



Hopes, Fears, & Reality

A BALANCED LOOK AT AMERICAN CHARTER SCHOOLS IN 2012



Robin J. Lake, Editor

National **Charter School**
Resource Center

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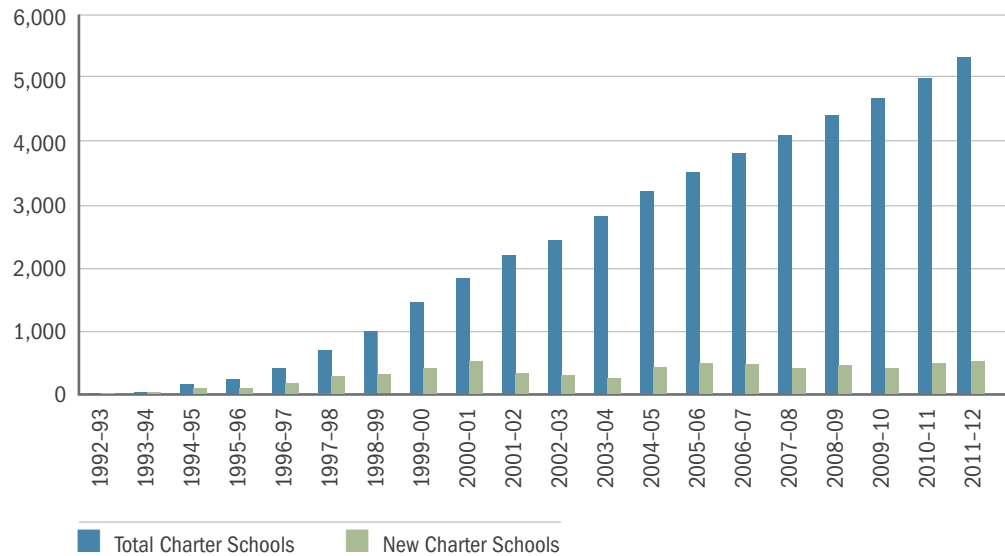
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Center on Reinventing Public Education
University of Washington Bothell

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Fast Facts: Charter Schools in 2011–12



Number of states that now have charter laws:	42 and the District of Columbia
Number of states that have passed a charter law since 2011:	2 (Maine and Washington)
Total number of charter schools in 2011–12:	5,618
Percentage of public schools that are charter schools in 2011–12:	5.8%
Percentage of public schools that are charter schools in 2010–11:	5.4%
Number of students attending charter schools in 2011–12:	2,050,168
Percentage of all public school students attending charter schools in 2011–12:	4.2%
Percentage of all public school students attending charter schools in 2010–11:	3.7%
Estimated number of students on charter school waiting lists in 2011–12:	420,000
Percentage of charter school students eligible for free or reduced-price lunch in 2011–12:	53.3%
Percentage of traditional public school students eligible for free or reduced-price lunch in 2011–12:	47.7%
Number of new charter schools that opened in 2011–12:	547
Estimated number of charter schools that closed in 2011–12:	150*
Percentage of charter schools that have converted from a traditional public school or a private school in 2011–12:	8.7%
Percentage of charter schools that are run by nonprofit or for-profit management organizations in 2010–11:	32.5%
Percentage of charter schools that are unionized in 2009–10:	12.3%
Percentage of charter schools that provide some form of virtual learning in 2009–10:	7.4%

* This is an estimate from *Back to School Tallies: Estimated Number of Public Charter Schools & Students, 2012–2013* (National Alliance for Public Charter Schools, 2013) at http://www.publiccharters.org/data/files/Publication_docs/NAPCS_2012-13_New_and_Closed_Charter_Schools_20130114T161322.pdf.

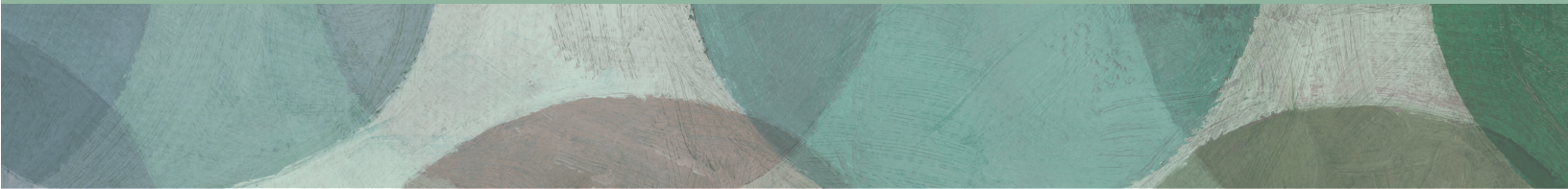
All data are from the National Alliance for Public Charter Schools. See <http://dashboard.publiccharters.org/dashboard/home>. All numbers reflect the most recent data available as of April 2013.

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Overview

Will the Charter Movement
Rest on Its Laurels or
Innovate and Expand?



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Overview

Will the Charter Movement Rest on Its Laurels or Innovate and Expand?

Robin J. Lake

More than 20 years after the charter sector was born, charter schools have become a mature presence in U.S. public education. Charter schools educate a significant number of students in most major U.S. cities. From a ragged start marked by diverse—and sometimes vague—goals, the sector has evolved into one where the quality of outcomes is generally understood to be the central concern. Since the first charter law was enacted in 1991, the movement has grown steadily, with 300 to 400 new charter schools added each year, and with the best schools being replicated through charter management organizations (CMOs). As our last issue of *Hopes, Fears, & Reality* highlighted, charter schools are now partnering with major urban school districts, developing agreements and infrastructure to support shared enrollment systems, special education, facilities, and instructional best practices. Even my home state of Washington passed charter school legislation in 2012 (on the fourth attempt in 13 years). Today, only eight states still do not allow charter schools. It is hard to envision the future of U.S. public education without an ongoing role for the charter sector.

So where does the movement go from here? In a way, it has fulfilled one of its core missions—equity for students—by establishing itself as a primarily urban phenomenon with significant chains of schools that are closing achievement gaps. But innovation is another core mission of the charter founders, so it would be a shame if charter leaders took their successes for granted and became a strong but largely static element of public education.

Will the sector place itself at the leading edge of innovation? Some signs point to no. For instance, I recently conducted a quick survey of school providers and association leaders in the charter sector to see whether they were prepared to implement the Common Core State Standards. To a large extent, they were not prepared to do so. The Common Core State Standards are the next big thing for

U.S. students, so the sluggishness of charters in this area is surprising for a movement that has often positioned itself as the research and development sector for public education. There are other areas of concern as well:

- We have seen tensions as more charter schools fight to get a foothold in suburban areas. Today, are charter schools more likely to open in more advantaged communities? If so, is this a cause for concern? Or is it a reflection of their growing mainstream appeal?
- In the past few years, cities have started bidding wars over a few high-performing CMOs that cannot come close to meeting the demand for them. How can cities and those who fund growth develop new ways to create more good schools?
- In the face of budget forecasts that predict very tight state education spending well into the future, will charter schools struggling to cover basic costs use their budget autonomy to use funds more productively?
- Although there are a handful of striking examples of creative new uses of technology in charter schools, why are they relatively small in number and isolated, given the market share of charters and their flexibility to innovate?

We asked leading thinkers in these areas to assess the landscape and provide guidance to the field. In the following chapters, these experts explore ideas that could be useful to charter leaders, funders, and policymakers as they consider what role charter schools should play given the demand for better schools, the Common Core State Standards, and highly constrained fiscal realities.

In Chapter 1, Jeffrey Henig, an esteemed political scientist from Columbia University, takes on the question of suburban charters. Henig's assessment is that despite recent high-profile newspaper stories about charters opening in affluent areas, the data suggest that in the past six years, charter schools have been remarkably consistent in serving urban and disadvantaged populations. In fact, there is evidence that the proportion of charter schools serving advantaged populations is falling. Insofar as charters are expanding among mostly white advantaged families, he argues, that may be a meaningful political sign, showing that charter schools are making serious inroads with a wider audience. Indeed, Henig points to several intriguing scenarios that could bring a significant increase in demand for charter schools among suburbanites, raising a real opportunity for school developers and authorizing agents to consider whether and how charter schools might move beyond their current "brand" of serving the neediest populations to become leaders in creating integrated schools—a goal that has been elusive in the United States.

In Chapter 2, we move from the demand side to the supply side with Ethan Gray, a leader in building a successful charter school community in Indianapolis and now head of the Cities for Education Entrepreneurship Trust (CEE-Trust). Gray contributes a compelling argument and roadmap for why and how cities should consider taking control of their own destiny by building charter school incubators, rather than waiting for CMOs to decide to expand in a given area. Gray writes that “for most cities, a CMO replication strategy is unlikely to either be successful or meet the demand in their communities for high-quality seats.” Gray describes how school incubators work, the results to date, and lessons the CEE-Trust has learned about how incubators can be most successful. Gray concludes with ideas for the role incubators can play to create more effective models based on blended learning and other new instructional technologies. Finally, he makes the case that by investing in local school incubators, cities can leverage public funds to get long-term results for students.

Chapter 3 builds on the theme of charter school experimentation with new technologies and new classroom structures. Michael Horn is a leading thinker on disruptive technologies in education and director of the Christensen Institute (formerly Innosight Institute). He and coauthor Tricia Maas of the Center on Reinventing Public Education (CRPE) argue—based on Horn’s experience and Maas’ surveys of charter school operators—that charter schools, which until recently took a traditional approach to schooling, are now rapidly adopting blended-learning approaches to classroom and school design. California CMOs appear to be leading this trend, but it is clear that charter schools across the United States also are experimenting with technology. Although the potential for cost savings is a factor for many of these schools, the real driver, Horn and Maas say, is a desire to get dramatically better results for students through personalized and data-driven instruction.

In Chapter 4, Suzanne Simburg and Marguerite Roza, fiscal analysts at CRPE and the Edunomics Lab at Georgetown University, propose that school systems should experiment with innovative staffing models and blended-learning technologies to use their resources more effectively. As the authors argue, all of public education is facing a crisis. Labor costs are growing faster than revenues. Other than cutting teacher salaries or increasing class sizes, Simburg and Roza say, the way out is trimming costs by dramatically reorganizing schedules and staff through technological approaches, such as those being used in the schools discussed in Chapter 3.

Together, these essays remind us that the charter school sector is constantly in flux as it responds to the demand for better schools. Formerly viewed as primarily urban schools, charters are now suburban as well and could grow more so in the future. Funders, authorizers, policymakers, and association leaders will have to decide whether to support start-up schools serving a more affluent population in search of better school options or ignore the demand. City leaders need to think through how they will build a supply of strong school providers and whether incubators can play a role. Those running or starting schools must consider how they can use their autonomy to take advantage of new technologies and staffing models.

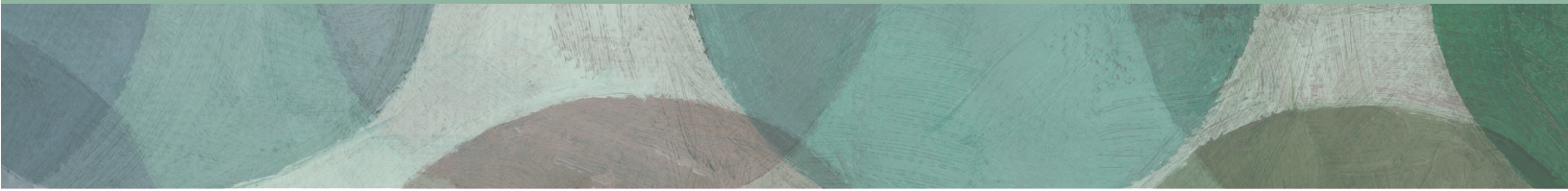
The charter sector will continue to evolve. The question is only how fast and in what directions. If charter leaders rest on their laurels, the movement may miss out on important opportunities to expand more quickly, use resources more productively, and, most importantly, improve student success. We hope these essays point to proactive steps forward.

Author Biography

Robin Lake is the director of CRPE at the University of Washington and is nationally recognized for her research and analysis of U.S. public school system reforms, including charter schools and CMOs, innovation and scale, portfolio school districts, school turnaround efforts, and performance-based accountability systems. Lake has authored numerous studies and provided expert technical assistance reports on charter schools. She is the editor of *Hopes, Fears, & Reality: A Balanced Look at American Charter Schools*, an annual report on the state of charter schools in the United States. She is also the editor of *Unique Schools Serving Unique Students: Charter Schools and Children With Special Needs* (CRPE, 2010) and coauthor (with Paul Hill) of *Charter Schools and Accountability in Public Education* (Brookings, 2002). She has provided invited testimonies to the Education and Labor Committee of the U.S. House of Representatives as well as various state legislatures; presents regularly at conferences and summits across the United States; and serves as an advisor to the *Journal of School Choice*, the National Association of Charter School Authorizers, and the National Charter School Resource Center.

Chapter 1

Charter Inroads in Affluent Communities: Hype or Turning Point?



Hopes, Fears, & Reality

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Chapter 1

Charter Inroads in Affluent Communities: Hype or Turning Point?

Jeffrey R. Henig

Charter schools were formerly eyed suspiciously—as a way for affluent families to get the benefits of elite private education without having to pay tuition and thus were a potential force for racial resegregation. By 2010, approximately two decades into the charter school movement, it seemed this worry had been put to rest. Charter schools were primarily focused on urban minority families, who felt they were not well served by traditional public schools, rather than suburban white children, whose advantages seemingly destined them for success. In 2009–10, according to the National Center for Education Statistics, 63 percent of all charter school students were nonwhite, 60 percent of all charter schools served a majority nonwhite student population, and 55 percent served a majority low-income-family student population.

