves a low-income population is 51.5% for charters and 85.4% for non-charters. “High status, high growth” schools are similarly likely to serve low-income populations for charters and non-charters. While non-charters serving low-income populations are disproportionately concentrated in the low-performing quadrants, charters serving low-income populations are more evenly distributed across the continuum.

**Table 5:** Percent of Charters and Non-Charter Serving a Low-income Population, by Status/Growth Quadrant, 2010.

	Low Status Low Growth	Low Status High Growth	High Status Low Growth	High Status High Growth	Total
Total Charters 4+ Years	130	117	97	140	484
Total Charters 4+ Years with ≥ 50% FPRL	67	79	13	66	225
<b>Percent of Charters 4+ years that have ≥50% FPRL</b>	<b>51.5%</b>	<b>67.5%</b>	<b>13.4%</b>	<b>47.1%</b>	<b>46.5%</b>
Total Non-Charter	1,751	1,821	1,980	1,854	7,406
Total Non-Charter with ≥50% FRL	1,495	1,652	443	841	4,431
<b>Percent of Non-Charter that have ≥50% FRL</b>	<b>85.4%</b>	<b>90.7%</b>	<b>22.4%</b>	<b>45.4%</b>	<b>59.8%</b>

**Finding:**

**The impact of family income on charter schools' API performance is four times less than the impact of family income on non-charters' performance.**

This points to the fact that family income is much more strongly related to academic performance for non-charter schools than it is for charter schools. Specifically, income level has four times less of an impact on the school's API performance for charters as it has on non-charters API performance. The  $r^2$  coefficient in Table 6 shows that for non-charters, 51.0% of the variance in their API scores is explained by variation in the percent of students eligible for the Free or Reduced Price Lunch program at the non-charter school. For charter schools, it is only 11.5% of the variance. This suggests that charter schools are finding ways to surpass the traditional limitations of poverty more effectively than are non-charter schools.

**Table 6:** Correlation Coefficients between Percent Free or Reduced Price Lunch Eligibility for Charters and Non-Charters, 2010.

Non-Charters		
	% Free or Reduced Lunch	API
% Free / Reduced Lunch	1	-.714**
API	-.714**	1
$r^2$	.510	

\*\* Correlation is significant at the .01 level (2-tailed)

Charters		
	% Free or Reduced Lunch	API
% Free / Reduced Lunch	1	-.339**
API	-.339**	1
$r^2$	.115	

Taken together, these observations suggest that charter schools are breaking the persistent link between poverty and low-performance and showing that poverty does not equal destiny. Next, we look more closely within charter schools to identify any associations between school typology and performance in order to better understand the performance of the charter school movement.

## A Deeper Look at the Four Quadrants

We looked deeper within the charter portfolio to identify any patterns in how school type affect the distribution of charters across the four quadrants of academic status and growth. The following are notable findings that were found to be statistically significant (See Appendix B for full results). First, we asked the question: are there any patterns in how school type affects the distribution of charters across Status/Growth quadrants? The following are notable findings that were found to be statistically significant.

- School site type accounts for some of the difference in how charters are distributed across the quadrants. Classroom-based charters are overrepresented in the high status, high growth quadrant (95% compared to 79.1% of charters overall) and non-classroom-based charters are somewhat overrepresented in the low status, low growth quadrant (38.5% compared to 26.9% of charters overall).
- Charter schools that are funded directly from the state (a proxy for “independence”) are more likely to have high growth than schools that are funded indirectly through their district (typically more “dependent” charters).<sup>23</sup> These findings indicate that the more autonomous the charter, the higher their momentum in improving their performance from year to year. Direct-funded charters are under-represented in the high status, low growth quadrant, as indirect-funded charters make up a larger proportion of charters in this quadrant (45.4% compared to 20% of charters overall).
- Conversion schools are somewhat overrepresented in the high status quadrants. Though conversion schools make up only 18% of charters in this sample, they make up 25.8% of schools with high academic status and low growth and 23.6% of schools with high academic status and high growth.
- Small schools (defined as testing fewer than 100 students) are more likely to have low academic status and low growth (21.5% compared to 13.8% of charters overall) and are less likely to have high status and high growth (8.6% compared to 13.8% of charters overall).

## Start Types

### Conversion Schools:

Schools that converted from a traditional public school into a charter school.

### Start-up Schools:

Schools that started organically without converting from an existing school.

**Table 7: Breakdown by School Type across Status/Growth Quadrants, Charters Four Years and Older, 2010.**

			Low Status Low Growth	Low Status High Growth	High Status Low Growth	High Status High Growth	Total and % of Charters Overall
Site Type**	Classroom-Based	Number	80	86	84	133	383
		(%)	61.5%	73.5%	86.6%	95.0%	79.1%
	Non-Classroom Based	Number	50	31	13	7	101
		(%)	38.5%	26.5%	13.4%	5.0%	20.9%
Funding Type**	Direct from the state	Number	94	94	53	100	341
		(%)	72.3%	80.3%	54.6%	71.4%	70.5%
	Indirect from the district	Number	36	23	44	40	143
		(%)	27.7%	19.7%	45.4%	28.6%	29.5%
Start Type*	Startup	Number	116	101	72	107	396
		(%)	89.2%	86.3%	74.2%	76.4%	81.8%
	Conversion	Number	14	16	25	33	88
		(%)	10.8%	13.7%	25.8%	23.6%	18.2%
Size*	Over 100 Students tested	Number	102	100	87	128	417
		(%)	78.5%	85.5%	89.7%	91.4%	86.2%
	Under 100 Students tested	Number	28	17	10	12	67
		(%)	21.5%	14.5%	10.3%	8.6%	13.8%
Management Model	Freestanding	Number	84	60	62	86	292
		(%)	67.2%	51.7%	64.6%	61.4%	61.2%
	CMO	Number	28	32	19	38	117
		(%)	22.4%	27.6%	19.8%	27.1%	24.5%
	Network	Number	13	24	15	16	68
		(%)	10.4%	20.7%	15.6%	11.4%	14.3%
Total and Percent of Charters in each quadrant		Number	130	117	97	140	485
		(%)	26.9%	24.4%	20.0%	28.9%	100%

\*\*Relationship is significant at p=.001    \*Relationship is significant at p = .01

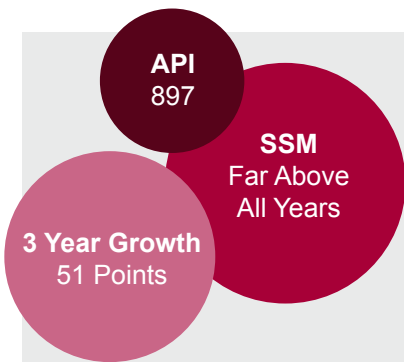
Management model was not found to be significantly associated with variation in the Status/Growth quadrant. The four observations cited above indicate that there is a connection between these school types and their Status/Growth quadrant, but they do not indicate causation. Additional research would be needed to determine a causal link between these characteristics and academic status and growth, but they do elucidate certain patterns in academic status and growth by charter school type.

We also looked at the charter school type profile for each Status/Growth quadrant in order to answer the question: who are the schools in each of these quadrants?



1. High Status, High Growth

Schools in the top right quadrant are excelling with above-average academic status and above-average cumulative growth over the past three years. Twenty-eight point nine percent (28.9%) of established charters are in this quadrant, representing 31.3% of charter students served. Charters in this quadrant are more likely to be classroom-based than non-classroom-based; 95% of these schools are classroom-based schools. They represent all types of management model; 61.4% are freestanding, 27.1% are operated by a Charter Management Organization (CMO), and 11.4% are operated by a Network. Seventy-one point four percent (71.4%) are direct-funded from the state (i.e., higher levels of independence) and 76.4% are start-up schools. They are less likely to be small schools; 91.4% test over 100 students. These high-performing schools are also more likely to perform highly relative to their predictions as measured by the SSM; 35.7% are Above Predicted Most or All Years SSM, in comparison with 20% of charters overall.