In the past few years, however, high-profile incursions of charters into privileged suburbs and gentrifying city neighborhoods have been gaining attention, leading some to conclude that a dramatic shift is afoot. Reporting in the *Wall Street Journal*, Stephanie Banchemo noted that “charter operators have pushed to open schools in middle-income and suburban communities, triggering battles” in New Jersey, New York, and Nashville, among other places. Nina Rees, the incoming chief executive officer of the National Alliance for Public Charter Schools (NAPCS), told Banchemo that the change is “important to broaden the base, so all parents—including middle- and upper-income—can see charters are a viable option for them.... It helps build support for the idea of charters” (Banchemo, 2012). In central Ohio, between 40 percent and 50 percent of the more than 23,000 charter school students are in suburban and rural districts, leading a vice-president of the pro-charter Thomas B. Fordham Institute to declare the following: “We’re moving into the second generation of school choice. The first generation was about helping kids in failing schools and giving them a safety valve. The second generation of school choice is now actually about middle-class parents” (Smith Richards, 2011).

The prospect that charters may be targeting more affluent neighborhoods also has stoked concern and resistance. In New York City, Success Academy Charter Schools, headed by Eva Moskowitz, a former city council member, attracted opposition when it spread from its original base in Harlem and opened charter schools in affluent neighborhoods in Brooklyn and Manhattan's Upper West Side. "When charters open in their own privately financed, state-of-the-art buildings in poverty-stricken neighborhoods where they're welcomed by the community, there may be reasons to celebrate," one parent wrote in the *New York Times*. "But when charters co-locate in mixed-income areas, choice is only half the story. The existing schools in which they set up shop suffer both in terms of resources...and morale" (Rosenfeld, 2012). In Silicon Valley, Bullis Charter School gives an admissions advantage to a geographic area where the median household income is \$219,000 and asks families to donate \$5,000 per child each year. Bullis, one expert told a reporter from *Bloomberg News*, "could bring a whole new level of inequality to public education" (Hechinger, 2011).

In some instances, charter proposals have been rejected because of concerns about racial resegregation. In June 2012, Nashville school officials voted 7-to-2 to reject a proposal by an Arizona-based charter management organization (CMO) to open a school in a middle-class part of the city. Opponents were concerned that the proposed location would make it difficult for low-income minority students to attend. "I went to segregated schools," said one board member who voted against the plan, "and this gets us dangerously close to separate but unequal" (Banchero, 2012).

Is this renewed attention to the prospect of charters catering to affluent communities a case of media hype—of journalists and anticharter activists overinflating the significance of idiosyncratic exceptions to the general rule? Or are we witnessing the early stages of a fundamental redefinition of the charter school market? If it is the latter, is it occasion for alarm or simply an indication that charter schools are now being recognized as a solution to a broader range of educational wants and needs?

THE SPECTER OF "CREAMING"

Concern that charters would exacerbate racial and socioeconomic segregation was a defining feature of early charter school debates. Critics warned that charters would seek out populations that were easier and less expensive to

serve, presumably those in which families had substantial education, resources, and commitment to ensure that their children would come to school ready and able to learn. In contrast, it would cost more to educate children raised in neighborhoods scarred by concentrated poverty, and they might be less likely to post the academic gains that would be the metric by which schools marked—and marketed—their success. Proponents countered that charters would be no worse—and might be substantially better—at promoting racial and economic integration than traditional public schools. Anchored in segregated communities and ruled by enrollment policies based almost entirely on location, traditional public schools allowed and even encouraged families to sort out into homogeneous schools, with advantages going to those with the wealth and the mobility to live wherever they chose.

Interestingly, both critics and proponents leaned heavily on the market metaphor in buttressing their predictions. Critics argued that charter entrepreneurs, acting as rational investors, would be drawn to markets that maximized profit and the potential for expansion. With most state laws barring charter schools from charging tuition, revenue per pupil would be relatively fixed, so competitive advantage would depend on lowering marginal costs. Children from middle-class backgrounds, it seemed likely, would present fewer disciplinary problems, require less remedial work, and tap into stronger family resources and social capital. This could translate into lower costs by reducing the need for specialists or making it feasible to have teachers handle larger classes. Legislative provisions, such as requirements that schools use lotteries to allocate slots when oversubscribed, would limit the ability of charters to directly screen students. But critics anticipated that charters would informally counsel out high-cost kids; selectively recruit (e.g., by advertising only in English); offer programs, such as language immersion and Montessori (more likely to appeal to the affluent); use website images to signal which students were welcome; or locate far from low-income and minority families.

Proponents also based their predictions on market considerations, although in their case, the story was meant to send reassurances that choice would target need and not lead to stratification by race and class. Middle-class and affluent families would have little incentive to seek out charters, they argued, because they would have already used their economic advantages to find the best public school districts or placed their children in private schools. The effective market for charter schools would consist of neighborhoods and families ill-served by traditional public schools. Residential density would make cities a more favorable place for charters to attract applicants. Compared with traditional school

districts, which are based on typically segregated residential attendance zones, charters would attract diverse families united by interest in a particular curricular theme or a pedagogical approach.

That analysts leaned so heavily on the market metaphor in anticipating how charters would behave was understandable. As with all sharp policy interventions, early discussions depended largely on theory because there were no working models available. Because one of the key animating ideas behind the charter movement was to make the existing system more market-like, it was reasonable that microeconomics would be invoked.

Charter systems are very much mixed public-private systems, however, with supply and demand operating within parameters established and maintained by government laws and regulation. More relevant would be theories about how markets and governments interact, especially in light of ideological, partisan, and interest group politics. The sharp distinction between traditional public schools, as representatives of government monopolies, and charter schools, as representatives of entrepreneurial and competitive market actors, meant that predications about both sectors were abstract and often caricatured. At this point, the nonprofit sector—not quite government and not quite market—was not yet recognized as the substantial force it would become.

THEORY MEETS REALITY: EARLY FINDINGS ABOUT LOCATION AND ENROLLMENT

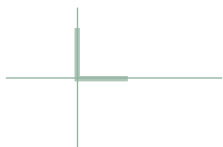
As charters expanded and took root, evidence began to accumulate about their behavior, the behavior of those who sought them out, and the actual consequences for location and enrollment. The resulting picture was more complex than either the supporters or the skeptics had projected.

Early enrollment patterns made clear that charters were not targeting affluent and white clientele. Based on data from 927 charter schools in 27 states, the U.S. Department of Education's *The State of Charter Schools 2000* report (RPP International, 2000) found that charter schools were more likely than public schools to enroll black students (24 percent versus 17 percent) and Hispanic students (21 percent versus 18 percent). In 2004, the American Federation of Teachers released a report noting that charter schools enrolled black students at twice the rate of traditional public schools (Nelson, Rosenberg, & Van Meter, 2004).

These patterns, however, masked some important findings. Although the early charter school movement was centered in minority communities, a subset of schools was catering to non-Hispanic whites. For instance, one study found that among charter high schools in Phoenix and several rural towns in Arizona, those that were obviously focused on vocational education were predominantly Hispanic, and those that were obviously college-preparatory academies were largely white (Cobb & Glass, 1999).

Not targeting the elite, moreover, is not the same as fully embracing the highly disadvantaged. A few charter schools, usually small, had organizational missions built around serving high-need populations, such as students with disabilities or juvenile justice problems. But even those serving nonaffluent minorities typically had lower proportions of special education and non-English-speaking students. Rather than skimming the cream of the highly advantaged, they were “cropping off” service to students who cost more to educate because of their special needs (Lacireno-Paquet, Holyoke, Moser, & Henig, 2002). Although charters were locating in high-minority communities, some research suggested they were targeting middle- and working-class populations, not the poorest neighborhoods (Henig & MacDonald, 2002).

For those trying to read these early trends, one of the most important things to learn was not to overgeneralize. There is no such thing as a typical charter school. Charters differ from one another, and the differences matter. One of the important distinctions is between those that are more mission oriented and those that are more market oriented—a distinction that partially overlaps with whether providers are nonprofit or for profit. Many charter schools were started by organizations with long-standing missions of helping the disadvantaged; they cannot be totally insensitive to market factors that affect revenues and costs, but by seeking philanthropic support and hiring employees willing to work for less because they identify with a school’s mission, they can push considerations of profitability toward the periphery of their decision making (Henig, Holyoke, Brown, & Lacireno-Paquet, 2005).



COMPELLING STORIES OR INFLECTION POINT?

To opponents, charter schooling has always been about privatization and market forces, which opponents believe inevitably induce providers to cater to consumers who can pay more, are less costly to serve, or whose status helps to expand the market. That did not happen earlier, opponents would say, because (1) legislative provisions and charter authorizers favored only those proposals targeted to high-need populations, and (2) charter funders figured they could assuage concerns about resegregation and expand political support by initially concentrating on minority neighborhoods. As the charter community expands to include more affluent families, critics predict it will shift its emphasis away from helping those most in need to maximizing freedom of choice for all families, including a large middle class.

Charter proponents have an alternative interpretation. In their view, charter schooling has been fueled from the outset by the failures of a government-run system characterized by special-interest politics and monopolistic indifference to quality and cost. What we are seeing now is proof that the appeal of charter schools is universal. Suburban and affluent urban parents were once reasonably satisfied with their zoned public schools and wary of charters. Now, many have grown disappointed with bland school offerings and pressure to narrow the curriculum and expand test preparation. Charter schools, formerly an untested notion, have become more familiar and represent for these families the chance to recover the kind of parent-centered local control that they remember as being integral to happy schooling experiences before the No Child Left Behind (NCLB) Act. The fact that charters are beginning to penetrate these markets, supporters might say, proves that the movement can not only serve as a mere bandage and competitive spur but also provide the ultimate replacement of an obsolete education system.

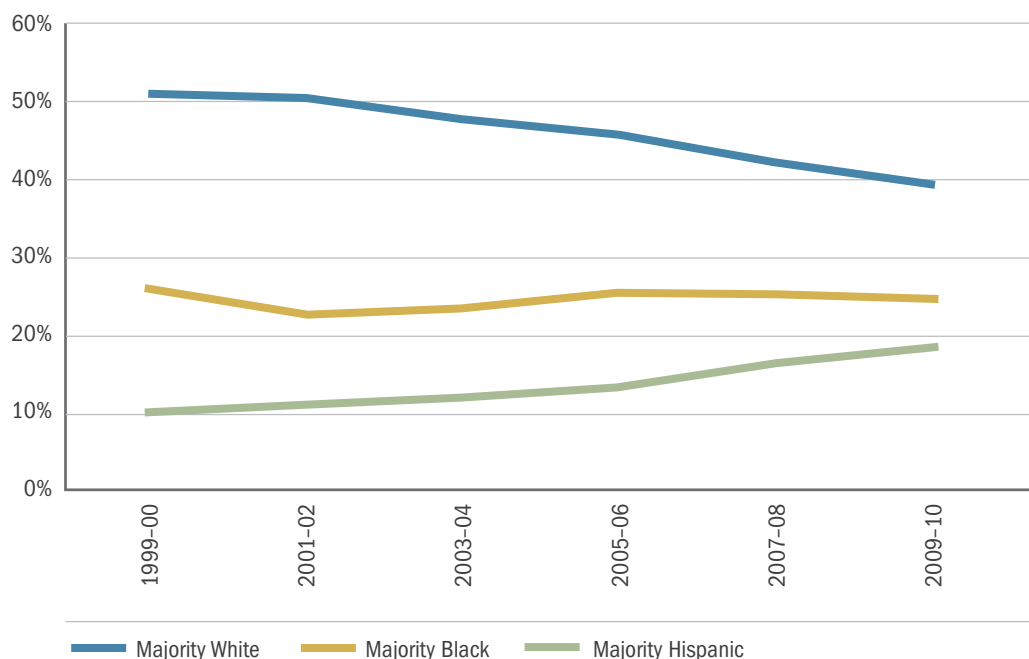
But both sides should not assume that the incipient signs presage broad changes. To the extent that the changes are real, a rush to explain them with predigested theories preempts an opportunity to develop a more sophisticated understanding of how quasi-markets behave across time.



Data Versus Anecdote

Formal data on unfolding policy and social issues often lag behind genuine change. Nonetheless, it is important to note that the available data do not show evidence of the beginning of a trend, at least as of the 2009–10 school year. Figure 1 shows the change from 1999 to 2009 in the racial composition of charters. In 1999, 51 percent of all charter schools had majority white enrollments; by 2009, charter schools with majority white enrollments had decreased to 40 percent. During the same time period, the proportion of charters with a Hispanic majority increased from 11 percent to 20 percent.

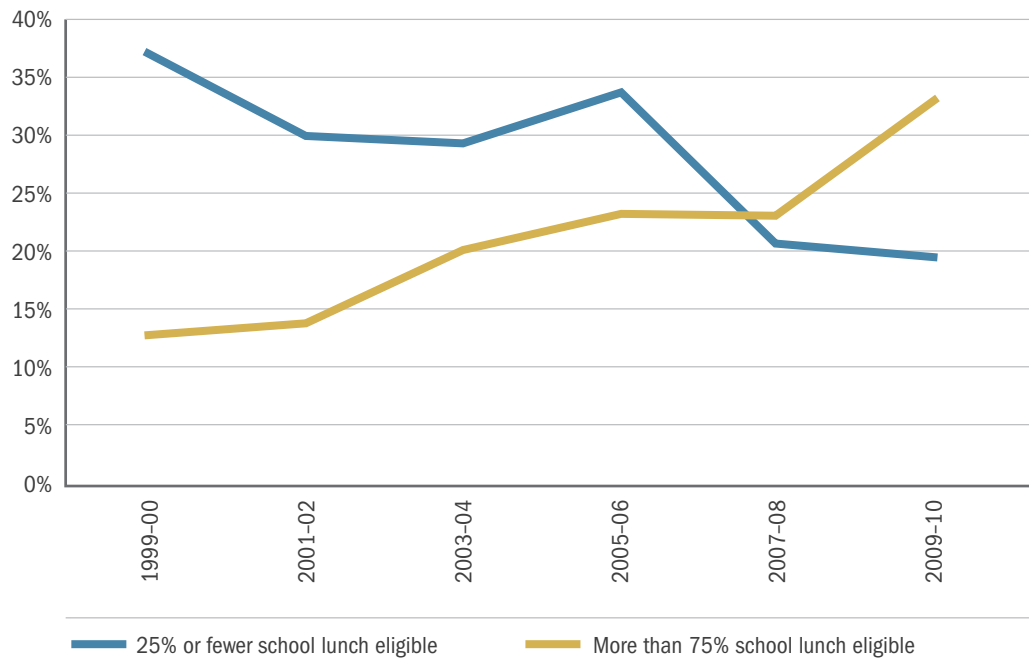
Figure 1. Change in Racial Composition of Charter Schools: 1999–2009



Note. Compiled from *The Condition of Education*, Table A-4-1 (<http://nces.ed.gov/programs/coe/tables/table-cse-1.asp>). Copyright U.S. Department of Education, Institute of Education Statistics, National Center for Education Statistics.

Figure 2 shows the change from 1999 to 2009 in the distribution of charter schools that were either predominantly serving affluent populations (where one fourth of the students or fewer were eligible for free or reduced-price lunch) or high-poverty populations (where at least three fourths of the students were eligible for free or reduced-price lunch). The percentage of charters with more affluent enrollments decreased sharply from 37 percent to 19 percent, whereas those serving high-poverty populations increased from 13 percent to 33 percent.

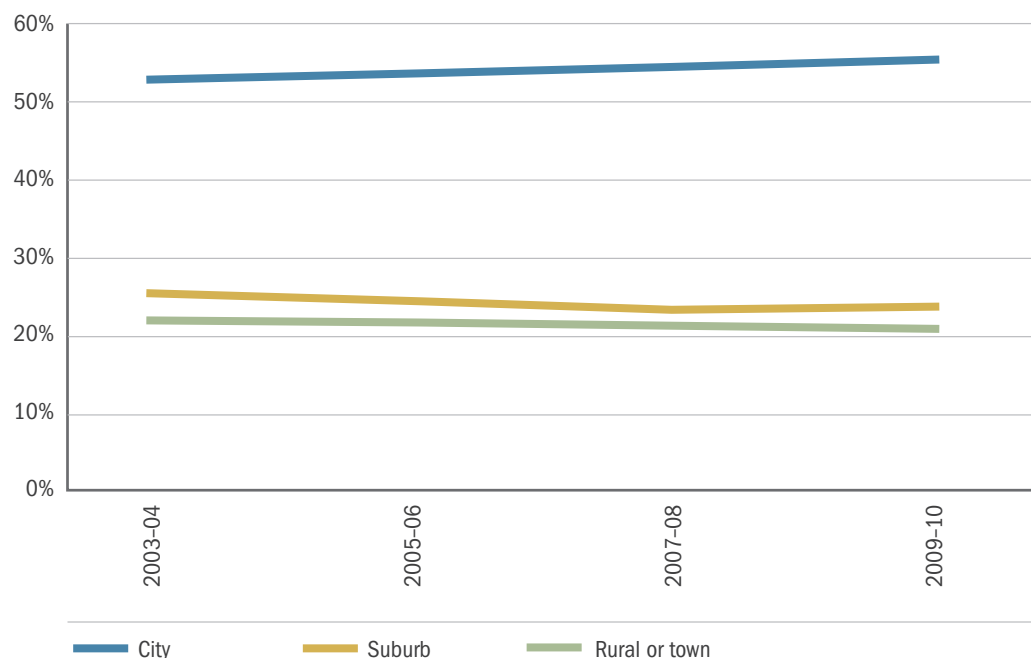
Figure 2. Distribution of Charter Schools Across Low and High Concentrations of Poverty: 1999–2009



Note. Compiled from *The Condition of Education*, Table A-4-1 (<http://nces.ed.gov/programs/coe/tables/table-cse-1.asp>). Copyright U.S. Department of Education, Institute of Education Statistics, National Center for Education Statistics.

For the six years for which data are available, the distribution of charter schools among city, suburban, and rural communities has barely changed (see Figure 3). From 2003 to 2009, the percentage of the nation's charters located in suburbs decreased by one percentage point.

Given evidence that the proportion of charters serving a more affluent clientele was decreasing, at least through 2009, what should we make of the growing perception that something is afoot? One possibility is that stories about this new wave of charters are largely hype. For media consumers, who tend toward the affluent, the topic is compelling and personal in a way that stories only about failing schools are not (Edmonds, Guskin, & Rosenstiel, 2013). The culture clashes that often surround charter school penetration into racially and socioeconomically mixed neighborhoods make for vivid reports.

Figure 3. Distribution of Charter Schools Across Type of Community: 2003–09

Note. Compiled from *The Condition of Education*, Table A-4-1 (<http://nces.ed.gov/programs/coe/tables/table-cse-1.asp>). Copyright U.S. Department of Education, Institute of Education Statistics, National Center for Education Statistics.

But it is unlikely that this perception is born of hype alone. Policy analysts and journalists, after all, are well placed to spot early trends. Although the distribution of charters appears to not be shifting toward suburban, white, or affluent students, overall expansion means that charters have been making substantial inroads in these communities. For example, even as the proportion of charter school students who are white was declining, the total number of white charter school students more than tripled between 1999 and 2009, to more than 600,000, according to the National Center for Education Statistics (2010). During that time, the number of low-poverty charter schools increased 43 percent, from 545 schools to 961 schools.

Especially from a political perspective, this expansion could be meaningful because affluent voters are typically more powerful than their generally less mobilized counterparts. It is not out of the question that the simmering stories may signal the approach of an inflection point.

IS THE PAST PROLOGUE? WHY CHARTER PATTERNS MIGHT CHANGE

Policies and programs change as they mature as (1) the rules become better known and more sharply defined, (2) market conditions change, (3) key actors learn about what works and what does not, (4) distracting battles fade, and (5) legislators revisit laws in response to new information and political pressure. Initially promising policies and programs also can falter or spin off in unpredictable ways as (1) the original pioneers and funders lose interest or are elbowed aside, (2) new actors enter with differing goals and modus operandi, and (3) new strains and complications are introduced. It is then natural that charter school distribution also might evolve, potentially shifting toward more affluent areas because of changes in demand, supply, and governmental behavior.

Demand-Side Shifts

Markets change, sometimes precipitously. On the demand side, change is driven by the aging of loyal consumers and the entry of new ones, changes in taste, or changes in effective buying power. In the case of charter schools, there are credible scenarios under which suburbanites and urban gentry might sharply shift from wary contemplation to a strong embrace of charters.

Researchers also have identified a contradiction. Suburbanites frequently support school choice and charters in the abstract yet consistently balk at the prospect of them in their immediate environs, out of fear they might disrupt local public schools, attract students from elsewhere, or symbolically convey that they have a problem, which might lower prestige and property values (d'Entremont & Huerta, 2007). It is conceivable, however, that this reticence is based on limited information and will dissolve as suburbanites learn more about charters. In a report titled *Familiarity Breeds Content*, based on polling by NAPCS, Gary Larson wrote, "public support for charters is growing while opposition is declining. It's also evident that the more the public knows about charters, the more they like them." NAPCS found that national support doubled from 37 percent to 74 percent when respondents were read a simple definition of charter schools (Larson, 2008, p. 2). A recent poll in *Education Next* of college graduates who are in the top income deciles in their states found that 64 percent supported charters and 19 percent opposed them (Howell, Peterson, & West, 2011).

One factor that could accelerate suburban demand for charters is the high-stakes testing environment in district-run schools. Charters may be somewhat more insulated from those pressures compared with traditional public schools, especially when their initial charter contract specifies an emphasis on nontested subjects or alternative outcome measures. By focusing on themes such as foreign languages, science, or the arts, they can signal to affluent families that they will not narrow the curriculum in the face of standardized tests. This is not to say that charters can duck high-stakes accountability. They are subject to adequate yearly progress and other NCLB accountability requirements, and some educational management organizations (EMOs) and CMOs impose rather strict accountability regimes of their own design. But charters that attract affluent families with the promise of a less test-based approach are building a constituency capable of using its greater political muscle to defend it against interventions. Suburban reticence about charters also could drop sharply if affluent families become convinced that the right kinds of charters confer prestige, attract desirable development, and do not necessarily undermine nearby traditional public schools.

Supply-Side Shifts

Shifts in the supply side also could bring more charters to the suburbs. In the early years of the charter school movement, many providers were small enterprises founded by local educators, community-based organizations, or social service agencies. These actors were familiar with local needs, could mobilize quickly, and were viewed favorably by local charter authorizers. Many were mission oriented, with little interest in extending beyond a school or two.

As time progressed, larger national and regional operators have grown more prominent, which could dictate substantial changes in charter location. In just three years, between 2007–08 and 2010–11, the proportion of freestanding charter schools declined from 79 percent to 68 percent, whereas charters run by for-profit EMOs increased from 10 percent to 12 percent and those run by nonprofit CMOs increased from 12 percent to 20 percent, according to NAPCS (2013). Because schools run by EMOs and CMOs tend to be larger than freestanding charters, the number of students in them has increased even more sharply, as seen in Figures 4 and 5.

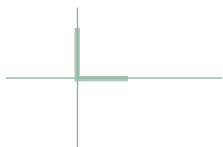
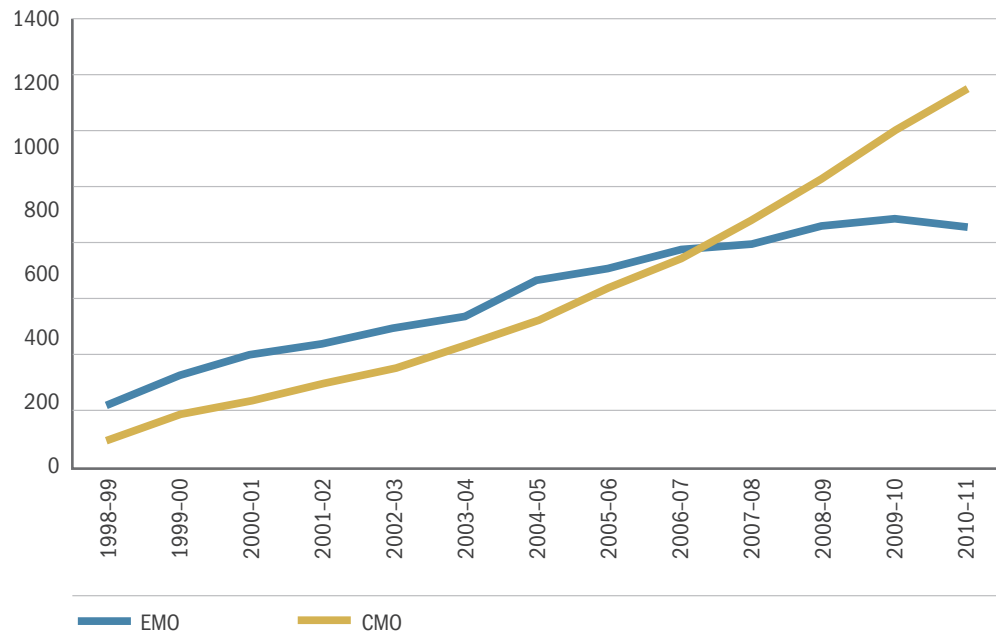
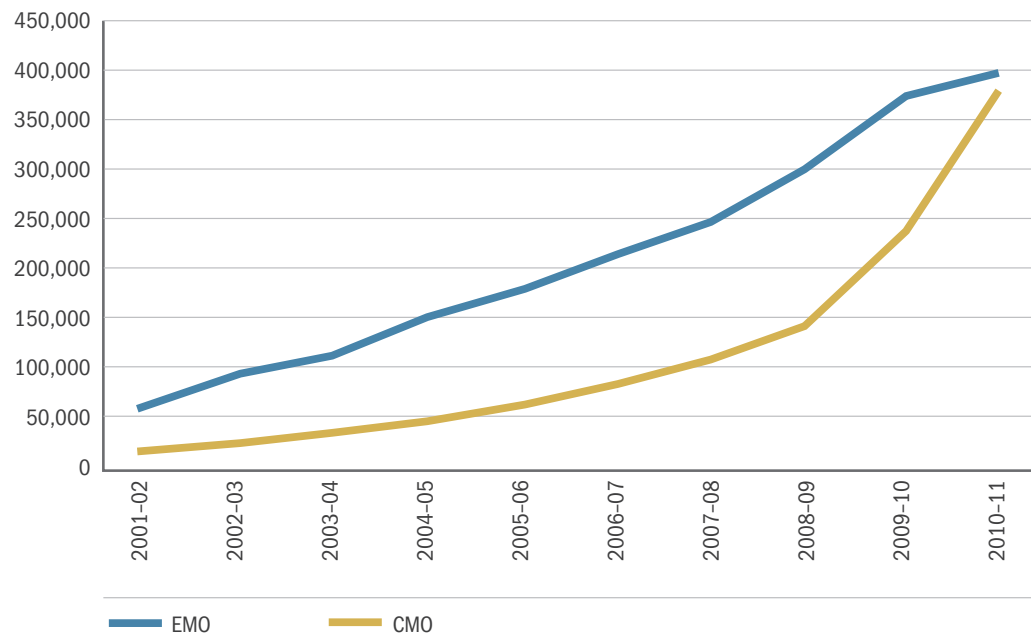


Figure 4. The Number of Schools Operated by Educational Management Organizations and Charter Management Organizations: 2001–10



Note. Data drawn from *Profiles of For-Profit and Nonprofit Education Management Organizations Thirteenth Annual Report: 2010–2011*, by G. Miron, J. L. Urschel, M. A. Yat Aguilar, and B. Dailey, Tables 5 and 8. Copyright 2012 by the National Education Policy Center.

Figure 5. The Number of Students in Educational Management Organizations and Charter Management Organizations: 2001–10



Note. Data drawn from *Profiles of For-Profit and Nonprofit Education Management Organizations Thirteenth Annual Report: 2010–2011*, by G. Miron, J. L. Urschel, M. A. Yat Aguilar, and B. Dailey, Tables 5 and 8. Copyright 2012 by the National Education Policy Center.

For the most part, EMOs have business plans that depend on expansion and economies of scale (Levin, 2002). This pressure may be expressed in greater efforts to open new markets, including where families are reasonably satisfied with current options yet eager to find an edge—either by better meeting their children’s specific needs or helping them get into selective high schools and colleges.¹ Politically, EMOs are sometimes cast as profit-maximizing predators, and CMOs are cast as idealized pursuers of the social good. Any pressure CMOs face to increase scale—as a means of increasing positive impacts—would be constrained by the need to show that they are not abandoning their mission to serve the most disadvantaged children.