### Profile of a “High Status, High Growth” School: Synergy Charter Academy

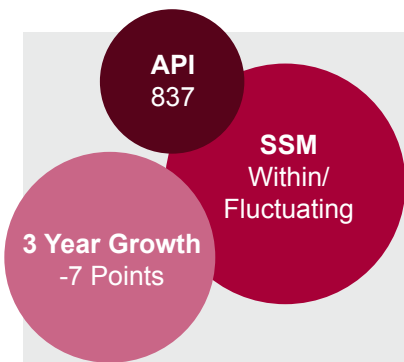
Synergy Charter Academy (Synergy) was founded by former teachers in 2004 in the inner city of South Los Angeles, and has demonstrated an impressive record of student achievement. Synergy serves a Kindergarten through grade 5 student population that is considered “at-risk,” with 86 percent qualifying for Free or Reduced Price Lunch, 35 percent of students are English Language Learners, 89 percent Latino, and 11 percent African American (2009-10 data). Synergy’s success can largely be credited to its emphasis on personalized, accelerated instruction and cycles of data inquiries.

Synergy’s staff prioritizes quality teaching and seeks to teach grade-level content while helping students make up for missing skills. To meet the needs of its many new students who arrive performing below grade level, Synergy administers baseline diagnostic assessments in math and reading, the results of which are shared with teachers, parents, and administrators. The teachers then differentiate their instructional practices by tailoring interventions to students’ areas of need. For example, a 3rd grade student struggling with reading would be provided with more phonemic awareness and phonics activities. Staff proceed to accelerate performance within a short amount of time by continuing to review data and differentiate their instructional practices throughout the year.

Synergy has not lengthened its school day or school year, which the founders believe makes it a more replicable model among traditional district schools. Synergy pursues other means of collaboration with traditional district schools, including their current co-location with a new district school, through which they share achievement strategies, a daily bell schedule, lunch and recess times, and conduct joint staff and parent meetings. Synergy Charter Academy is part of the growing Synergy Academies network of schools, which also operates Synergy Kinetic Academy and will open a high school, Synergy Quantum Academy, in fall 2011.

2. High Status,  
Low Growth

Schools in the top left quadrant have above-average academic performance that they have sustained over the past three years. Twenty percent (20%) of established charters fall in this category, representing 19.8% of students served. Charter schools in this quadrant represent a wide range of school typologies. The majority of these schools (89.7%) test over 100 students. They are more likely to be conversion schools (25.8%, compared to 18.2% overall) and more likely to be indirectly funded through their district, i.e. more dependent on their district, (45.4%, compared to 29.5% overall). In assessing their performance relative to their predictions; they are more likely than any other quadrant to be Within/Fluctuating on SSM (81.4%), yet also more likely to be Above Predicted Most or All Years (15.5%) than Below Predicted Most or All Years (3.1%).



Profile of a High Status, Low Growth School:  
Classical Academy

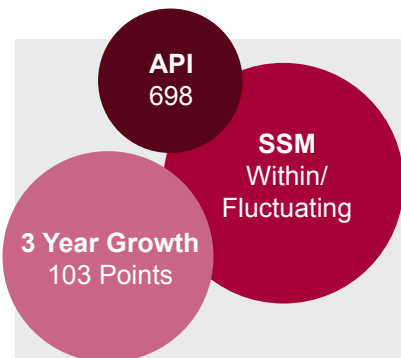
Classical Academy High School (CAHS) is an independent study charter school serving students in grades nine to 12. CAHS launched in 2006, and is affiliated with the charter network called The Classical Academies which began in 1999. Serving about 366 students, CAHS is comprised of 74% white students; 15% of students qualify for Free or Reduced Price Lunch and 0% are English Language Learners.

CAHS's independent study model guides students on a college preparatory path, while providing flexibility in instruction and classroom time. Students can select to be on campus from zero to four days per week. CAHS offers a curriculum that is aligned to the University of California A-G requirements, offering a wide range of college prep, honors, Advanced Placement, and electives, including classes at local colleges. CAHS integrates both accessibility and flexibility for their students, which helps students who might struggle in a traditional school setting. Every teacher is available to parents and students by cell phone and email, and parent communication is welcome at all times. Teachers often take extra time to work with students with a learning disability or provide additional tutoring after school.

CAHS, like all schools within the Classical network, focuses on core standards in lesson planning and instruction, in order to prepare students for standardized tests. CAHS integrates state tests into their school culture, and by nurturing a culture where testing is welcomed, administrators report that students feel less pressured with testing and therefore perform better. Meaningful parental involvement plays a key role in supporting the importance of testing, as well as in shaping the curriculum and program. Administrators report that once parents realize the importance of state tests in showcasing their students' success, student buy-in is soon to follow. School leadership consistently seeks parent feedback, and often makes changes, from curriculum choices to programming, based on parent input. Changes resulting from parent input include increased "seat time" in the physical classroom, introduction of a sports program, and more Advanced Placement classes. In the 2011-12 school year, CAHS hopes to further improve their API by messaging to parents, their community of learners, and their entire team about the importance of testing and the accolades that follow positive testing results. When stakeholders care and feel connected to results, growth will take place.

### 3. Low Status, High Growth

Schools in the bottom right quadrant have a below-average level of academic performance but their performance has increased at an above-average rate over the past three years. These are schools that are demonstrating remarkable momentum, even though they have not yet reached high performance. Twenty-four percent (24%) of established charters fall in this category, representing 28% of students served. Charter schools in this quadrant represent a wide range of school typologies. These schools are more likely to be directly funded through the state, i.e. independent charters (80.3%, compared to 70.5% overall), and are more likely to be start-up schools (86.3%, compared to 81.8% overall). They are more likely than charters in the high status quadrants to be non-classroom-based (26.5%, compared to 20.9% overall), however a majority are classroom-based schools (73.5%). In assessing their performance relative to their predictions, a majority are Within/Fluctuating on SSM (60.7%) and the remaining schools are split between being Below Predicted Most or All Years (20.5%) and Above Predicted Most or All Years (18.5%).



### Profile of a “Low Status, High Growth” School: Oakland Unity Charter High School

Founded in 2003, Oakland Unity Charter High School (Unity) serves 230 students in grades nine to 12. Unity serves a highly “at risk” population of students; 86% of students qualify for Free or Reduced Price Lunch, 33% are English Language Learners and 98% are Latino or African American.

Beginning in the 2007-08 school year, Unity had a palpable inflection point of improved API. Changes at that time included a new school leader, systematic alignment of curriculum for core subject classes, as well as additional improvements to their academic program and operations. Further, Unity began to establish a more data-focused culture by using CCSA’s ZOOM! Data Source program and by focusing on supporting all performance groups through a “data cycle” process by using data protocols to review assessment data. Over time, Unity has substantially shifted its academic culture and now is far more deliberate in their use of data to drive all academic decisions. Ongoing meaningful assessment and frequent review of data at all levels—including school-wide, grade-wide, class-wide, and for individual students—ensures teachers effectively target where students need the most support. Unity has adopted school-wide, quarterly benchmark assessments that inform teachers, students and administrators where re-teaching and further instruction should be targeted. These benchmark assessments are created by subject teachers and reviewed by the principal; they consist of 80% current and 20% cumulative content.

Unity ensures that all stakeholders understand academic accountability measures. Students help set their own academic goals and targets in “Advisory” periods, based on past and target performance for benchmarks and California Standards Tests (CSTs). Unity aims for CST growth goals of at least one performance band per year, and uses ZOOM! Data Source as a tool to organize and present student data. Ongoing student reflection on progress towards goals takes place during “Advisory” periods as well, including through “journal prompts” to facilitate that reflection. Unity also seeks to align families, support staff, teachers, administrators, and their Board of Directors around metrics that gauge student progress. The positive outcomes of this culture shift are evidenced in their scores.

4. Low Status,  
Low Growth

Schools in the bottom left quadrant have below-average levels of academic performance, and have also had a below-average rate of growth over the past three years. Twenty-seven percent (27%) of established charters are in this quadrant, representing 21% of charter students served. These schools are more likely than any other quadrant to be small; 21.5% test fewer than 100 students, compared to 13.8% of established charters. They are more likely to be non-classroom-based (38.5%, compared to 20.9% overall), however a majority are still classroom-based schools (61.5%). They are more likely to be start-ups (89.2%, compared to 81.8% overall). In assessing their performance relative to their predictions; they are more likely than any other quadrant to be Below Predicted Most or All Years (41%, compared to 18.6% overall) but just over half of them (52%) are Within/Fluctuating on SSM.

**API 500**

**SSM Below Most Years**

**3 Year Growth -19 Points**

### Profile of a “Low Status, Low Growth” School: Oakland Aviation High School

Oakland Aviation High started in 2006 as a charter high school with the aim of preparing students for college success as well as careers in aviation and business. Oakland Aviation serves approximately 135 students, most of whom experience a number of challenges outside their school, including unsafe neighborhoods, lack of resources at home and low expectations for post-secondary education. Eighty-seven percent (87%) of students qualify for Free or Reduced Price Lunch, 59% are English Language Learners and 95% are Latino or African American.