However, we should not overdramatize the distinction between EMOs and CMOs. Some for-profit charter operators are committed to showing that doing good and turning a profit can be complementary goals. Some nonprofit operators are committed to applying strong business principles to make their efforts as efficient and self-supporting as possible. As research in other areas of service delivery has established, operating within the same general field leads to convergent behaviors by for-profit and nonprofit providers.² Research on CMOs suggests that they feel strong pressure from donors to rapidly expand while still producing high test scores and lower per-pupil expenditures. They could very well deduce that their best bet for doing so would be to shift to more affluent locations.

Political and Policy Changes

Political science traditionally has emphasized that in the American system, significant policy change is unlikely. This view is evolving; scholars have begun to recognize that sharp changes in policy can and do occur. Political scientists Frank R. Baumgartner and Bryan D. Jones (1993) suggested that sharp shifts in the agenda become possible when an alternative problem definition is combined with a shift to a new decision-making venue less controlled by the reigning elites and less invested in the reigning ideas.

¹ In the past two to three years, the expansion of large EMOs appears to have leveled off, which might reflect their decision that other avenues of education service provision are more lucrative than the continued expansion of their charter networks.

² On the general tendency toward convergence, see DiMaggio and Powell (1983). On for-profit versus nonprofit providers generally, see DiMaggio and Anheier (1990), Weisbrod (1975), and Weisbrod (1998).

In education, certainly, the decision-making venue has moved, from localities to state and federal governments, from public actors to private interests, and from school boards to mayors and other politicians. These shifts create a more charter-friendly political environment. For instance, although elected school boards tend to be protective of traditional public schools, school districts under mayoral control have been more open to charters (Bulkley, Henig, & Levin, 2010; Hill et al., 2009).

Also relevant is the notion of policy feedback: the theory that “policies enacted and implemented at one point in time shape subsequent political dynamics so that politics is both an input into the policy process and an output,” as political scientist Lorraine McDonnell (2009, p. 417) put it (see also Mettler, 2002; Mettler & Soss, 2004; Patashnik, 2008). Policies affect politics by (1) making the costs and the benefits of programs more apparent, (2) redirecting support so that some groups become stronger and others less so, (3) creating new allies of public employees and political sponsors who become mobilized because they have jobs and reputations at stake, and (4) creating new interest groups that directly benefit from the programs and often become their most ardent proponents. Sometimes new policies that are enacted by thin margins build stronger constituencies across time.

One national study of the evolution of charter school laws, by Arnold Shober and colleagues, lends support to the idea that charter policies could empower new interest groups (Shober, Manna, & Witte, 2006). They found that, thanks in part to interest group lobbying and partisan politics, nearly every U.S. state with charters had changed its charter laws across time, with almost all of the amendments making it easier to start and operate charter schools.

To the extent that the early generations of charters may have been steered toward more disadvantaged communities as a result of legislative provisions or political compromises, a constituency of charter providers and families pushing for greater state flexibility could open the field for charter founders to shift their sights toward suburbs and gentrifying neighborhoods.

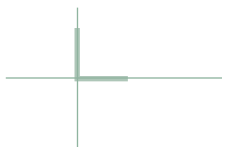
Considering the changing political parameters also brings us back to the earlier observation that the total number of charter families in affluent communities is increasing substantially despite their decline as a percentage of all charter enrollees. Expanding the number of charter school parents in general expands the voting bloc likely to rally to the sector's support, but expanding the number of affluent charter school parents brings extra muscle to the movement because of their greater propensity to vote and the greater political resources they can bring to bear. One open question is whether the charter movement will stay unified—with more affluent families taking leadership roles while using the more numerous minority and less advantaged families to add electoral clout and burnish their legitimacy as a socially progressive force—or will begin to unravel around racial, class, and urban-suburban cleavages.

CONCLUSION

Charter schools have become increasingly ingrained and broadly familiar in the past two decades. But the charter sector is still in flux, and there is much we do not know about how it is likely to look and behave when the dust settles.

Despite highly publicized instances of inroads into more affluent communities, the center of gravity in the charter school movement remains with minority and low-income populations. Although there are no signs that the center of gravity will move significantly, it is good to be alert to the possibility and begin considering what the implications might be if this were to occur. Market demand is subject to shifts as charters become more familiar and information about them becomes more detailed and better understood. Big changes have already occurred on the supply side, and the growth of larger networks of providers is likely to introduce a range of other changes, including in target audiences. But the greatest volatility may come from the interaction between market forces and the political and policy parameters within which markets operate. These have the potential to shift demand and supply, as well as how they are expressed. And they are susceptible to sharp change.

Early proponents predicted that charters would create more diverse schools and help narrow educational gaps based on race, class, and neighborhood. Today's supporters admit that charters have done better at targeting minority communities than at creating diverse learning environments. Some consider that to be fine—they are more intent on improving educational outcomes for those in greatest need than they are in chasing what they consider to be an elusive target of racial and



economic balance—but others are calling for a rededication to the possibility of internally diverse charters (Kern, Thukral, & Ziebarth, 2012). And although many on the left remain deeply skeptical of the stratifying tendencies in market processes, some have recently started arguing that charters can be important components of efforts to promote equity (Kahlenberg & Potter, 2012).

If creating internally diverse charters is the goal, some movement into inner suburbs and gentrifying areas, where catchment areas are more likely to include different kinds of families, may be a pragmatic necessity. But realizing this vision is likely to require self-conscious management, not just a happy confluence of supply and demand. Chartering bodies, for instance, would need to explicitly favor charter applicants in mixed neighborhoods versus those in homogeneously advantaged or disadvantaged ones. Patterns to date are relevant to determining what is likely to happen, but the relationship between charters and social goals such as integration and equity are not embedded in their DNA or in that of markets. Decisions about whether to make charters a force for integration and redistribution are still ahead of us. They will depend on not only leadership within the charter community but also authoritative decisions about policy and its implementation as fought and negotiated through partisan, interest group, and electoral politics.

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Jeffrey R. Henig is a professor of political science and education at Teachers College at Columbia University and a professor of political science at Columbia University. He is the author or the coauthor of 10 books, including *The Color of School Reform: Race, Politics and the Challenge of Urban Education* (Princeton, 1999) and *Building Civic Capacity: The Politics of Reforming Urban Schools* (University Press of Kansas, 2001), both of which were named—in 1999 and 2001, respectively—the best book written on urban politics by the Urban Politics Section of the American Political Science Association. *Spin Cycle: How Research Gets Used in Policy Debates: The Case of Charter Schools* (Russell Sage Foundation, 2008) focuses on the controversy surrounding the charter school study by the American Federation of Teachers and its implications for understanding politics, politicization, and the use of research to inform public discourse; it won the American Educational Research Association's Outstanding Book Award in 2010. Harvard Education Press published his most recent book, *The End of Exceptionalism in American Education*, in January 2013.

Chapter 2

Incubate for America?



Hopes, Fears, & Reality

A BALANCED LOOK AT AMERICAN CHARTER SCHOOLS IN 2012

Chapter 2

Incubate for America?

Ethan Gray

The growth of the charter school sector in its first few decades has been defined by two stages. In the first stage, individual “mom-and-pop” schools dominated the landscape. More recently, the most successful of those single-site schools replicated and grew into charter management organizations (CMOs). Although the rise of CMOs has enabled a few school networks—such as the Knowledge Is Power Program (KIPP), Achievement First, and Aspire Public Schools—to achieve some scale and national renown, many charter markets, especially in noncoastal cities, are still dominated by single-site, mom-and-pop schools.

Those who frequent education reform conferences often hear how much leaders in city X want to recruit KIPP to their city or funders in city Y want to invest in a replication of YES Prep (in Houston) in their city. But the reality is that for most cities, a CMO replication strategy is unlikely to either be successful or meet the demand in their communities for high-quality seats. Simply put, it is challenging to recruit national CMOs to new markets, and there are far too few CMOs to meet the growing demand. As a result, some enterprising cities have embraced a new strategy for intentionally building the supply of high-quality new schools: charter school incubation.

Charter school incubators are organizations that seek to improve the odds that new schools will succeed. They bring some order to the often chaotic, random growth of the mom-and-pop-dominated charter scene. Incubators recruit, competitively select, and support high-quality school founders as they design and build new schools in specific communities. By investing in or developing talented school leaders and connecting them with local networks of support, incubators are betting that they can increase the likelihood that new schools will succeed.

Unlike other charter support organizations, incubators do not serve all who apply; they rigorously screen applicants, taking on only the very best. Most incubators offer some financial support—usually a salary and a benefits package for school founders—to woo top talent. In addition, incubators, whose staffs are expert in

the charter start-up process, provide training or support for leaders as they build charter boards, locate and develop facilities, recruit great teachers, and make connections with other local funders and stakeholders.

WHY WE NEED INCUBATORS

The Cities for Education Entrepreneurship Trust (CEE-Trust), the initiative I lead, is a network of city-based education reform organizations. During the past couple of years, we have built the Charter Incubation Working Group, which includes nearly every geographically focused incubator across the United States, including the following:

- New Schools for New Orleans (NSNO)
- New Schools for Baton Rouge
- The Mind Trust in Indianapolis
- Get Smart Schools in Denver
- Charter School Partners in Minneapolis–St. Paul
- E3 Rochester in New York
- The Tennessee Charter School Incubator in Nashville and Memphis
- The Teaching Trust in Dallas
- Rhode Island Mayoral Academies

A few other organizations also are involved in incubation. The New York Center for Charter School Excellence has helped build the charter market in the largest city in the United States. Boston-based Building Excellent Schools has partnered with some CEE-Trust incubators to recruit, select, and train their school leaders. In addition, many of the top CMOs in the United States incubate their own leaders, through in-house development programs such as the KIPP Fisher Fellows Program.

A 2011 policy brief, called *Better Choices*, explored how charter school incubators were accelerating the smart growth of the charter sector (Ableidinger & Kowal, 2011). The brief profiled many of the leading incubators and discussed the ways that policymakers at state and federal levels could create better conditions for incubators to help start more schools. The authors found that in 2011–12, schools operated by the five CMOs that were “widely regarded as among the sector’s best” served only 61,000 pupils, and in 2009–10, all the CMOs put together served only 14 percent of all charter school students.

Although civic leaders in the United States would like nothing more than to be able to replicate the schools of KIPP, Achievement First, Rocketship Education, or YES Prep, the reality is that there are not enough high-quality CMOs with the massive scaling plans required to meet that demand. CMOs will continue to play an important role in driving the growth of the charter sector, but civic leaders would be wise to consider other ways of driving smart growth.

HOW INCUBATORS WORK

Incubators have different theories of change and thus different approaches to incubation. The Mind Trust's theory of change is that a combination of major funding, a landscape filled with top education reform and human capital organizations, and a pro-charter state policy environment will attract top talent to Indianapolis. The Mind Trust is not interested in developing new leaders as much as it is interested in recruiting the best and brightest from across the United States. Most of its emphasis, then, is placed on designing and implementing an extremely selective up-front quality screen. On their applications, aspiring school leaders go into great detail about past leadership experience, student achievement results at the schools they have worked at, and personal qualities and leadership characteristics. A panel of national experts helps interview and evaluate the applicants and select the winners.

In addition to its fellowship program to launch new charter schools, the Tennessee Charter School Incubator has developed an incubation program for turnaround leaders because of the market opportunity created by the emergence of the new Tennessee Achievement School District (ASD). ASD provides buildings, students, and charter-like freedom; the incubator recruits, selects, and trains the turnaround leaders.

Get Smart Schools and Charter School Partners (CSP) focus more on leadership development. With more limited funding but a strong university partner, Get Smart is tapping into a different talent pool and market segment to develop the next generation of charter leaders in Denver. CSP in Minneapolis–St. Paul, meanwhile, is focusing its recruiting on identifying educators who show the potential to develop into great school leaders. CSP recruits its fellows both locally and nationally by partnering with Teach For America, CEE-Trust, and other organizations. Its intensive two-year training program for prospective school leaders clearly illustrates the intensity of support an incubator can provide aspiring leaders.



The program begins with an intensive summer session that, CSP says, “is designed to immerse the Fellows in educational philosophy and design while also giving them the foundation in charter school law and operations necessary to begin their school creation work in earnest” (Charter Schools Program, 2010). In the first year of the fellowship, during which fellows earn a salary, each fellow is placed in a high-performing charter school in the role of “school improvement coordinator” and is responsible for helping to improve the academic growth of students. The fellows spend the year learning about several areas of importance, such as how to design coursework, apply for grants, and build boards. The fellows visit high-performing charters across the United States; recruit and develop members for their future schools’ boards, with assistance from CSP; and seek input from and build relationships with community members “in order that they might build authentic bonds with the families their school will serve” (Charter Schools Program, 2010).

In the summer, fellows interview with their boards, which make the ultimate decision whether to hire them. If they are hired and receive a charter and grant money from certain sources, CSP supports them through a second year as they secure facilities, hire and train staff, enroll students, and take university courses in school law and finance. Fellows also receive help in growing as leaders, developing their boards, strengthening their community ties, and enrolling enough students. All told, CSP spends \$350,000 per fellow in salary, training, and in-kind services.

The costs of incubation vary by both location and program. The Mind Trust offers up to \$1 million and significant local support to competitively selected leadership teams that commit to starting new charter school networks in Indianapolis. Other incubators that offer funding make investments between \$200,000 and \$500,000 in individual leaders or teams (Ableidinger, 2011). Some incubators, such as Get Smart, do not offer money but maintain university affiliations and offer leadership degrees for new school founders or significant in-kind support.

As communities develop their own plans for incubation, they need to carefully consider their core theory of change and determine whether (1) their market demands the intensive support structure of a CSP-style training program, or (2) they would be better served by raising the resources necessary to follow the more expensive route of attracting seasoned national talent.

PRIME AREAS OF FOCUS: LESSONS LEARNED

The pioneers of charter incubation have learned some important lessons that communities interested in incubation should consider. Among existing incubators, there is broad agreement that recruitment and selection is—by far—the most important (and most difficult) activity. In a September 21, 2012, interview, Greg Thompson, the chief executive officer of the Tennessee Charter School Incubator, said that “it’s all about identifying the best leaders.”

Beyond recruitment and selection, incubators also can act as advocates in the charter space, freeing leaders to focus on what matters most. Maggie Runyan-Shefa, the chief schools officer of NSNO, argued in an interview on September 20, 2012, that “it’s a value-add when incubators can mitigate against anything that takes away from a principal’s ability to focus on staff, students, and families.”

Incubators also can play a role in strengthening the policy climate for the charter sector. Thompson said that in Tennessee, “the policy environment was not fertile for so long that it was hard to attract talent and grow charters in any significant way. We’ve seen charter growth in other states—both good and bad—and we saw that those markets were doing well because there were charter support organizations in those cities that were training entrepreneurs and providing support systems.”

In Indianapolis, The Mind Trust has supported a stronger charter policy climate to make the city and the state more attractive to top charter networks and aspiring school leaders. Recent reforms include improved funding, stronger authorizer accountability, and the launch of a new statewide authorizer that can approve multiple schools under a single charter. The Mind Trust’s Charter School Incubator touts this improved policy environment in its recruiting efforts for new applicants.

RESULTS SO FAR: A SNAPSHOT FROM NEW ORLEANS

The literature on incubation is quite limited. In September 2011, Public Impact produced a paper for the National Charter School Resource Center on charter incubation that included snapshots of many incubators affiliated with CEE-Trust (Public Impact, 2011). Public Impact’s Joe Ableidinger and I also led an interactive webinar in September 2011 on the topic for the Resource Center (Gray & Ableidinger, 2011). But there have not been any studies of the impact of incubators. Incubation is a classic example of why education is a difficult

social science. There is really no way to do a double-blind study to prove that incubation actually increases the likelihood that new schools succeed. Several incubators, including The Mind Trust, CSP, and E3 Rochester, are too new to have data to analyze.

But early evidence suggests that incubation is a promising strategy. In Colorado, each of the 11 schools incubated by Get Smart Schools for which there are student growth data have outperformed their district averages. Eight of these schools had higher student proficiency rates than their corresponding local public districts (Get Smart Schools, 2011). In New Orleans, one of the only charter markets that has had an incubator in place for at least five years, NSNO has incubated the highest performing high school and elementary school in the city's Recovery School District (NSNO, 2010).

After Hurricane Katrina obliterated the public school system, New Orleans faced an urgent need to open a significant number of new schools. Many of the highest performing district schools converted to charter schools in the aftermath of the storm, but neither the newly formed Recovery School District nor those existing stand-alone schools could meet the city's need in short order.

"This was an opportunity to transform the education landscape in New Orleans," Runyan-Shefa noted in an interview. Matt Candler, NSNO's first chief executive officer, had done work related to school incubation at KIPP and the New York Center for Charter School Excellence. Nancy Euske, who had designed the KIPP Fisher Fellows Program, was brought in to design a year-long incubation program for New Orleans charters.

In its first several years, NSNO helped incubate nine new schools, attracted several national CMOs to New Orleans, and supported the expansion of teacher pipeline programs, such as Teach For America and TNTP. As the market share of city charters has increased, to three in five public school students, the gap between city students overall and their peers statewide has narrowed significantly. In 2012, 58 percent of New Orleans students scored at grade level or better compared with 35 percent the year before Hurricane Katrina (Vanacore, 2012).

THE IMPORTANCE OF SELECTION

Recently, NSNO decided to shift its strategy away from incubating and toward supporting the replication of existing schools and recruiting national CMOs. As the charter market in New Orleans has matured and a few very high-performing, single-site schools have developed aspirations to grow into CMOs, there is less

of an urgent need to support the launch of significant numbers of new schools. But NSNO also has been disappointed with the quality of some of the nine schools it has incubated. Of those, NSNO reports that three have been outstanding, one has closed, and the rest are somewhere in the middle. Interestingly, two of the high-performing schools have started to expand, and two others have merged with existing CMOs.

Runyan-Shefa said that in its early years, NSNO's selection procedures were not as rigorous. "We didn't have an influx of talent like we do now. If we still did incubation now, we would really beef up the rigor of our selection process, because it's all about finding the right person. The right person grows the right teachers" (M. Runyan-Shefa, personal communication, September 20, 2012).

Given NSNO's limited success with recruitment and selection, Runyan-Shefa said, "We weren't sure that we could compensate and offer enough support to ensure that new schools would be high performing. Whereas investing in CMOs and replication of high-performing single-site schools—those folks could offer what schools need."

Runyan-Shefa still believes that incubation can be a good strategy for other communities, if the selection process is rigorous. "When you design your incubator," she says, "be sure you have a clear sense of what leadership skills and experiences you need prospective school leaders to demonstrate before you bring them into the program."

INCUBATORS AND FUTURE TRENDS

As cities such as New Orleans prove that vibrant charter districts can drastically improve student outcomes, civic leaders and funders in other cities will consider ramping up their support for burgeoning charter sectors. Existing CMOs will help meet some of that demand. But if the first generation of incubators can prove that incubation ups the chances that new schools will succeed, then incubation represents an additional way smart funders will turn dollars into better life outcomes for students.

We expect to see more incubators crop up in cities across the United States. CEE-Trust has advised several new city-based groups on incubator design, and we plan to continue offering these services to interested organizations. But a confluence of reform trends is emerging that could shake up the incubation landscape before it even has a chance to mature.

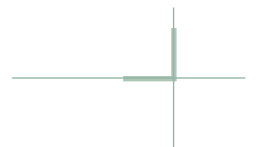


The rise of blended-learning schools, which use a mix of technology and face-to-face instruction to personalize learning for every student, could force incubators to rethink their approaches to recruitment, selection, training, and support. Schools run by Rocketship Education, KIPP LA, Aspire Public Schools, and Carpe Diem Schools are demonstrating dramatically new academic and economic models that have drawn extensive attention in the past couple of years.

If blended learning lives up to its promise to improve student outcomes, personalize learning, free teachers to focus on higher-order thinking skills, and lower schools' operating costs, then incubators will have to quickly retool and determine how they can support the launch of new blended-school models.

CEE-Trust will be developing some blended-learning supports for its incubation partners in the coming year. And we plan to host six city-based blended-learning design workshops in cities that are part of our network. As both blended learning and charter school incubation become more ingrained in the education ecosystem, we will begin to see a new generation of innovative school models crop up in cities across the United States.

Without incubators, it will likely be impossible to meet the demand for high-quality new schools. That is why civic leaders should take a page from the private sector playbook. In the private sector, business incubators have long played a critical role in developing innovative new businesses. Cities interested in building a strong supply of new schools should consider developing locally based incubators as an investment in the future of their cities. When done right, incubators can help launch new schools that will leverage public funding and deliver great results for students in perpetuity—a double bottom line any education reformer will love.



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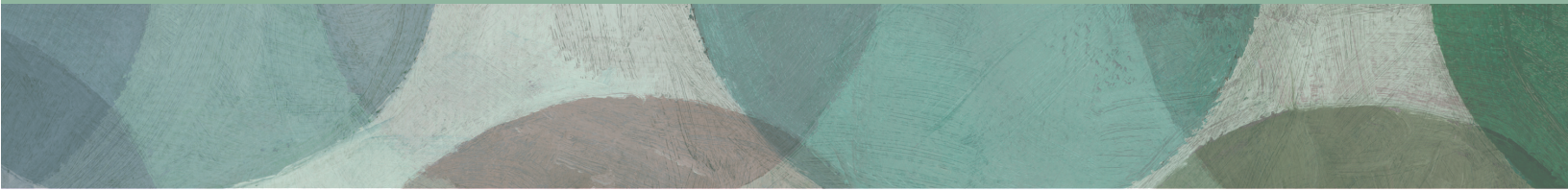
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Chapter 3

Innovating at Last? The Rise of Blended Learning in Charter Schools



Hopes, Fears, & Reality

A BALANCED LOOK AT AMERICAN CHARTER SCHOOLS IN 2012

Chapter 3

Innovating at Last? The Rise of Blended Learning in Charter Schools

Michael B. Horn and Tricia Maas

When charter schools were created in the 1990s, they were intended to spur innovation in America's K–12 school system. Charters, it was thought, would look radically different from what we knew: schools divided into conventional classrooms in conventional grades.

Some charter schools fulfilled that hope. All too often, however, charter schools looked pretty conventional. Even the charters that stand out as significant because of the outstanding results of their low-income students, the schools' efforts to replicate, and the schools' adherence to a “no-excuses” mantra look very traditional, perhaps even old-fashioned.

Reed Hastings, the chief executive officer of Netflix and a board member of the California Charter Schools Association, has summarized the approach of these schools to education as “we can solve anything by simply working harder.” That hard work is evident in the schools' longer hours, stricter discipline procedures and codes of conduct, contracts with families, and high expectations for students and staff. Are these practices admirable? Sure. Are they necessary? Perhaps.

Yet have charter leaders been innovators of either the breakthrough or the disruptive variety? Not really. By and large, charter leaders have not fundamentally redefined schooling. They still have age-based classrooms with one teacher and many students, they have not improved productivity, and they have not widely scaled success.

Today, this appears to be changing as no-excuses charter networks across the United States are experimenting more and more with blended learning in various forms—a move that could begin to change everything about the dominant schooling model in our society. The Clayton Christensen Institute for Disruptive Innovation

(the Christensen Institute; formerly Innosight Institute), which conducts research into blended learning, defines blended learning as a formal education program in which a student is learning at least in part through online learning; has some control over learning time, place, path, and/or pace; is schooled at least in part at a supervised brick-and-mortar facility; and has integrated learning experiences among different learning modalities within a course or a subject. In other words, blended learning is where online learning and traditional schooling meet. Beyond this, blended learning can look very different from school to school in terms of the programs used, the ratio of virtual to face-to-face instruction, the physical layout of the school space, and how students spend their time (Staker & Horn, 2012).

Most charter management organizations (CMOs) are still tinkering with blended learning but not necessarily upending the dominant traditional classroom structure. However, if California, which has often served as a bellwether for the rest of the United States, is any indication, charters may be entering the innovation game in earnest.

In summer 2012, we conducted a survey of CMOs operating in California to learn to what extent they were integrating blended learning into their instruction and how they were doing so. The survey revealed that at least one fourth of California CMOs are now using blended learning. In many cases, this has been driven largely by California's already low funding of public charter schools coupled with increased budget cuts. The survey results, however, reveal something striking: The charter leaders adopting online instruction all say they are doing so not only for efficiency's sake but also because they believe it will bolster student learning.

These two factors—a darkening budget picture across the United States and a continued drive to boost student results—now seem to be causing established CMOs to implement blended-learning solutions, many of which mimic models used by other CMOs. New charters with plans to scale into CMOs are also pushing the field by creating new blended-learning models. For the first time, perhaps, the charter sector is fulfilling its promise to drive new kinds of innovations in schooling.

THE LAUNCH OF ROCKETSHIP EDUCATION

For years, technology was largely missing from charter schools. On the one hand, there was some logic to this. For most of its history, educational technology had failed to deliver the results necessary to justify its expense. On the other hand,

something did not add up. In the last two decades, technology has revolutionized much of our society and has enabled dramatic innovation in many sectors. Charter schools were supposed to drive innovation. Why were they not at least experimenting—or even tinkering—in this realm?

Slightly more than a decade ago, some full-time virtual charter schools were created. Many states opened online schools that offered supplemental courses, and districts began using online learning to fill in gaps in their offerings. Yet, by and large, the brick-and-mortar charters did not budge. In the last few years, however, that has begun to change. New entrants in the charter school scene are pioneering blended-learning solutions, producing great student results, and looking to scale. Consequently, many of the established CMOs are finally paying attention to educational technology.

Rocketship Education was arguably the catalyst for the charter school sector's shift.¹ Founded in 2006, Rocketship's first school opened in San Jose in 2007. A year later, the elementary school began to turn heads when it received an astonishingly high score of 925 on California's Academic Performance Index. At a school where nearly three fourths of the students were English language learners (ELLs) and nearly 9 in 10 students were eligible for free or reduced-price lunch, 90 percent of the students were proficient in mathematics and 83 percent were proficient in English language arts. The school was the top-ranked elementary school in San Jose and Santa Clara County for low-income students and outperformed the Palo Alto Unified School District, where only 9 percent of the students were ELLs and 7 percent were eligible for free or reduced-price lunch. Since then, Rocketship has opened more elementary schools, which have consistently been the highest performing, low-income schools in Santa Clara County.

Other charter schools across the United States were, of course, helping their students achieve great results, but when people looked closer at Rocketship, they saw some things that made the school stand out. Notable among them is the use of blended learning. Rocketship students rely heavily on technology; they rotate between more traditional classrooms and online instruction, the latter of which is delivered in a learning lab in two-hour blocks and monitored by instructional aides rather than delivered by classroom teachers. In the learning

¹ The term *charter management organization* describes networks of branded charter schools, but technically speaking, Rocketship Education is not a CMO; it owns and operates its schools rather than just advising them.

labs, students work on various online mathematics and reading programs to learn and hone basic skills so that teachers in the traditional classes can focus more on higher-order thinking skills. The online programs include everything from mathematics and reading games to more conceptual problem solving. Although Rocketship has struggled throughout its existence to find enough high-quality online programs to fill the time in the learning lab and continues to struggle to connect the students' results from the online programs to their work offline, it has made progress on both of these fronts each year and will debut a new model design in its schools going forward to connect these experiences even more.

Blended learning changes the traditional schooling human capital model and allows Rocketship schools to operate in smaller, more efficient buildings—which is important for charters that do not receive funds to cover capital costs. The school's use of technology and paraprofessionals also eliminates the need for one in four teachers (Danner, 2010). Together, these efficiencies save each school approximately \$500,000 per year compared with traditional school expenditures. Rocketship funnels these savings into paying for an academic dean for each school, who focuses on coaching teachers; an assistant principal, who manages the learning lab and is preparing to become a principal; and teacher salaries that are 20 percent greater than those of surrounding districts. Unlike many top charter schools, which have costs greater than what the public funds and therefore rely on a significant dose of philanthropic funding, Rocketship schools do not require philanthropy for their day-to-day operations.