Oakland Aviation High School is a small, personalized school with a focus on character development and building motivation within students, in addition to offering opportunities to develop technical skills for aviation and business. However, the school has struggled over the years with low test results. Oakland Aviation has experienced significant leadership turnover, having had three different principals in five years. In prior years, student transcripts and records were not well maintained, students had not been taking courses in appropriate sequence, and course completion was not consistently graded or monitored. The school also experienced a number of operational challenges, including insufficient facilities and a mercury spill.

In fall 2010, a new principal took helm of the school and has since made substantial improvements around establishing effective systems for managing the building and creating a calm and orderly environment in school. She hired all new teachers, except for one veteran lead teacher, who reports that students are more engaged in the classroom than they have ever been in previous years. The principal also hired a new counselor who has developed a personalized program for connecting students to post-secondary opportunities. School leadership has recognized the need for a comprehensive turn-around and is taking the steps to make that possible in order to fulfill the mission of the school and give students the education needed to thrive in life.

# **Section 3: Accountability and Replication**

The Status, Growth and Similar Students Measure (SSM) Framework is an approach for classifying performance levels of schools across the continuum of performance, and it also has been a significant vehicle to inform our efforts to adopt minimum performance standards and to identify high impact schools that we should support for expansion and replication.

### Minimum Criteria for Renewal

A central purpose of CCSA's academic accountability focus is to strengthen the academic performance standards to which charter schools are held. Charter schools are currently held accountable under the guidelines established by CA Education Code 47607. As described earlier in the report, these criteria rely on annual API growth data and comparisons to other schools as measured, which, over time, has proven ineffective in identifying under-performing charter schools (See endnote 3 on page 61.)

CCSA has developed minimum criteria that improve upon many deficiencies of the current law by using a three-dimensional metric of Status, Growth and the SSM, and has adopted these criteria as CCSA policy regarding minimum performance. In order to qualify for CCSA's endorsement of a school's academic performance at their time of renewal, schools four years and older must meet the following Minimum Criteria for Renewal:<sup>24</sup>

- API<sup>25</sup> of at least 700, or
- Cumulative three-year growth in API of at least 30 points, or
- SSM Bands of "Within/Fluctuating" through "Far Above All Years"

These criteria create a clear and transparent benchmark based on academic status and growth, and include the SSM as a way to isolate student demographic factors in order to better assess the academic effect of a school's program. Additional benefits of these criteria are that they use multiple years of data to mitigate yearly fluctuations, and they rely on the most recently available data, as opposed to current law, which relies on data that is not available until nearly a year after testing.<sup>26</sup>

### Rationale Behind the CCSA Minimum Criteria

The following summarizes the approach we used to set the CCSA Minimum Criteria using these metrics. The analyses were completed in summer 2010, using 2009 API data.

- We started by aligning the API minimum threshold with the 25th percentile (i.e., identifying all charters in the bottom quartile statewide, ASAM excluded), which in 2009 was an API score of 722. This particularly over-selected high schools, which as a group have lower API scores than elementary and middle schools. A threshold of 700 allowed for a more balanced approach for schools at all grade

levels, and also allowed for the simplicity of being 100 points from the statewide goal of 800. The 700 API threshold aligned with the 18th percentile statewide in 2009.

- The metric chosen for assessing additional school value-add is the Similar Students Measure (SSM). If a school is below the API and growth thresholds, and was also “Below Predicted” on SSM for at least two of the past three years, then it would not meet our Minimum Criteria for Renewal.
- Using cumulative API growth over a three-year period, we aligned the threshold for growth with the median three-year growth rate statewide. We chose this because a school in the bottom 18th percentile on API would have to be growing at a rate higher than average in order to “catch up” to high levels of performance.

### Identification of “High Impact” Schools

At the other end of the performance spectrum, the Status, Growth and SSM Framework also informs our discussion around identifying schools that are high-performing on a variety of absolute and relative measures. To that end, we have determined criteria for schools to be classified as a “High Impact” school based on our framework. High Impact schools persistently exceed their prediction as measured by SSM and demonstrate success on other absolute academic performance indicators, regardless of their prediction.

A school is identified as a High Impact school if it fulfills each of the following:

- API of at least 800 (the statewide goal)
- Cumulative three-year API growth or above -30 points (no more than 30 point decline over three years)
- SSM Bands of “Above Most Years,” “Above All Years,” or “Far Above All Years”
- Proficiency of at least 50% in both English Language Arts (ELA) and Math

There is no minimum age for a school to be able to qualify as a High Impact school under these criteria.

### Rationale Behind the High Impact Schools Criteria

In setting the High Impact schools criteria, we started with our core concept of Status, Growth, and SSM:

- We set the minimum API threshold at 800, because that is the state’s API goal for all schools.
- We set a low threshold for cumulative growth because we felt that at high performance levels, demonstrating consistent growth over time was not as essential and harder to achieve as schools move towards the maximum score of 1,000. However we did want to set some minimum requirement to filter out schools with substantial drops in API. The cut-point of -30 aligned

with the average decline among all schools that had negative cumulative growth in both 2010 and 2009.

- We also wanted to identify schools that were not only demonstrating high performance on absolute measures, but those that were also adding significant value based on a prediction for their student body. Therefore, a school would also have to be in SSM Performance Bands of “Above Most Years,” “Above All Years,” or “Far Above All Years.”
- In addition to these measures, we also felt it important to include a measure of the actual percent of students scoring proficient or above in ELA and mathematics on the California Standards Tests. Since the API is a composite index score that aggregates testing results from numerous subject areas and tests, it is possible for a school to meet the state API target of 800, but still have low rates of proficiency in these two core subjects. Thus, we felt it important to include a filter to ensure that schools that were high performing on API and persistently exceeding prediction on the Similar Students Measure also demonstrated absolute proficiency in ELA and math of at least 50%.

Any one of these factors alone would not constitute a designation of high-performance. However, when taken together, the “High Impact” definition designates a level of performance that is exceptional. As context, if we were to apply the definition to non-charter schools, only 5.5% of schools would qualify. In comparison, 10.7% of charter schools qualify as a High Impact school.

**Table 8:** Charters and Non-Charter Schools Qualifying for CCSA’s “High Impact” Schools Definition, 2010.

	<b>Charters</b>	<b>Non-Charter</b>
Percent of Schools Qualifying as “High Impact”	720	7,454
Total “High Impact” Schools	77	413
Total (excluding ASAM + small)	10.7%	5.5%

**Charter Schools Identified: Minimum Criteria for Renewal and High Impact Schools**

In Figure 10, the pink-shaded area covers schools that are identified under the API status and growth components of the Minimum Criteria. Schools in that area that are also colored orange, dark purple, or red (corresponding to SSM Performance Bands of “Below Most Years,” “Below All Years,” or “Far Below All Years”) are below CCSA’s Minimum Criteria for Renewal. The criteria only apply to schools four years and older.

The green-shaded area in Figure 10 covers schools that are identified under the API status and growth components of the High Impact schools definition. Schools in that

area that are also colored orange, light purple, or red (corresponding to SSM Performance Bands of “Above Most Years,” “Above All Years,” or “Far Above All Years”) and also have ELA and math proficiency over 50% (not pictured) would be identified as a High Impact school.<sup>27</sup>