In essence, Rocketship seems to be a disruptive innovation relative to other charter schools—complete with a new business model and technology enabling it to expand rapidly.² Rocketship may have the potential to reset the charter sector's relationship with philanthropy completely; philanthropic funds can now help with the development of the education technology ecosystem and support a favorable regulatory environment instead of being used for day-to-day operational costs.

When the Charter School Growth Fund invested \$2.3 million to scale Rocketship's operations in 2008, the dialogue regarding technology in the charter school world started to change. Rocketship, which had 320 students at the time of the investment, has aggressive scaling plans relative to other charters. It intends to open clusters of 20 to 100 schools in 50 cities across the United States and

² A disruptive innovation is one that transforms a sector characterized by expensive, inaccessible, and complicated products and services into one characterized by affordable, convenient, and simple ones.

ultimately serve 1 million students by 2030 (Rocketship Education, n.d.). Given that the U.S. elementary and middle school population is slightly under 40 million students total, these plans have turned heads. By comparison, the Knowledge Is Power Program (KIPP), a network of charter schools that was founded in 1994 and began scaling in earnest beyond its original two schools in 2000, has 125 schools open in the 2012–13 school year that serve approximately 41,000 students.

Despite Rocketship's successes, other CMO leaders still held back and seemed hesitant to innovate. Many privately wondered why they should experiment when their students were achieving great results and their schools were not experiencing financial challenges. They noted Rocketship's ongoing struggle with finding educational software that was good enough and the challenges of interpreting data from multiple online providers. The line uttered, reminiscent of many other leaders who had been disrupted in many other sectors, was as follows: "We'll wait until the technology is good enough."

EXPANDING INNOVATION IN THE WEST

Shortly after Rocketship's debut, Carpe Diem Collegiate Middle and High School, a charter school in Yuma, Arizona, began to draw attention for its efforts with blended learning. Carpe Diem had been operating as a charter school in Arizona well before Rocketship was founded but did not receive much notice until the 2010–11 school year. Carpe Diem began as a traditional charter school in 2002. But when it lost its building lease and its budget was slashed, it had to rethink everything about its operations. Already growing increasingly uncomfortable with the staid traditional school model, the head of the school, Rick Ogston, in the 2005–06 school year, moved decisively to technology and blended learning to transform his school model in dramatic ways.

Carpe Diem now looks strikingly different from the average school. Students work with online curricula for 35 minutes at a time in a large room of 280 cubicle-like workstations, where paraprofessionals are available for support (Staker & Horn, 2012). Around the perimeter are breakout rooms separated by transparent glass, to which students rotate on an as-needed basis for support in small-group instruction, seminar discussions, traditional instruction, and group projects and labs. The school has only four certified teachers in the core academic subjects for its 280 students—one each in mathematics, science, English, and social studies. Instead of traditional physical education, the school has what is in

essence a fitness center on-site, to which students can go for a 35-minute rotation if they want to get a workout in and blow off some steam. A certified trainer staffs the gym and helps educate the students on healthy living. In addition to the paraprofessionals and four teachers, the principal of the school is also on the floor to help students with their learning and teachers with their teaching.

After its transition to a blended-learning model, the results of Carpe Diem students soared and have continued to improve yearly. With 60 percent of the students eligible for free or reduced-price lunch and minorities constituting 48 percent of the students, in 2010, Carpe Diem ranked first in its county in student performance in mathematics and reading and ranked among the top 10 percent of Arizona charter schools. With an innovative human capital model in place, Carpe Diem's operational costs are less than the already low revenues it receives in Arizona, and because of its physical layout, its building footprint cost 2.5 times less per pupil to build than that of a neighboring school. As funders and policymakers from across the United States began traveling to Yuma to learn the secret behind Carpe Diem's success, and as Carpe Diem began planning to expand, the charter school community took further notice.

Established charter school players, such as the Alliance College-Ready Public Schools, started experimenting in the world of blended learning. And then KIPP—known for its great student results, hard work ethic, and costs greater than what the public funds—jumped into the deep end in one of its schools. Unexpected budget cuts prompted KIPP Empower Academy in Los Angeles to open in 2010 with a model where students rotate between teacher-led instruction and online learning, which allows the school to maintain an individualized, small-group approach to instruction. The results have been amazing: In 2011–12, at least 96 percent of the students in both grade levels that the school serves scored at or above the national average on the SAT-10 test.

It now appears that the majority of CMOs in California are beginning to adopt or experiment with blended learning. Of the 43 California CMOs that we surveyed in summer 2012, 12 CMOs responded, including Rocketship. All 12 were using online learning in some fashion: 11 were using blended learning (in two thirds of their schools, on average), and the 12th was a full-time virtual school in which learning centers were available for students but not required. Some CMOs that did not respond to the survey are using blended learning, and their efforts have

been chronicled online.³ But even just the responders reflect more than one fourth of California CMOs; the fact that all of them are engaged in virtual or blended learning reflects a marked change from only a few years prior.

Another survey, from the California Learning Resource Network (CLRN), which was conducted in spring 2012, examined the use of online learning in all California schools—not only charters—and confirmed the directional findings of our own survey (Schwirzke, Rouse, & Bridges, 2012). Of the schools that responded, 57 were managed by 13 CMOs. Of these, 36 schools (73 percent) reported that students learned online in some capacity.⁴

Our survey found that schools were using blended learning the most in mathematics. When asked to rate how integral blended learning was in the instruction of individual subjects on a scale of 1 (*lowest*) to 4 (*highest*), the average responses were as follows:

- Mathematics: 3.2
- English: 2.2
- Science: 1.9
- Foreign language: 1.9
- History/social studies: 1.8
- Other electives: 2.0

Some leaders in the sector report that they like using online learning because it can help students develop ownership of their learning, which presumably might help them succeed in college, where the robust support networks that the no-excuses CMOs provide will not envelop them. Many leaders also consider the move to blended learning an opportunity to transform their teaching models in a variety of ways—with the primary motivation being to give teachers more time for one-on-one and small-group teaching. In many ways, charter leaders are using the online learning programs to offload some basic learning tasks, so their teachers have more opportunities to personalize and deepen the learning for students.

³ See the Christensen Institute's profiles of blended-learning models and www.blendmylearning.com for examples.

⁴ Our examination of the CLRN survey found that it may have been underreporting the use of online learning. For example, Alliance College-Ready Public Schools and Summit Public Schools told CLRN that they had no plans to use online learning, but in our survey, they reported already using blended learning and having extensive plans to continue. In conversations with leaders at both CMOs, we learned that blended learning is, indeed, a big part of their future plans.

Of the 11 CMOs using blended learning, all reported that they were doing so at least in part to improve student learning, and 5 reported that cost savings or sustainability was a factor.⁵ This is yet another reason that California may be a bellwether for the rest of the United States in education; school budgets in California, an already low state for per-pupil allocations, have seen significant cuts in the last few years, with no relief in sight. Charter school funding is even lower. The threat of unfunded public pension liabilities and health care obligations for soon-to-be retiring baby boomers also loom on the horizon. Many of California's CMOs may need the productivity boost from blended-learning models to survive; necessity will be the mother of innovation.

Some charter networks are already innovating aggressively. The Alliance College-Ready Public Schools in Los Angeles piloted BLAST (Blended Learning for Alliance School Transformation) in two of its high schools in 2010–11, and now has expanded the model to four high schools and three middle schools, with promising early results (Alliance College-Ready Public Schools, n.d.). The BLAST model creates efficiencies in human capital and instructional materials, which should allow the network of schools to be far more sustainable and scalable. In the BLAST high school model, for example, classes have a 48:1 student-teacher ratio, but students rotate in groups of 16 between teacher-led instruction, online learning, and collaborative small-group work.

Summit Public Schools, a small charter network in California, is also beginning to innovate with blended learning. It is using blended learning in several schools, and in fall 2013, it plans to open two next-generation schools in the area around San Francisco Bay that will be founded on the principle of competency-based learning. At the schools, according to one description, "Summit plans to break down silos between grades and content to allow students to move at their own pace, both academically and physically" (Next Generation Learning Challenges, 2013). Still in the planning stages, Summit has already launched an early prototype of its competency-based model at a school in San Jose, in which students are learning at different rates and taking increasing ownership for their own learning. Summit's team is also working with Illuminate Education to build an online platform to track student progress against the different competencies and create easy ways to find the specific online curricula and assessments that align to those competencies.

⁵ Ten CMOs reported that they were using blended learning to differentiate or personalize learning options for students, and two reported that they were using it to improve student achievement.

Notwithstanding these ambitious plans, many of the blended-learning models in California charter schools are still primitive. These networks are holding back and experimenting gradually, content to copy what others have done in small ways (and, according to our survey, sometimes wary of the quality of online content providers). Regardless, CMOs are innovating beyond their comfort zones, and teachers are gaining valuable experience in how their roles may change.

EXPERIMENTS GROW NATIONWIDE

Blended-learning innovations from charters are beginning to spread. The most disruptive charter networks, Rocketship and Carpe Diem, are scaling outside their original states. Rocketship will expand to Milwaukee in fall 2013. Carpe Diem opened its first school in Indianapolis in fall 2012.

Other established charter schools across the United States also are beginning to tinker with blended learning. Perhaps not coincidentally, many of these initial experiments have occurred in states where public financing for education is also low and declining. Established charters in Illinois and Texas—such as the 16 schools in the Chicago International Charter School network and several KIPP schools—have begun implementing blended-learning models. The number of charter schools experimenting in these states does not appear to be as high as in California, but momentum seems to be building. Philanthropic efforts, such as the Next Generation Learning Challenges, a multiyear grant program aimed at dramatically increasing college readiness and completion through applied technology, have sparked more charters to seriously consider moving to blended learning as well.

Experiments are occurring in more than just the most cash-strapped states. Some established CMOs in Connecticut, Massachusetts, and New York, such as Achievement First and Match Education, are trying blended learning. A new CMO, Touchstone Education, opened its first school in Newark, New Jersey, this year, with a blended-learning model in a school space that has echoes of Carpe Diem's design: glass-enclosed breakout rooms around the perimeter of a central learning space.

It is becoming clear that this current wave of innovation is not being driven by fiscal considerations only; blended learning has the potential to boost student achievement. Test scores from pioneers such as Rocketship and Carpe Diem



reveal the power of integrating online learning into the instructional day. In addition to its contributions to student learning, blended learning also has the power to transform human capital models, allowing teachers to spend their time with students more efficiently. These efficiencies free up resources for schools to hire paraprofessionals, pay teachers more, or use money in any other way that will support student learning. Other high-flying CMOs are noticing the benefits of blended learning and are attempting to replicate these outcomes using similar methods.

The best implementations of blended learning are not being driven by the desire to adopt technology for technology's sake. Where that has been the case, schools tend to struggle because they have not considered how the shift in the school model is more important than the technology in and of itself and how sound implementation requires a strong culture focused on each individual student's learning. For now, much of the charter sector appears to be heeding those lessons. As it does so, it appears that—at long last—the charter school sector is also becoming a beacon for innovation in not only how it improves on conventional schooling but also harnessing the promise of technology to fundamentally change schooling itself.

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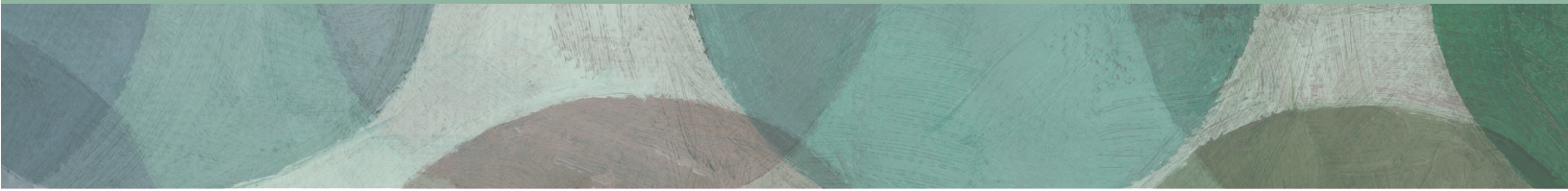
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Tricia Maas is a research assistant at the Center on Reinventing Public Education and a student in the University of Washington's doctoral program for education policy. Her recent projects include research on charter school policies and performance, the use of blended learning, and human capital pipeline policies in education. Prior to her time at the University of Washington, Tricia taught high school mathematics in Charlotte, North Carolina, as a Teach For America corps member and at a KIPP charter school in San Jose, California. She holds bachelor's degrees in economics and French from the University of Richmond and a master's degree in education policy from Stanford University.

Chapter 4

Innovating Toward Sustainability: How Computer Labs Can Enable New Staffing Structures and New Savings



Hopes, Fears, & Reality

A BALANCED LOOK AT AMERICAN CHARTER SCHOOLS IN 2012

Chapter 4

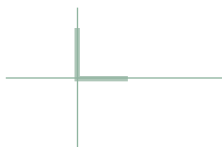
Innovating Toward Sustainability: How Computer Labs Can Enable New Staffing Structures and New Savings

Suzanne Simburg and Marguerite Roza

For a long time, even as new educational technologies have emerged, staffing innovations have seemed all but impossible in American schools. Even in charter schools, which do not have the typical labor constraints that traditional schools have, technology has merely been a layer added to the existing personnel structure, rather than a catalyst for delivering education—and staffing schools—in fundamentally new ways. Charter and district schools alike long ago surrendered to the notion that education requires at least as many core teachers as determined from dividing a school's enrollment by the average class size.

But does it? Or are there ways of organizing instruction so that schools need fewer teachers?

Finding an answer to these questions is more important than ever. Resources for public education are likely to be highly constrained for many years. Even as revenues climb, those increases will not be sufficient to cover the steady growth in labor costs, as salaries increase to keep pace with other fields and as benefit and retirement costs steadily increase as well. With staffing costs set to escalate faster than revenues, schools are likely to cut services, with students receiving less and less. As one Colorado superintendent put it, “We can cut and cut and cut, but that only works for so long, since we’ll always need a teacher for every classroom” (personal communication, 2011).