**Figure 10:** Area Below Minimum Criteria (pink shading) and area showing High Impact Schools (green shading), 2010.

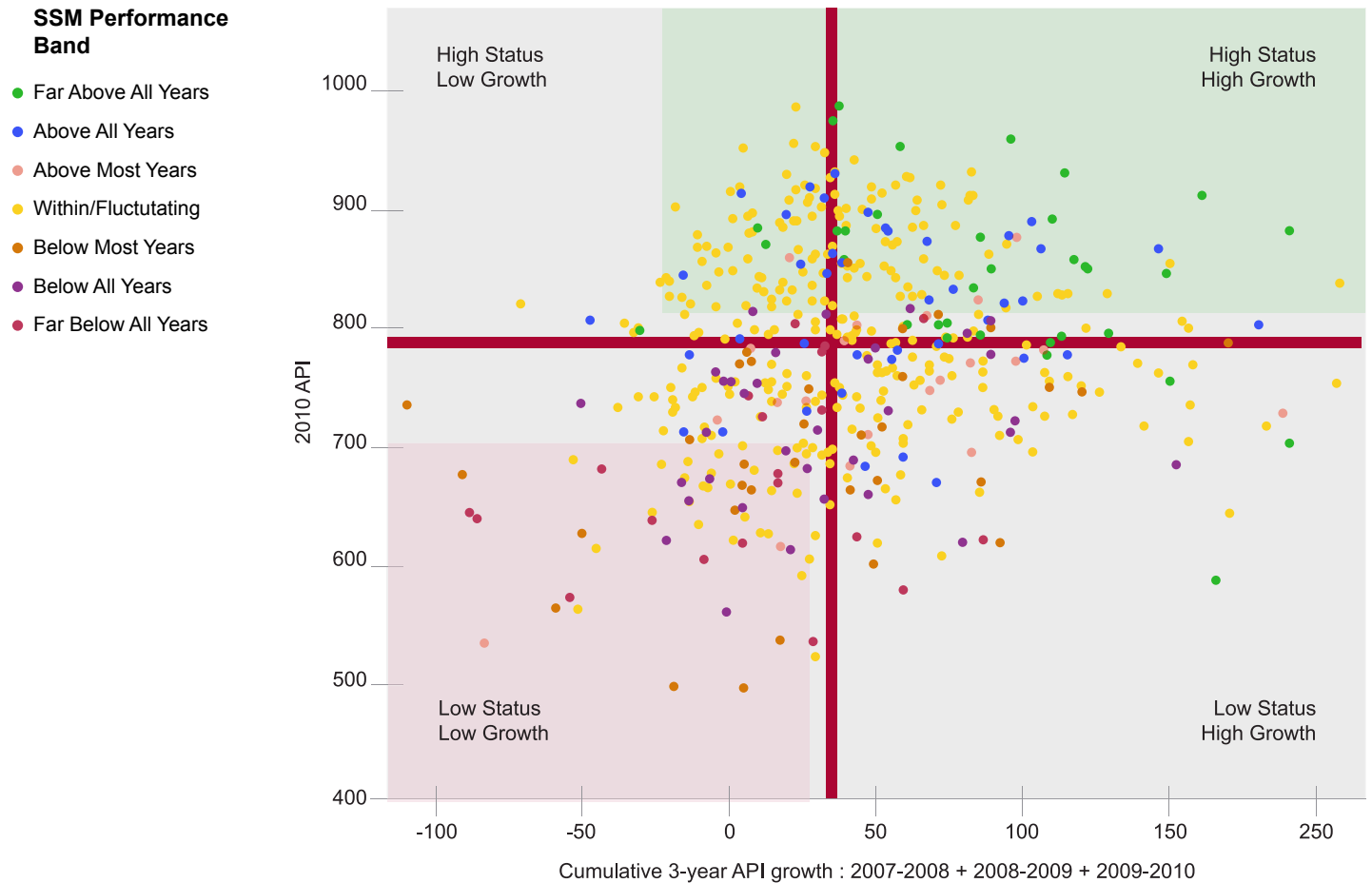


Table 9 shows the school type breakdown of schools identified by CCSA’s Minimum Criteria for Renewal, as well as those fulfilling the High Impact school definition. Schools identified under each definition are marked in the Excel spreadsheet of school results available at [www.calcharters.org/portraitofthemovement](http://www.calcharters.org/portraitofthemovement).

**Table 9:** Schools Identified by CCSA's Minimum Criteria for Renewal and "High Impact" School Definition, 2010.

	CCSA's Minimum Criteria for Renewal		High Impact Schools		All Charters	
	Number	(%)	Number	(%)	Number	(%)
<b>Total Schools</b>	30		77		720	
<b>Years Old (average)</b>	8.9		6.4		6.5	
<b>Students Tested (average)</b>	137.8		265.5		279.1	
<b>Site Type</b>						
Classroom-Based	19	63.3%	76	98.7%	582	80.8%
Independent Study	9	30.0%	1	1.3%	114	15.8%
Combination	2	6.7%	0	0.0%	24	3.3%
<b>Management Model</b>						
Freestanding	19	63.3%	25	32.5%	411	57.1%
CMO	7	23.3%	39	50.6%	201	27.9%
Network	4	13.3%	13	16.9%	108	15.0%
<b>Funding Type</b>						
Direct	21	70%	56	72.7%	509	70.7%
Indirect	9	30%	21	27.3%	211	29.3%
<b>Start Type</b>						
Start-up	30	100%	72	93.5%	605	50.8%
Conversion	0	0.0%	5	6.5%	115	16.0%
<b>Grade Level</b>						
Elementary	10	33.3%	40	51.9%	366	50.8%
Middle	0	0.0%	16	20.8%	97	13.5%
High	20	67.7%	21	27.3%	257	35.7%
<b>Student Family Income Level</b>						
≥50% Eligible for Free/Reduced Lunch	18	60.0%	64	83.1%	365	49.9%

In 2010, 30 schools were identified as being below the Minimum Criteria, and 77 schools were identified as High Impact schools. High Impact schools tested 266 students on average, compared to schools below the Minimum Criteria, which tested 138 students on average (i.e., more successful charters serve more students, on average). The majority of both groups are classroom-based, however schools below the Minimum Criteria are more likely to be non-classroom-based than the High Impact schools. High Impact schools are also more likely than schools below the Minimum Criteria to serve a low-income population (83% compared to 60%) and are more likely to be CMO schools (51% compared to 20%). Finally, high schools are over-represented among schools that are below the Minimum Criteria, while High Impact schools more accurately reflect a more balanced distribution of elementary, middle and high schools.<sup>28</sup>

## Limitations

The Status, Growth and SSM Framework offers substantial improvements to minimum performance criteria as written in state law, however there are some limitations to this approach that bear mention. Foremost, the API system lacks the ability to measure growth of individual students. It is our position that the state should fully operationalize the CALPADS student information system and align state assessments appropriately in order to adopt a student growth model for school accountability and act with the urgency and focused resource allocation equal to the challenge.<sup>29</sup>

However, as the timeline for that eventuality is unknown, we believe it is preferable in the short-term to adopt an approach that, albeit imperfect, is implementable and greatly improves on the current system's challenges.

A second limitation is that by setting a minimum API level at a numeric score as opposed to using the comparative ranks measures, proportionally more high schools are selected (as opposed to elementary or middle schools), because high schools as a group have lower API scores than the lower grade levels. However, we felt it was more fair to set a clear benchmark of a numeric score, as opposed to a comparative measure that depends on the performance of other schools and is subject to volatility from year to year. Furthermore, this approach allows schools to use the most recently-available data, while there is a one-year lag time for the Ranks metrics (See Endnote #4). In sum, despite these limitations, we believe the approach offers substantial improvements as a performance framework for assessing charter school performance and guiding CCSA's accountability efforts.

## Advocacy and Implementation of the Accountability Framework

After nearly two years in development, CCSA's Board of Directors and Member Council, which is composed of charter school leaders from across California, adopted the Accountability Framework that calls for improving academic performance criteria and refining enforcement mechanisms to eliminate deficiencies in current law that make it difficult to close under-performing schools. Our accountability strategy aims to provide a clear, simple and fully transparent framework that provides all charter schools with tools to examine their individual performance, and also helps present an accurate picture of the performance continuum across the entire movement. Schools must understand how their individual performance compares with other charter schools that share their characteristics, and have clearly visible examples of charters that are succeeding and how others are facing similar challenges. By providing public tools that are easily searchable, charters will be able to easily identify fellow schools to learn from, and form informal communities of practice across the state. With more than 900 active charters in operation in all regions of the state, the challenge to

connect, contextualize and understand patterns of academic performance is increasingly vital. As the membership and professional organization representing California's charter movement, the most important function CCSA can fulfill is to "hold up a mirror" against the whole of the movement and embolden schools to look unblinkingly at their record of performance. However, this must be a public endeavor. Schools at risk of missing minimum performance criteria will know with precision what gains they must make in order to correct their trajectory; schools experiencing growth but missing absolute measures of rigor will know where they need to improve; and schools excelling in both absolute status and growth, as well as schools identified as "High Impact," can have an expanded platform to intentionally share their best practices and accelerate their growth. CCSA will continue to assist its membership by making available data analysis and performance management tools to help schools focus their efforts to implement high-yield strategies for improvement.

In advance of the publication of the **Portrait of the Movement** and the unveiling of the Web-based tools, CCSA released to all member schools the first annual CCSA Academic Accountability Report Cards in November 2010. The Report Cards show schools their exact placement on this framework of Status, Growth and SSM, to provide fair warning to schools that are at risk of falling below the established minimum criteria and give them an opportunity to review and correct their underlying data. School leaders were encouraged to share their results with their staff, parents and key stakeholders, and customize their Report Card to suit their needs; CCSA will continue to provide these Academic Accountability Report Cards to member schools on a yearly basis. Additionally, annual publication of this **Portrait of the Movement** will track changing trends and refresh the interactive tools as annual performance data is updated.

### Implementing CCSA Policy on Accountability with Members and Authorizers

As discussed in the beginning of this section of the report, a school misses the CCSA Minimum Criteria for Renewal only if it fails to meet all of the three criteria listed above. For schools missing these criteria, CCSA will not publicly endorse their academic performance with their authorizer at the time of renewal, without additional compelling data. CCSA will encourage authorizers to take a deeper look at each school's performance to assess what unique facts in each school's data picture might better explain the individual school's record. We also will encourage schools in this category to offer more substantive value-added analysis based on individual student data and make a substantive case for why the API is inadvisable in their specific case and what alternative measures might better quantify their performance. For example, there are among the low status, low growth schools a few schools that are serving student

populations that might have qualified under the ASAM designation but did not receive it, or that have such high rates of turnover (some in excess of 200% because they focus on dropout recovery models) that API measures are simply inappropriate.

CCSA has accelerated its leadership in the policy and advocacy community while defining performance standards and ensuring accountability that lives up to the obligations of our charter promise to the public. Recently, the State Board of Education (SBE), adopted regulations that establish academic criteria to revoke chronically under-performing charter schools. CCSA worked diligently with the SBE to select clear metrics that align with the principles of our accountability framework and to define a process that would ensure an opportunity for schools to provide additional data and testimony. CCSA looks forward to working with the State Board as it implements these new regulations.

In the coming months, CCSA will endeavor to introduce legislation to amend the current renewal process and criteria, to help eliminate the loopholes that allow chronically low-performing schools to continue operating, and to reduce the volatility inherent in the current measures and enact metrics that better align with the CCSA accountability framework. Even as we prepare for the coming overhaul in the state's data and evaluation system within the next five years that will build a data system capable of assessing performance using individual student level data, the current system must be improved. Regardless of the legislative outcome, CCSA will work closely with local authorizers to share the framework and seek to align local policies for renewal and assessment with the framework statewide.

### CCSA Policy on High Impact Schools

In addition to the sensitive work of identifying minimum criteria for renewal, we have identified a cohort of 77 “High Impact” schools that are demonstrating significant added value. These charters are varied in curricular approach, management model and geographic location and much can be learned from not only what they are doing and what their results are, but what specific challenges they have overcome. These schools have delivered strong results on absolute measures like API and proficiency and have consistently outperformed their predictions – demonstrating a significant value-add. It is this multivariate picture of performance that singles them out for further study and replication. These schools should be encouraged to replicate and grow by accessing additional capital for expansion, and be supported in ways commensurate with their success, such as receiving expedited renewal access and longer charter terms, without sacrificing ongoing and appropriate monitoring by responsible authorizers. Advocacy efforts of CCSA will continue to explore ways to remove barriers to growth and

replication and reduce regulatory over-reach. As a community of practice, CCSA will also continue to orient its outreach and dissemination and replication support to connect its membership to these High Impact schools.

## Conclusion

This **Portrait of the Movement** report outlines a performance framework to assess California's charter schools based on academic performance measures already existing in the current data and evaluation system, while presenting improvements on the specific measures utilized to assess schools upon renewal or revocation. It paints a landscape of performance that offers much reason for hope and optimism, and a realistic picture of the challenges and obstacles ahead to improve upon. Our report demonstrated that:

- Charters as a group prove that the achievement gap is NOT impossible to overcome; indeed the most successful charters are significantly accelerating the closing of the achievement gap in demonstrable ways.
- Charter successes are broadly distributed across the state and by school type.
- Low-income children are disproportionately benefitting from greater access to high-quality educational choices, as the California Charter Schools Act of 1992 intended.

We have engaged hundreds of members through testing and refining our Report Cards, in conversations across the state during Regional Meetings in spring, summer and fall of 2010, and working closely with our Member Council to enact a system that makes sense for California. CCSA, along with its membership, is deeply committed to delivering fully on the promise made to California families to accelerate student achievement through high-performing charter schools. It is only through this sustained, honest, transparent and publicly accessible conversation that charters will keep their collective eyes on the prize of quality. This will be our annual report card to the public. In coming years we will increase the interactivity of our tools and schools' ability to connect more intuitively and intentionally with their peers; we will track trends and report on our failures as honestly as our successes. We will study the low-performing quadrant more diligently to understand better how those students can be better served and our schools strengthened – or closed. We will share our results with traditional non-charter schools and seek to partner with districts to enact accountability measures that are consistent and rigorous and that encourage a conversation with traditional schools about their own challenges and responses to chronic underachievement. We will join with districts and traditional schools to call for prioritized funding for a more modern, sophisticated and transparent data and assessment system worthy of the great state of California and the students it aims to serve. More importantly, we will continue to engage with our members to continue to improve our systems of support and performance management to guide them in their journey toward quality and success for all.

## Endnotes

- <sup>1</sup> The Academic Performance Index (API) is a numeric score ranging from 200 to 1,000 that summarizes a school's performance on California's standardized tests. It is used for school accountability purposes.
- <sup>2</sup> For more information, see the California Department of Education's "2009-10 Academic Performance Index Reports Information Guide."
- <sup>3</sup> Due to complexities in the tracking of charter school data at the state level, it is difficult to pinpoint the exact number of charter schools that have closed. CCSA is working with California Department of Education to help improve the quality and accuracy of charter school closure data.
- <sup>4</sup> EC 47607 holds that a charters four years and older must meet one of the following three metrics in the prior year, or in two of the last three years: meeting the annual API growth target, API Statewide Rank of 4 or above, or a Similar Students Rank of 4 or above. These provisions have proven ineffective for charter school accountability for several reasons: the provisions are largely ignored by authorizing bodies across the state; the Ranks and growth metrics are volatile measure of school performance; Ranks are not released until nearly a year after testing, which disallows schools from demonstrating recent progress; and Ranks are not calculated for schools that test fewer than 100 students, which excludes approximately 20% of all charter schools.
- <sup>5</sup> The California Department of Education uses a similar approach to create the Schools Characteristics Index. California Department of Education, "2009-10 Academic Performance Index Reports: Information Guide," May 2010, page 67, <http://www.cde.ca.gov/ta/ac/ap/documents/infoguide09.pdf>. A 2010 Report published by Ed Source used the Schools Characteristics Index to classify middle schools across the state, <http://www.edsource.org/middle-grades-study.html>.
- <sup>6</sup> Value-added measures refer to a variety of efforts involving statistical models that "estimate the relative contribution of specific teachers, schools or programs to student test performance." Braun, Henry, et al., "Getting Value Out of Value-Added: Report of a Workshop," National Research Council and National Academy of Education, National Academy of Sciences, 2010.
- <sup>7</sup> For more information on CCSA's methodology for creating the Annual School Performance Prediction (ASPP) and the Similar Students Measure (SSM), see the accompanying Technical Guide available at [www.calcharters.org/portraitofthemovement](http://www.calcharters.org/portraitofthemovement).
- <sup>8</sup> The Alternative Schools Accountability Model (ASAM) provides school-level accountability for alternative schools serving highly mobile and at-risk students. For more information, see California Department of Education's website, <http://www.cde.ca.gov/ta/ac/am/>.
- <sup>9</sup> See the accompanying Technical Guide for more on the exclusions applied to the ASPP regression models.
- <sup>10</sup> The Technical Guide includes regression statistics from prior-year ASPP models. Appendix C of this report includes the regression statistics for the 2010 ASPP regression models.
- <sup>11</sup> For this report, the term "non-charter" refers to traditional public non-charter schools.
- <sup>12</sup> Total counts of schools and students cited exclude schools that are part of the Alternative Schools Accountability Model, as well as those testing fewer than 20 students. These exclusions apply to the ASPP model and our Accountability Framework.
- <sup>13</sup> For this purpose, schools were considered to serve a low-income population if 50% or more of their students met federal eligibility for the Free or Reduced Price Lunch (FRPL) program.
- <sup>14</sup> The school type characteristics analyzed were: grade level, site type, start type, management model, funding type, school age, student family income level, size, CCSA member status, and replication/closure status. See Appendix A for definitions of each of these school type variables and the results.
- <sup>15</sup> Source: California Department of Education (CDE) data on Non-Classroom-Based/Independent Study schools, provided to CCSA in March 2010. Of a list of 192 non-classroom-based schools provided by CDE, 53% are charters and 47% are non-charters.
- <sup>16</sup> Out of 90 non-charter non-classroom-based schools, 83 (92%) either participate in ASAM or test fewer than 20 students (Source: CDE data provided to CCSA, March 2010). In comparison, 24% of charter non-classroom-based schools participate in ASAM or test fewer than 20 students (Source: CCSA data, 2010).