However, that scenario is not necessarily the case. Some new school designs suggest that we can fundamentally alter the basic schooling model so that a given number of students can be taught—and taught well—by fewer teachers, who are leveraged in new ways. Although some tasks require new technology and thus new technology staff, these new school designs are just as much staffing innovations as technological innovations.

The innovations come with the promise of fundamental cost redesign. If schooling could indeed be reorganized to rely on a different mix of staff (typically, fewer teachers offset by more lower salaried lab aides), then district and charter leaders could alter the cost curve. They could step off the cycle of cost escalation and budget cuts that have consumed them in recent years and onto more financially sustainable footing.

Of course, any large-scale adoption of new school designs should depend most on whether the models are effective with students. Even if the models are effective, many states have formidable barriers to staffing innovations, including funding formulas rigidly tied to student-teacher ratios. Policymakers are unlikely to let go of some of these barriers without relevant evidence of what such reforms might mean for their states. This report provides that evidence. Using real wage and staffing data from each state, we project the financial and staffing implications of one innovative model—the lab rotation—to highlight the potential implications for the schooling workforce and total per-student spending.

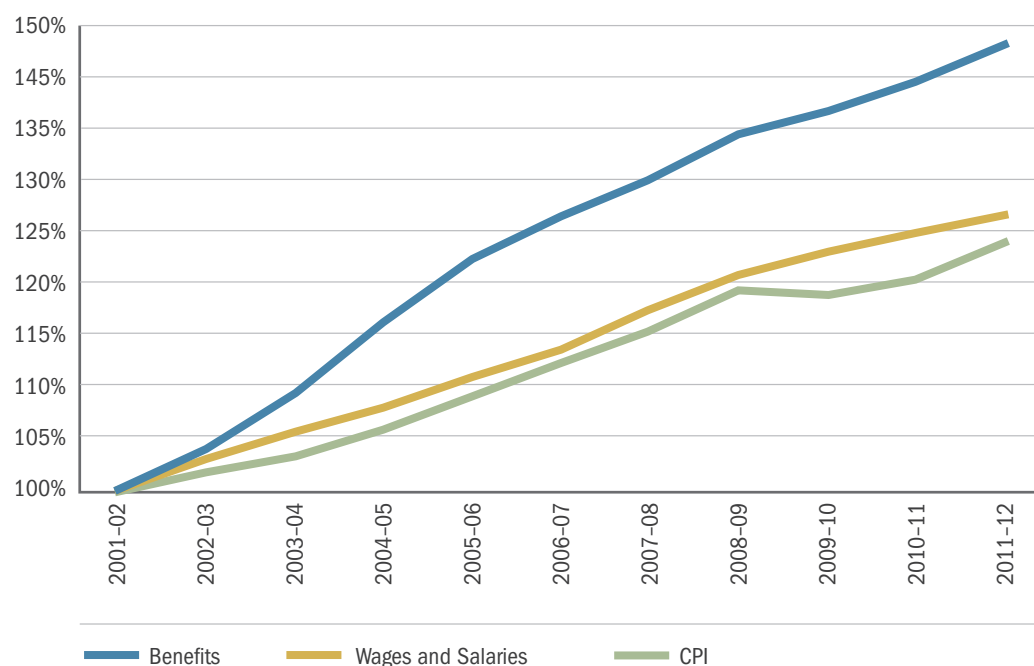
In one possible permutation of the lab rotation, one fourth of each day's instructional time is spent in a computer lab, which is staffed by an instructional aide instead of a classroom teacher. Money saved on staffing is then reinvested elsewhere.¹ The lab rotation model is not a solution for all schools, districts, or states. But it illustrates the extent to which staffing innovations can change cost structures and offer greater financial sustainability. If all public elementary schools adopted it, states could unlock nearly \$10 billion in funds to reinvest elsewhere for students and achieve the financial sustainability that would otherwise elude them. Of course, the universal adoption of lab rotations is implausible, but there is no reason to think that lab rotations could not be embraced on a far larger scale than they are now. This innovation, and others like it, should be given serious consideration, before our current cost structures begin to deteriorate the quality of schooling.

¹ Lab rotation is defined in Staker and Horn (2012).

REDUCING THE QUICKEST RISING COSTS

Schooling, of course, is and likely always will be a labor-intensive enterprise. In the last decade, school reform efforts have hinged on adding more and more staff to schools. From 2002 to 2008, the number of public elementary and secondary teachers increased by 10 percent, a rate faster than student enrollment growth (National Center for Education Statistics, 2011a). Some projections suggest that staffing will continue to grow (National Center for Education Statistics, 2011b). As Figure 1 illustrates, among the production inputs typical in education, cost escalation has been greatest for benefits (particularly health benefits), followed by wages and salaries. On the flip side, the prices of technology, equipment, and software have effectively fallen (Rampell, 2011). As long as reforms continue to rely on the addition of labor, labor costs will likely increase faster than public revenues (Hill & Roza, 2010).

Figure 1. Personnel Costs Have Climbed Faster Than Consumer Price Index



Note. Compiled from *Databases & Tools*, Employment Cost Trends (http://data.bls.gov/pdq/SurveyOutputServlet?request_action=wh&graph_name=EC_ectbrief) and *Consumer Price Index* (<ftp://ftp.bls.gov/pub/special.requests/cpi/cpi.txt>). U.S. Department of Labor, Bureau of Labor Statistics.

The precise mix of labor in schools does not need to be fixed in stone, which some innovative schooling networks have shown. With financial sustainability a critical issue, school designs that rely less on high-cost labor and more on technological innovations might prove more viable in the long run. The recent explosion of technology-based options in schooling—combined with the falling price of technology—suggest that the timing is ripe for more innovations that rethink staffing. New content providers that customize learning for individual students, including lower-cost (or free) products, such as those offered by Khan Academy and the CK-12 Foundation, are increasingly accessible for use in schools (Belissent, 2011).

Even as these promising tools proliferate, most forward-thinking schools and school networks, including most charters, have yet to fundamentally change their staffing structures. Many still rely on the basic personnel model used by traditional schools and offer only improvements in staff effectiveness, performance management, and school culture. Although some of these strategies have indeed yielded improved outcomes for students, the spending patterns of such schools look similar to those of traditional schools, with similarly problematic cost structures (Lake, Dusseault, Bowen, Demeritt, & Hill, 2010).

ROCKETSHIP: FEWER TEACHERS, GROWING LEARNING

Rocketship Education, which created an innovative lab rotation model, provides a notable exception.² Rocketship operates K–5 charter schools in San Jose, California, where approximately 90 percent of the students come from low-income families, and 75 percent are English language learners. Rocketship schools outperform schools with similar demographics, including some that are more affluent.³

Figure 2 shows how lab rotations similar to the system that Rocketship pioneered can change the traditional staffing structure. Imagine that the third grade in a school has four classrooms. At the typical elementary school, each classroom would be assigned its own dedicated teacher, who would teach all subjects—four teachers for four classrooms. Rocketship assigns only three teachers for

² Others pioneering blended learning with new staffing models include Carpe Diem Schools in Arizona and the Knowledge Is Power Program: Empower Academy in Los Angeles.

³ Based on the 2012 California Academic Performance Index reported by Rocketship Education at <http://www.rsed.org>.

those four classrooms plus one lab aide for every 70 students. The classroom teachers specialize: Each of two humanities teachers covers two classrooms, whereas one mathematics and science teacher splits his or her time among all four classrooms. Students spend 25 percent of their time in a computer lab, called the learning lab, which is supervised by uncertified staff. While in the learning lab, students work on mathematics and literacy software programs, receive individual tutoring as needed, and take time out to participate in other special classes, including physical education and art.⁴

Figure 2. Switching Up Staffing

Traditional elementary school: four teachers for four classrooms

	3rd-Grade Class 1	3rd-Grade Class 2	3rd-Grade Class 3	3rd-Grade Class 4
1st Period	Teacher A	Teacher B	Teacher C	Teacher D
2nd Period	Teacher A	Teacher B	Teacher C	Teacher D
3rd Period	Teacher A	Teacher B	Teacher C	Teacher D
4th Period	Teacher A	Teacher B	Teacher C	Teacher D

Rocketship lab rotation: three teachers plus lab staff

	3rd-Grade Class 1	3rd-Grade Class 2	3rd-Grade Class 3	3rd-Grade Class 4
8 AM start	Teacher A	Teacher C	Teacher B	Learning Lab
1st Period	Teacher A	Learning Lab	Teacher B	Teacher C
2nd Period	Teacher A	Learning Lab	Teacher B	Teacher C
3rd Period	Teacher C	Teacher A	Learning Lab	Teacher B
4 PM end	Learning Lab	Teacher A	Teacher C	Teacher B
4th Period	Learning Lab	Teacher A	Teacher C	Teacher B

	Teacher A	Teaches Humanities
	Teacher B	Teaches Humanities
	Teacher C	Teaches Math/Science
	Teacher D	N/A
	Learning Lab	Teaching Aides and Computers

Note. Compiled by the Center on Reinventing Education (CRPE) from a presentation by John Danner at the Washington Education Innovation Forum, June 9, 2011.

⁴ For an in-depth case study of Rocketship, see Bernatek, Cohen, Hanlon, and Wilka (2012).

On the face of it, each teacher has an increased student load. But because the teachers specialize, they do not need to prepare for as many subjects (Public Impact, 2012). In addition, the learning lab software removes the need for some tasks, such as assigning and grading basic mathematics problems and individualized literacy work. In this manner, a single teacher reaches one third more students, whereas noncertified instructors, computers, and the students themselves take on a portion of the previous responsibilities—and costs—of the teacher. This reduced reliance on teachers enables the school to hire more selectively and spread scarce mathematics and science expertise across more students.

Rocketship Education is now testing iterations of the lab rotation, with different mixes of staffing and computer-based instruction conducted in the classroom instead of the lab. In the coming years, its schools may look quite different. The network's innovation in the past several years, however, still stands as a useful and exciting example of what is possible for other schools.

FREEING FUNDS FOR REINVESTMENT

The lab rotation model implemented by Rocketship produces a substantially different cost structure than what is typical nationally. In a traditional public school district, salaries and benefits combined consume, on average, 60 percent to 80 percent of the budget (Roza, Wepman, & Sepe, 2010). At Rocketship, that total is about 47 percent (Rocketship Education, 2011).

It is important to note that Rocketship schools have not simply used technology to reduce overall staff; they have shifted staffing to rely on a different mix of staff: fewer classroom teachers and more technology staff. That mix has allowed Rocketship to reinvest some funds, enabling its schools to operate with a longer school day and pay teacher salaries at a rate greater than the market rate.

Determining the cost implications of the lab rotation model across different school settings requires some isolation of the features that might be more broadly adopted. Although this report focuses on the implications of subject specialization and the lab rotation structure, other elements of the Rocketship design affect the cost structure of its schools. For instance, Rocketship schools have larger class sizes than the national average and deliver their noncore electives differently (National Center for Education Statistics, 2012a). Rocketship also remands some administrative tasks to parents, who are asked to volunteer

30 hours per school year. Although these additional features may not be scalable across other settings, the basic staffing innovation could be. So we analyzed this question: Leaving class sizes and administrative structures as is, what if more schools simply adopted the concept of having four classrooms taught by three teachers, along with a lab rotation?

Keeping constant national norms for elementary school class sizes, Table 1 demonstrates the staffing and the cost implications of adopting this staffing innovation for Grades 1 through 5 (National Center for Education Statistics, 2012a). Current core staffing costs are based on state average salaries for elementary teachers, and benefits are included as a projected 33 percent of salary costs.⁵ The lab rotation assumes using 25 percent fewer core teachers and one technology aide per 70 students, whose total compensation we based on the national average for paraeducators (38 percent of the earnings of the average teacher; NEA Research, 2012).

Table 1. Rotation Model Frees Up Funding, Even at Current Class Sizes

	Average Class Size ^a	Core Classroom Teachers Required (per 1,000 Students)	Lab Aides Required (per 1,000 Students)	Total Teachers Plus Lab Aides (per 1,000 Students)	Staff Cost at Current Compensation Levels for Core Teachers and Lab Aides ^b (per Pupil)
Traditional one teacher per classroom model	20.1	49.75	—	49.75	\$3,710.04
Lab rotation model	20.1	37.31	14.29	51.60	\$3,185.02
<i>Change if shifted to a lab rotation model</i>	0	-12	14	2	-\$525.01

^a Kept at the current national average for elementary students.
^b Benefits are assumed to be 33 percent of the base salary.

⁵ Average salaries are from NEA Research (2010); benefits and salary costs are from the National Center on Education Statistics (2010b).

Based on Table 1, the rotation model relies on fewer teachers and more lab aides; for every 1,000 students, the system uses 12 fewer teachers but adds 14 more lab staff. Although the number of total jobs increases, the per-pupil staffing costs decrease by \$525 per pupil (or about 5 percent; National Center for Education Statistics, 2012b).⁶ That enables some investment in necessary lab equipment and software, with additional funds available for other reforms.

Clearly, implementing the lab rotation model comes with additional implications for schools.

- Because these schools use teachers differently, they may need a different mix of teacher expertise (namely, elementary teachers able to specialize in mathematics and science or in humanities).
- There will certainly be cultural challenges that come with changing practices in organizations that have run things the same way for a long time.
- The lab experience requires that schools assemble their computers in a single location and purchase relevant software to enhance learning. The costs for equipment and software to transition to this model will depend on both software choices and the extent to which a school already has appropriate computers. In 2008, the most recent year for which data are available, the ratio of students to instructional computers with Internet access was 3.1 to 1 (National Center for Education Statistics, 2010a). The lab rotation model demands even fewer computers than that because a computer is needed for only every four students. Some schools may not necessarily have to buy more computers but rather rearrange them. How much schools now spend on software varies widely, and it is unclear how much they will have to spend to adopt the new model.

With the educational technology sector still in transition and many free options available, technology costs are expected to grow more slowly than labor costs and have been omitted from these projections.

⁶ Based on the average \$11,467 per-pupil spending in 2012 as reported by the National Center for Education Statistics (2012b).