## Endnotes

- <sup>17</sup> See Appendix A for definitions of CMO, Network and Freestanding schools.
- <sup>18</sup> In addition to the graph in Figure 3 showing distribution of student seats, Appendix A includes results showing that small schools are more concentrated than non-small schools at the low percentiles.
- <sup>19</sup> We generate SSM results for all schools, but SSM only becomes applicable as an accountability tool for charters once they have had four years of operation, as that is when charters typically reach their first renewal cycle and have had sufficient time to generate a trend of performance.
- <sup>20</sup> To calculate three-year cumulative growth, we add the growth over the last three API cycles (i.e., an API cycle represents the difference between a current year growth API and the prior year's base API). We use three-year growth as opposed to annual growth in order to mitigate some of the volatility and natural fluctuations that occur with annual API growth.
- <sup>21</sup> The 2010 API used in these analyses and shown in these graphs is the 2010 Growth API score, reflective of test results from the end of the 2009-10 school year.
- <sup>22</sup> As in the previous analysis, we exclude schools that qualify for the Alternative Schools Accountability Model (ASAM) as well as those that have fewer than 20 valid test scores.
- <sup>23</sup> A charter's level of dependency determines how autonomous they are from their local district or authorizer. Levels of dependency are defined by a school's source of funding (direct vs. indirect), 501(c)(3) non-profit status, district representation on their board, and the source of their collective bargaining agreement. Here, funding type is used as a proxy for dependency as dependency data is currently unavailable, but will be integrated into the Portrait of the Movement 2012 Report.
- <sup>24</sup> CCSA Minimum Criteria for Renewal only apply to schools four years and older. We exclude schools participating in the Alternative Schools Accountability Model (ASAM) as well as schools testing fewer than 20 students.
- <sup>25</sup> We use the API Growth Score that is released with the Growth API reports each fall.
- <sup>26</sup> Though schools' API Growth Scores are released the August following testing, their Similar Schools Ranks and Statewide Ranks are not released until the following May, when the Base API report is published.
- <sup>27</sup> Note that the graphic illustration in Figure 10 is a simulation to show the comparison of the range identified in each definition, but does not represent all identified High Impact schools because of the additional filter for ELA and math proficiency that is not accounted for in this visualization, as well as the fact that the graph only shows schools four years and older, while young schools could also be included in the "High Impact" definition.
- <sup>28</sup> The Grade level distribution of the charter population overall is: 47.5% elementary schools, 13.1% middle schools, and 39.4% high schools.
- <sup>29</sup> The California Longitudinal Pupil Achievement Data System (CALPADS) is a "longitudinal data system used to maintain individual-level data including student demographics, course data, discipline, assessments, staff assignments, and other data for state and federal reporting." For more information, see the California Department of Education's Web site at <http://www.cde.ca.gov/ds/sp/cl/>.

# Appendix A

School Typology  
Analysis:  
Percent Predicted  
API and Distribution  
of Performance on  
Percent Predicted API

## Definitions of School Type Variables

### Site Type:

- Non-classroom-based: Schools where less than 80% of instructional time is offered at the school site when students are “engaged in educational activities required of those pupils and are under immediate supervision and control of an employee of the charter school who possesses a valid teaching certificate.” (EC 47612.5)
- Classroom-based: Schools where at least 80% of instructional time is offered at the school site.

### Funding Type:

- Indirect: Schools that are funded indirectly through their district. This is used as a proxy for describing charters that are more dependent and have less autonomy from their local district.
- Direct: Schools that are funded directly through the state. This is used as a proxy for describing charters that are more independent and have more autonomy from their local district.

### Start Type:

- Conversion: Schools that converted from a traditional public school into a charter school.
- Start-up: Schools that started organically without converting from an existing school.

### Size:

- Small: Schools that have at least 100 valid test scores included in their API score.
- Not small: Schools that had less than 100 valid test scores included in their API score.

### Management Model (CCSA Definition):

- CMO school: School that is part of a Charter Management Organization (CMO), which is an organization that operates three or more schools linked by a common philosophy and centralized governance or operations.
- Network school: School that is part of a Network, which is a group of schools linked by a common philosophy but not centralized governance or operations. Networks are also entities that would otherwise fit the definition of CMO but have fewer than three schools.
- Freestanding school: Freestanding schools include both start-up single-site schools and traditional district schools that have converted to charters that are not part of a Network or CMO affiliation.

Student Family Income:

- Low-income: Schools where 50% or more of students are reported eligible for the federal Free or Reduced Price Lunch program.
- Not low-income: Schools where less than 50% of students are reported eligible for the federal Free or Reduced Price Lunch program.

Charter Age:

- Young: Charter schools that have been in operation for five years or less.
- Mature: Charter schools that have been in operation for six years or longer.

Member Status:

- Member: Active member of the California Charter Schools Association.
- Non-member: Not an active member of the California Charter Schools Association.

Association Replication Schools (CCSA Definition):

- Replication schools: Schools that are operated by a charter management organization (CMO) that opened a school in the following fall (i.e. in this case, the fall of the 2010-11 school year).

***Do Certain Types of Charters on Average Over- or Under-Perform their Prediction?***

These t-tests examine if the mean of Percent Predicted API for a group of charter schools is significantly different from 1. A significant result means that charter type is significantly over-performing (i.e., if API is above predicted, the mean would be greater than 1) or significantly below predicted (i.e., if API is below predicted, the mean would be less than 1).

Table X: One Sample T-test of Grade Span

	Percent Predicted 2010		t
	Mean	Std. Dev.	
Elementary	.9979	.08091	-.498
Middle	1.0267	.09125	2.878**
High	1.0099	.11478	1.382

\*p < .05 \*\*p < .01 \*\*\*p < .001

Table X: One Sample T-test of Site Type

	Percent Predicted 2010		
	Mean	Std. Dev.	t
Non-classroom-based	.9769	.08314	-3.271***
Classroom-based	1.0130	.09763	3.206***

\*p < .05 \*\*p < .01 \*\*\*p < .001

Table X: One Sample T-test of Start Type

	Percent Predicted 2010		
	Mean	Std. Dev.	t
Conversion	1.0061	.05814	1.118
Start-up	1.0061	.10169	1.464

\*p < .05 \*\*p < .01 \*\*\*p < .001

Table X: One Sample T-test of CCSA Member Status

	Percent Predicted 2010		
	Mean	Std. Dev.	t
Non-member	.9952	.09886	-.680
Member	1.0102	.09469	2.458**

\*p < .05 \*\*p < .01 \*\*\*p < .001

Table X: One Sample T-test of Management Model

	Percent Predicted 2010		
	Mean	Std. Dev.	t
Freestanding	.9914	.08417	-2.046*
CMO	1.0421	.09375	6.297***
Network	1.0101	.11091	.943

\*p < .05 \*\*p < .01 \*\*\*p < .001

Table X: One Sample T-test of Charter Age

	Percent Predicted 2010		
	Mean	Std. Dev.	t
Young (1-5)	1.0065	.10338	1.189
Mature (6+)	1.0056	.08845	1.208

\*p < .05 \*\*p < .01 \*\*\*p < .001

Table X: One Sample T-test of Charter Size

	Percent Predicted 2010		t
	Mean	Std. Dev.	
Not small	1.0113	.08181	3.312***
Small (T & S)	.9859	.13575	-1.270

\*p < .05 \*\*p < .01 \*\*\*p < .001

Table X: One Sample T-test of Funding Type

	Percent Predicted 2010		t
	Mean	Std. Dev.	
Indirect	.9984	.9984	-.239
Direct	1.0092	1.0092	2.191*

\*p < .05 \*\*p < .01 \*\*\*p < .001

Table X: One Sample T-test of CMO Replications

	Percent Predicted 2010		t
	Mean	Std. Dev.	
CMO Replications	1.0630	.08829	7.166***

\*p < .05 \*\*p < .01 \*\*\*p < .001

Table X: One Sample T-test of Charters that Closed

	Percent Predicted 2010		t
	Mean	Std. Dev.	
Closed Charters	.8228	.13331	-3.760**

\*p < .05 \*\*p < .01 \*\*\*p < .001

Table X: One Sample T-test of Charters with 50%+ Free or Reduced Price Lunch Students

	Percent Predicted 2010		t
	Mean	Std. Dev.	
Low-income	1.0307	.10677	5.421***

\*p < .05 \*\*p < .01 \*\*\*p < .001

***Are Certain Types of Charters More Likely to Perform at the Top or Bottom of the Statewide Distribution on Percent Predicted API?***

These t-tests examine differences in charters' average location along the statewide distribution of Percent Predicted API. The variable "Percent Predicted API Percentiles" ranges from 1 to 20 and represents the statewide percentile range, binned in groups of 5 percent (i.e., 1 = 0-5th percentile, 2 = 5th-10th percentile... 19 = 90th-95th percentiles, 20 = 95th-100th percentiles). A mean above 10 indicates that group is more concentrated at the top end of the statewide distribution and a mean below 10 indicates that group is more concentrated at the bottom end of the statewide distribution. These t-tests indicate whether the propensity to be in certain percentiles is statistically significantly different among two types of charters.

Table X: Independent Sample T-test of Site Type

	Percent Predicted 2010				t
	Non-classroom-based		Classroom-based		
	Mean	Std. Dev.	Mean	Std. Dev.	
Percent Predicted Percentiles (1-20)	8.25	6.734	11.16	6.941	-4.526***

\*p < .05 \*\*p < .01 \*\*\*p < .001

Table X: Independent Sample T-test of Start Type

	Percent Predicted 2010				t
	Conversion		Start-up		
	Mean	Std. Dev.	Mean	Std. Dev.	
Percent Predicted Percentiles (1-20)	11.15	5.794	10.50	7.196	.917

\*p < .05 \*\*p < .01 \*\*\*p < .001

Table X: Independent Sample T-test of Management Model

	Percent Predicted 2010				t
	Freestanding		CMO		
	Mean	Std. Dev.	Mean	Std. Dev.	
Percent Predicted Percentiles (1-20)	9.57	6.588	13.04	7.038	-5.794***

\*p < .05 \*\*p < .01 \*\*\*p < .001

Table X: Independent Sample T-test of Funding Type

	Percent Predicted 2010				t
	Indirect		Direct		
	Mean	Std. Dev.	Mean	Std. Dev.	
Percent Predicted Percentiles (1-20)	10.10	6.375	10.81	7.227	-1.225

\*p < .05 \*\*p < .01 \*\*\*p < .001

Table X: Independent Sample T-test of Charter Size

	Percent Predicted 2010				t
	Not Small		Small (T & S)		
	Mean	Std. Dev.	Mean	Std. Dev.	
Percent Predicted Percentiles (1-20)	11.13	6.849	8.59	7.180	3.897***

\*p < .05 \*\*p < .01 \*\*\*p < .001

Table X: Independent Sample T-test of Charters with 50%+ Free or Reduced Price Lunch Students

	Percent Predicted 2010				t
	Not Low-income		Low-income		
	Mean	Std. Dev.	Mean	Std. Dev.	
Percent Predicted Percentiles (1-20)	8.89	6.172	12.35	7.349	-6.833***

\*p < .05 \*\*p < .01 \*\*\*p < .001

Table X: Independent Sample T-test of Charter Age

	Percent Predicted 2010				t
	Young (1-5)		Mature (6+)		
	Mean	Std. Dev.	Mean	Std. Dev.	
Percent Predicted Percentiles (1-20)	10.61	7.056	10.59	6.937	.021

\*p < .05 \*\*p < .01 \*\*\*p < .001

# Appendix B

**School Typology  
Analysis:  
Status/Growth  
Framework**

***Are there patterns by school type in how charters are distributed across the four quadrants of academic status and growth?***

The chi-square test is used to determine whether differences between observed and expected frequencies are statistically significant. A significant result indicates that the different charter types' locations within the quadrants are significantly different from each other.

Table X: Chi-square of Site Type

Quadrant	Non-classroom-based (n = 101)		Classroom-based (n = 383)	
	Expected	Actual	Expected	Actual
Low Status, Low Growth	27.1	50	102.9	80
Low Status, High Growth	24.4	31	92.6	86
High Status, Low Growth	20.2	13	76.8	84
High Status, High Growth	29.2	7	110.8	133
$\chi^2$	51.23			
p	0.000			

Table X: Chi-square of Management Model

Quadrant	Freestanding (n = 292)		CMO (n = 117)		Network (n = 68)	
	Expected	Actual	Expected	Actual	Expected	Actual
Low Status, Low Growth	76.5	84	30.7	28	17.8	13
Low Status, High Growth	71	60	28.5	32	16.5	24
High Status, Low Growth	58.8	62	23.5	19	13.7	15
High Status, High Growth	85.7	86	34.3	38	20	16
$\chi^2$	10.14					
p	0.119					

Table X: Chi-square of Funding Type

Quadrant	Indirect (n = 143)		Direct (n = 341)	
	Expected	Actual	Expected	Actual
Low Status, Low Growth	38.4	36	91.6	94
Low Status, High Growth	34.6	23	82.4	94
High Status, Low Growth	28.7	44	68.3	53
High Status, High Growth	41.4	40	98.6	100
$\chi^2$	17.43			
p	0.001			

Table X: Chi-square of Start Type

Quadrant	Conversion (n = 88)		Start-up (n = 396)	
	Expected	Actual	Expected	Actual
Low Status, Low Growth	23.6	14	106.4	116
Low Status, High Growth	21.3	16	95.7	101
High Status, Low Growth	17.6	25	79.4	72
High Status, High Growth	25.5	33	114.5	107
$\chi^2$	17.43			
p	0.001			

Table X: Chi-square of Charter Size

Quadrant	Not Small (n = 417)		Small (T & S) (n = 67)	
	Expected	Actual	Expected	Actual
Low Status, Low Growth	112	102	18	28
Low Status, High Growth	100.8	100	16.2	17
High Status, Low Growth	83.6	87	13.4	10
High Status, High Growth	120.6	128	19.4	12
$\chi^2$	10.78			
p	0.013			

Table X: Chi-square of Charters with 50%+ Free or Reduced Price Lunch

Quadrant	Not Low-income (n = 259)		Low-income (n = 225)	
	Expected	Actual	Expected	Actual
Low Status, Low Growth	69.6	63	60.4	67
Low Status, High Growth	62.6	38	54.4	79
High Status, Low Growth	51.9	84	45.1	13
High Status, High Growth	74.9	74	65.1	66
$\chi^2$	64.85			
p	0.000			

# Appendix C

## Annual School Performance Prediction (ASPP) 2010 Regression Models

(Dependent Variable: 2010 API growth score)

See Technical Guide available at [www.calcharters.org/portraitofthemovement](http://www.calcharters.org/portraitofthemovement)  
for full explanation of the ASPP model and prior year regression statistics.