NEARLY \$10 BILLION TO GROW ON

All told, our analysis shows that a universal shift to the lab rotation model in U.S. elementary schools would yield more than \$9.8 billion for reinvestment elsewhere in education. The financial implications differ by state, given the variance in teacher salaries and the number of students per teacher. As Table 2 demonstrates, if all public elementary schools moved to a lab rotation model and class sizes remained the same, the United States could operate with 232,564 fewer teachers, which would be offset by 263,674 more lab aides. That would free up, on average, \$531 per student. In some states, it would be far more. In New York, for example, the model would make available \$943 per student, for a total of nearly \$1 billion.

Table 2. Staffing and Cost Changes If States Shifted to a Lab Rotation Model for Elementary Schools

State	Total Change in the Number of Teachers	Number of Additional Lab Aides Needed	Added Number of New Jobs	Funds Available to Reinvest	Funds Freed Up per Elementary Student
United States as a whole	(232,564)	263,674	31,110	(\$9,805,828,613)	(\$531)
Alaska	-654	710	56	(\$33,128,252)	(\$667)
Alabama	-3,844	4,160	317	(\$129,594,929)	(\$445)
Arkansas	-2,325	2,635	311	(\$75,032,641)	(\$407)
Arizona	-4,478	6,010	1,532	(\$113,856,476)	(\$271)
California	-26,948	33,086	6,139	(\$1,556,331,903)	(\$672)
Colorado	-3,745	4,544	798	(\$120,739,768)	(\$380)
Connecticut	-2,656	2,952	295	(\$148,506,625)	(\$719)
District of Columbia	-320	348	28	(\$18,518,603)	(\$761)
Delaware	-572	698	126	(\$24,416,810)	(\$500)
Florida	-13,749	14,339	590	(\$449,978,756)	(\$448)
Georgia	-9,218	9,266	48	(\$399,799,448)	(\$616)
Hawaii	-856	1,008	152	(\$34,302,135)	(\$486)
Iowa	-2,191	2,504	313	(\$76,994,225)	(\$439)
Idaho	-1,140	1,542	402	(\$28,462,677)	(\$264)
Illinois	-8,962	10,957	1,995	(\$442,281,557)	(\$577)
Indiana	-4,696	5,717	1,022	(\$153,722,953)	(\$384)
Kansas	-2,298	2,559	261	(\$71,803,132)	(\$401)
Kentucky	-2,906	3,668	763	(\$85,659,312)	(\$334)
Louisiana	-3,776	3,905	129	(\$139,261,920)	(\$509)

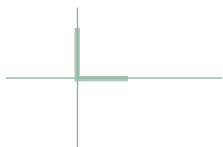
State	Total Change in the Number of Teachers	Number of Additional Lab Aides Needed	Added Number of New Jobs	Funds Available to Reinvest	Funds Freed Up per Elementary Student
Massachusetts	-4,718	5,054	336	(\$303,200,711)	(\$857)
Maryland	-3,786	4,374	588	(\$204,648,920)	(\$668)
Maine	-1,005	973	-32	(\$35,638,123)	(\$523)
Michigan	-5,983	8,372	2,389	(\$230,370,269)	(\$393)
Minnesota	-3,264	4,352	1,088	(\$108,365,374)	(\$356)
Missouri	-4,395	4,860	465	(\$134,349,277)	(\$395)
Mississippi	-2,509	2,767	258	(\$78,267,340)	(\$404)
Montana	-733	763	30	(\$24,460,458)	(\$458)
North Carolina	-7,560	8,397	836	(\$234,512,662)	(\$399)
North Dakota	-521	488	-33	(\$16,911,513)	(\$495)
Nebraska	-1,446	1,557	111	(\$47,535,540)	(\$436)
New Hampshire	-947	1,027	80	(\$37,560,721)	(\$523)
New Jersey	-6,315	7,141	827	(\$335,699,317)	(\$712)
New Mexico	-1,709	1,839	129	(\$54,923,906)	(\$427)
Nevada	-1,959	2,410	451	(\$70,242,069)	(\$416)
New York	-13,423	13,783	360	(\$909,657,853)	(\$943)
Ohio	-7,829	9,479	1,649	(\$329,516,940)	(\$497)
Oklahoma	-3,126	3,519	393	(\$104,734,333)	(\$425)
Oregon	-2,292	3,046	754	(\$86,050,539)	(\$404)
Pennsylvania	-7,817	9,299	1,482	(\$367,394,139)	(\$564)
Rhode Island	-634	750	115	(\$30,269,076)	(\$577)
South Carolina	-3,707	3,917	210	(\$133,345,908)	(\$486)
South Dakota	-647	660	13	(\$11,698,970)	(\$253)
Tennessee	-5,319	5,382	63	(\$181,160,053)	(\$481)
Texas	-26,336	26,591	255	(\$927,032,600)	(\$498)
Utah	-2,446	3,350	904	(\$57,113,637)	(\$244)
Virginia	-6,407	6,658	251	(\$251,748,937)	(\$540)
Vermont	-472	452	-19	(\$18,716,575)	(\$591)
Washington	-4,239	5,533	1,294	(\$147,414,058)	(\$381)
Wisconsin	-3,851	4,315	464	(\$144,915,253)	(\$480)
West Virginia	-1,384	1,474	90	(\$45,459,968)	(\$441)
Wyoming	-453	484	31	(\$20,521,451)	(\$605)

Of course, it is unlikely that this innovation would be appropriate for every school in the United States. Some might be too small to benefit from the model or may have a particular student population for whom the approach may not be a good fit. It is worth noting, however, that the lab rotation model is not intended only for special schools or unusual student populations. Rather, the model is intended for typical elementary schools, including those with substantial numbers of students from low-income families or students who are bilingual. Toward this end, the analysis highlights the potential relevance of such an innovation for the larger cost and staffing structure of states, including how much money is at stake.

The costs of salaries and benefits are likely to grow faster than technology costs, leaving schools vulnerable as budgets flatten. At a time of profound revenue constraints, it is worrisome to see how few schools have embraced innovative staffing structures that leverage technology and frequently produce great outcomes for students. Rather than zero in on financially sustainable models, charters and other innovative schools have sought improved student outcomes often at any cost.

It is clear that many of their strategies are helping students. But it is also clear that schools will not be able to continue their current approaches forever, unless they explore models that can be scaled and sustained across a larger set of schools. School and network leaders should be actively investigating the potential of new staffing innovations that will move them toward greater financial sustainability, and those promoting education reforms and innovations should lend support for these efforts. Furthermore, federal, state, and private grants should prioritize staffing innovations because these reforms may indeed hold more practical promise going forward.

Finally, despite how much money these models could free up, most state policies are still a long way from enabling the adoption of such models, in part because the state regulatory environment can be prohibitive. Student-to-staff ratios, formulas that dictate resource use, seat time regulations, salary schedules, and other such requirements inhibit even considering these kinds of models. Where states are serious about seeking innovations that alter the cost curve, they will need to remove these constraints—likely replacing process-based regulations with systems that manage schools based on outcomes measures. And, more importantly, these models will require more flexibility in how funds are applied.



For districts, it means moving away from rigid, one-size-fits-all school models and seeking purposeful variation in school design. Schools with staff attrition might be the first to try out new models because a vacant position provides some opportunity to rethink a school's delivery model. Where relevant, districts also would need to relax rigid work rules and school day scheduling requirements to accommodate redesigned service delivery models.

The lab rotation that Rocketship created is only one model; there will be many more. As individual innovators continue to break the mold on how schools can be staffed and students can be educated, we will see whether states and districts are up to the challenge of rethinking schooling to create more financially sustainable options. For public education, there is much at stake. Without such improvements in delivery, public education will likely face a decade of erosion in services.

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APPENDIX A. COST FACTORS USED IN THE ANALYSIS IN TABLE 2

State	Current Number of Core Teachers	Total Core Teachers Needed With Rocketship Lab Rotation Staffing	Average Class Size	Current Core Teaching Staff Cost	Rocketship Staffing Cost
Alaska	2,616	1,962	19.00	\$212,521,164	\$179,392,912
Alabama	15,374	11,531	18.94	\$987,247,308	\$857,652,378
Arkansas	9,299	6,974	19.84	\$597,124,313	\$522,091,672
Arizona	17,910	13,433	23.49	\$1,132,741,341	\$1,018,884,865
California	107,790	80,843	21.49	\$9,954,121,396	\$8,397,789,493
Colorado	14,981	11,236	21.23	\$995,027,364	\$874,287,596
Connecticut	10,626	7,969	19.44	\$926,660,463	\$778,153,838
District of Columbia	1,278	959	19.03	\$113,248,541	\$94,729,938
Delaware	2,289	1,717	21.35	\$176,358,430	\$151,941,619
Florida	54,994	41,246	18.25	\$3,415,905,874	\$2,965,927,118
Georgia	36,871	27,653	17.59	\$2,643,484,934	\$2,243,685,486
Hawaii	3,424	2,568	20.60	\$250,762,321	\$216,460,186
Iowa	8,763	6,573	20.00	\$590,155,574	\$513,161,350
Idaho	4,561	3,421	23.67	\$287,632,383	\$259,169,705
Illinois	35,848	26,886	21.40	\$3,003,964,637	\$2,561,683,080
Indiana	18,783	14,087	21.31	\$1,259,207,409	\$1,105,484,456
Kansas	9,192	6,894	19.49	\$575,579,983	\$503,776,851
Kentucky	11,623	8,717	22.09	\$756,048,939	\$670,389,627
Louisiana	15,106	11,329	18.10	\$997,183,498	\$857,921,577
Massachusetts	18,871	14,153	18.75	\$1,782,408,744	\$1,479,208,033
Maryland	15,145	11,359	20.22	\$1,311,548,629	\$1,106,899,710
Maine	4,020	3,015	16.95	\$252,745,533	\$216,607,409
Michigan	23,932	17,949	24.49	\$1,865,037,959	\$1,634,667,690
Minnesota	13,054	9,791	23.34	\$923,910,921	\$815,545,547
Missouri	17,578	13,184	19.35	\$1,085,058,927	\$950,709,650
Mississippi	10,036	7,527	19.30	\$624,918,430	\$546,651,090
Montana	2,933	2,200	18.21	\$183,845,567	\$159,385,109
North Carolina	30,241	22,681	19.44	\$1,884,341,282	\$1,649,828,620
North Dakota	2,083	1,563	16.40	\$122,657,597	\$105,746,084
Nebraska	5,784	4,338	18.84	\$365,575,675	\$318,040,135
New Hampshire	3,788	2,841	18.97	\$265,949,212	\$228,388,492
New Jersey	25,259	18,944	19.79	\$2,227,605,732	\$1,871,906,414

State	Current Number of Core Teachers	Total Core Teachers Needed With Rocketship Lab Rotation Staffing	Average Class Size	Current Core Teaching Staff Cost	Rocketship Staffing Cost
New Mexico	6,836	5,127	18.82	\$426,892,516	\$371,968,610
Nevada	7,835	5,877	21.53	\$552,558,088	\$482,316,019
New York	53,691	40,268	17.97	\$5,191,979,394	\$4,282,321,541
Ohio	31,317	23,488	21.19	\$2,386,300,192	\$2,056,783,253
Oklahoma	12,503	9,377	19.70	\$815,484,443	\$710,750,110
Oregon	9,167	6,875	23.26	\$687,482,945	\$601,432,406
Pennsylvania	31,270	23,452	20.82	\$2,517,602,079	\$2,150,207,941
Rhode Island	2,537	1,903	20.68	\$205,552,165	\$175,283,089
South Carolina	14,827	11,120	18.49	\$974,847,686	\$841,501,778
South Dakota	2,589	1,942	17.85	\$121,227,049	\$109,528,080
Tennessee	21,276	15,957	17.71	\$1,331,198,465	\$1,150,038,412
Texas	105,345	79,009	17.67	\$6,704,911,147	\$5,777,878,548
Utah	9,784	7,338	23.97	\$605,992,576	\$548,878,939
Virginia	25,627	19,220	18.19	\$1,757,319,131	\$1,505,570,194
Vermont	1,887	1,415	16.78	\$125,840,002	\$107,123,427
Washington	16,957	12,717	22.84	\$1,213,223,966	\$1,065,809,908
Wisconsin	15,404	11,553	19.61	\$1,065,988,880	\$921,073,627
West Virginia	5,536	4,152	18.63	\$347,920,991	\$302,461,023
Wyoming	1,814	1,360	18.69	\$136,678,751	\$116,157,300

Author Biographies

Suzanne Simburg is a research consultant at CRPE, where her work explores the cost implications of digital learning and redesigned school models. Her upcoming projects investigate resource allocation in blended-learning schools and other topics related to student-based allocation. Her interest in school innovation grew out of her first jobs, working with youth, and following professional experiences with innovative businesses. In the past, she was an Education Pioneers Fellow at Aspire Public Schools and a Fulbright Fellow at New Ventures, a business accelerator in Mexico City. Ms. Simburg has a bachelor's degree, a master of business administration degree, and a master of public administration degree from the University of Washington; prior to graduate school, she worked for YouTube/Google and Americorps.

Marguerite Roza, Ph.D., is the director of the Edunomics Lab at Georgetown University and senior research affiliate at the CRPE. Dr. Roza's research focuses on quantitative policy analysis, particularly in the area of education finance. Recent research traces the effects of fiscal policies at the federal, state, and district levels for their implications on resources at both school and classroom levels. Her calculations of dollar implications and cost equivalent trade-offs have prompted changes in education finance policy at all levels in the education system. She has led various projects, including the Finance and Productivity Initiative at CRPE and the Schools in Crisis Rapid Response paper series. More recently, she served as the senior economic advisor to the Bill & Melinda Gates Foundation. Her work has been published by Education Sector, the Brookings Institution, *Public Budgeting and Finance*, *Education Next*, and the *Peabody Journal of Education*. Dr. Roza is the author of the highly regarded education finance book *Educational Economics: Where Do School Funds Go?*

Dr. Roza earned a Ph.D. in education from the University of Washington. Prior to that, she served as a lieutenant in the U.S. Navy, teaching thermodynamics at the Naval Nuclear Power School. She has a bachelor's degree from Duke University and has studied at the London School of Economics and the University of Amsterdam.

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