## Model 1. Elementary Schools with Parent Education

### Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
.855a	.730	.729	39.058

### ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Regression	2.389E7	18	1327435.087	870.142	.000a
Residual	8822586.345	5783	1525.539		
Total	3.272E7	5801			

### Coefficients

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	617.815	136.967		4.511	.000
% FRPL	-.732	.034	-.305	-21.612	.000
Average Par Ed	18.365	1.202	.212	15.281	.000
% EL	-.879	.047	-.249	-18.548	.000
% DI	-.807	.126	-.045	-6.399	.000
% AA	-.886	.081	-.121	-10.974	.000
% AI	-2.426	.199	-.092	-12.177	.000
% AS	.935	.073	.163	12.830	.000
% FI	.175	.138	.010	1.271	.204
% HI	.017	.067	.007	.259	.795
% PI	-.817	.354	-.016	-2.309	.021
% WH	.050	.063	.017	.802	.423
% MR	.132	.193	.005	.684	.494
Mobility %	2.218	.137	.126	16.171	.000
% Gr 2	.209	1.365	.024	.153	.878
% Gr 3-5	.202	1.366	.036	.148	.882
% Gr 6	-.196	1.365	-.026	-.143	.886
% Gr 7-8	-.482	1.367	-.065	-.352	.725
% Gr 9-11	-2.139	1.383	-.078	-1.547	.122

### Residuals Statistics

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	579.16	1015.93	806.94	64.177	5802
Residual	-264.362	191.928	.000	38.998	5802
Std. Predicted Value	-3.549	3.256	.000	1.000	5802
Std. Residual	-6.768	4.914	.000	.998	5802

## Model 2. Elementary Schools without Parent Education

### Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
.850a	.722	.721	39.745

### ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Regression	2.405E7	17	1414610.731	895.506	.000a
Residual	9252568.838	5857	1579.678		
Total	3.330E7	5874			

### Coefficients

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	652.917	137.706		4.741	.000
% FRPL	-.930	.032	-.387	-29.205	.000
% EL	-1.064	.046	-.301	-23.200	.000
% DI	-.883	.128	-.049	-6.914	.000
% AA	-.959	.081	-.131	-11.805	.000
% AI	-2.784	.201	-.104	-13.857	.000
% AS	1.037	.073	.185	14.241	.000
% FI	.160	.139	.009	1.152	.249
% HI	-.131	.067	-.052	-1.954	.051
% PI	-.948	.358	-.019	-2.645	.008
% WH	.031	.063	.011	.492	.623
% MR	.254	.195	.010	1.303	.193
Mobility %	2.496	.138	.141	18.088	.000
% Gr 2	.293	1.373	.033	.214	.831
% Gr 3-5	.270	1.373	.048	.197	.844
% Gr 6	-.152	1.373	-.020	-.111	.912
% Gr 7-8	-.494	1.375	-.067	-.359	.720
% Gr 9-11	-2.046	1.391	-.074	-1.471	.141

### Residuals Statistics

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	559.57	1021.18	807.60	63.983	5875
Residual	-261.152	204.793	.000	39.688	5875
Std. Predicted Value	-3.876	3.338	.000	1.000	5875
Std. Residual	-6.571	5.153	.000	.999	5875

## Model 3. Middle Schools with Parent Education

### Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
.901a	.813	.810	37.453

### ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Regression	8742975.582	17	514292.681	366.636	.000a
Residual	2016815.563	1438	1402.734		
Total	1.076E7	1455			

### Coefficients

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	617.226	29.121		21.195	.000
% FRPL	-.774	.074	-.259	-10.457	.000
Average Par Ed	29.022	2.423	.276	11.980	.000
% EL	-1.101	.119	-.181	-9.288	.000
% DI	-3.056	.338	-.110	-9.050	.000
% AA	-1.590	.174	-.188	-9.134	.000
% AI	-3.124	.630	-.064	-4.957	.000
% AS	.715	.161	.107	4.429	.000
% FI	-.173	.303	-.008	-.571	.568
% HI	-.390	.155	-.128	-2.520	.012
% PI	-.736	.699	-.013	-1.053	.292
% WH	-.099	.144	-.028	-.688	.492
% MR	-.570	.371	-.020	-1.538	.124
Mobility %	2.271	.271	.109	8.368	.000
% Gr 2	-2.640	2.038	-.015	-1.295	.195
% Gr 3-5	.548	.166	.040	3.305	.001
% Gr 6	.232	.068	.039	3.401	.001
% Gr 9-11	-.802	.260	-.036	-3.083	.002

Grade 7-8 enrollment not included in MS model because not significant.

### Residuals Statistics

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	516.59	999.45	775.48	77.523	1456
Residual	-142.586	206.576	.000	37.234	1456
Std. Predicted Value	-3.340	2.889	.000	1.000	1456
Std. Residual	-3.807	5.516	.000	.994	1456

## Model 4. Middle Schools without Parent Education

### Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
.891a	.793	.791	39.568

### ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Regression	8672005.699	16	542000.356	346.179	.000a
Residual	2262196.445	1445	1565.665		
Total	1.093E7	1461			

### Coefficients

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	706.236	29.643		23.825	.000
% FRPL	-1.110	.072	-.370	-15.328	.000
% EL	-1.267	.122	-.208	-10.392	.000
% DI	-3.311	.356	-.119	-9.312	.000
% AA	-1.712	.184	-.201	-9.328	.000
% AI	-3.906	.661	-.079	-5.911	.000
% AS	.746	.170	.112	4.379	.000
% FI	-.371	.319	-.017	-1.161	.246
% HI	-.784	.160	-.256	-4.890	.000
% PI	-1.052	.738	-.018	-1.426	.154
% WH	-.163	.152	-.046	-1.074	.283
% MR	-.476	.391	-.017	-1.217	.224
Mobility %	2.521	.286	.120	8.817	.000
% Gr 2	-2.787	2.153	-.016	-1.295	.196
% Gr 3-5	.527	.175	.038	3.010	.003
% Gr 6	.247	.072	.042	3.447	.001
% Gr 9-11	-.705	.275	-.031	-2.567	.010

Grade 7-8 enrollment not included in MS model because not significant.

### Residuals Statistics

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	492.09	995.23	776.18	77.046	1462
Residual	-151.725	251.897	.000	39.351	1462
Std. Predicted Value	-3.687	2.843	.000	1.000	1462
Std. Residual	-3.834	6.366	.000	.995	1462

## Model 5. High Schools with Parent Education

### Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
.881a	.775	.773	38.895

### ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Regression	1.082E7	17	636452.214	420.703	.000a
Residual	3135114.937	2072	1512.831		
Total	1.395E7	2089			

### Coefficients

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	526.392	26.024		20.227	.000
% FRPL	-.410	.062	-.134	-6.572	.000
Average Par Ed	24.943	2.089	.238	11.939	.000
% EL	-1.818	.121	-.264	-15.028	.000
% DI	-3.820	.277	-.152	-13.811	.000
% AA	-1.400	.220	-.161	-6.361	.000
% AI	-1.743	.384	-.058	-4.545	.000
% AS	1.616	.202	.254	7.996	.000
% FI	.618	.290	.032	2.129	.033
% HI	.368	.193	.122	1.903	.057
% PI	-1.520	1.053	-.017	-1.443	.149
% WH	.601	.197	.182	3.054	.002
% MR	-.053	.385	-.002	-.139	.890
Mobility %	2.717	.135	.235	20.078	.000
% Gr 2	2.391	3.109	.027	.769	.442
% Gr 3-5	-3.108	1.032	-.111	-3.012	.003
% Gr 6	.263	.577	.007	.456	.648
% Gr 9-11	-.507	.129	-.071	-3.927	.000

Grade 7-8 enrollment not included in MS model because not significant.

### Residuals Statistics

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	389.01	978.59	745.92	71.962	2090
Residual	-227.268	286.080	.000	38.737	2090
Std. Predicted Value	-4.960	3.233	.000	1.000	2090
Std. Residual	-5.843	7.355	.000	.996	2090

## Model 6. High Schools without Parent Education

### Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
.873a	.763	.761	40.094

### ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Regression	1.082E7	17	636495.063	395.939	.000a
Residual	3363078.561	2092	1607.558		
Total	1.418E7	2109			

### Coefficients

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1421.777	760.655		1.869	.062
% FRPL	-.700	.059	-.229	-11.870	.000
% EL	-2.082	.123	-.301	-16.991	.000
% DI	-3.936	.284	-.155	-13.836	.000
% AA	-1.358	.225	-.155	-6.046	.000
% AI	-1.991	.391	-.066	-5.097	.000
% AS	1.840	.205	.291	8.957	.000
% FI	.876	.296	.045	2.955	.003
% HI	.282	.197	.094	1.434	.152
% PI	-1.533	1.083	-.017	-1.416	.157
% WH	.767	.200	.232	3.830	.000
% MR	.060	.393	.002	.154	.878
Mobility %	2.874	.136	.251	21.155	.000
% Gr 2	-5.079	7.928	-.057	-.641	.522
% Gr 3-5	-11.968	7.824	-.423	-1.530	.126
% Gr 6	-8.035	7.619	-.223	-1.055	.292
% Gr 7-8	-8.304	7.584	-.819	-1.095	.274
% Gr 9-11	-8.896	7.592	-1.245	-1.172	.241

Grade 7-8 enrollment not included in MS model because not significant.

### Residuals Statistics

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	364.14	968.37	746.72	71.627	2110
Residual	-214.760	276.741	.000	39.932	2110
Std. Predicted Value	-5.341	3.095	.000	1.000	2110
Std. Residual	-5.356	6.902	.000	.996	2110

